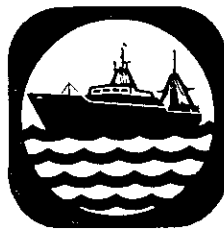
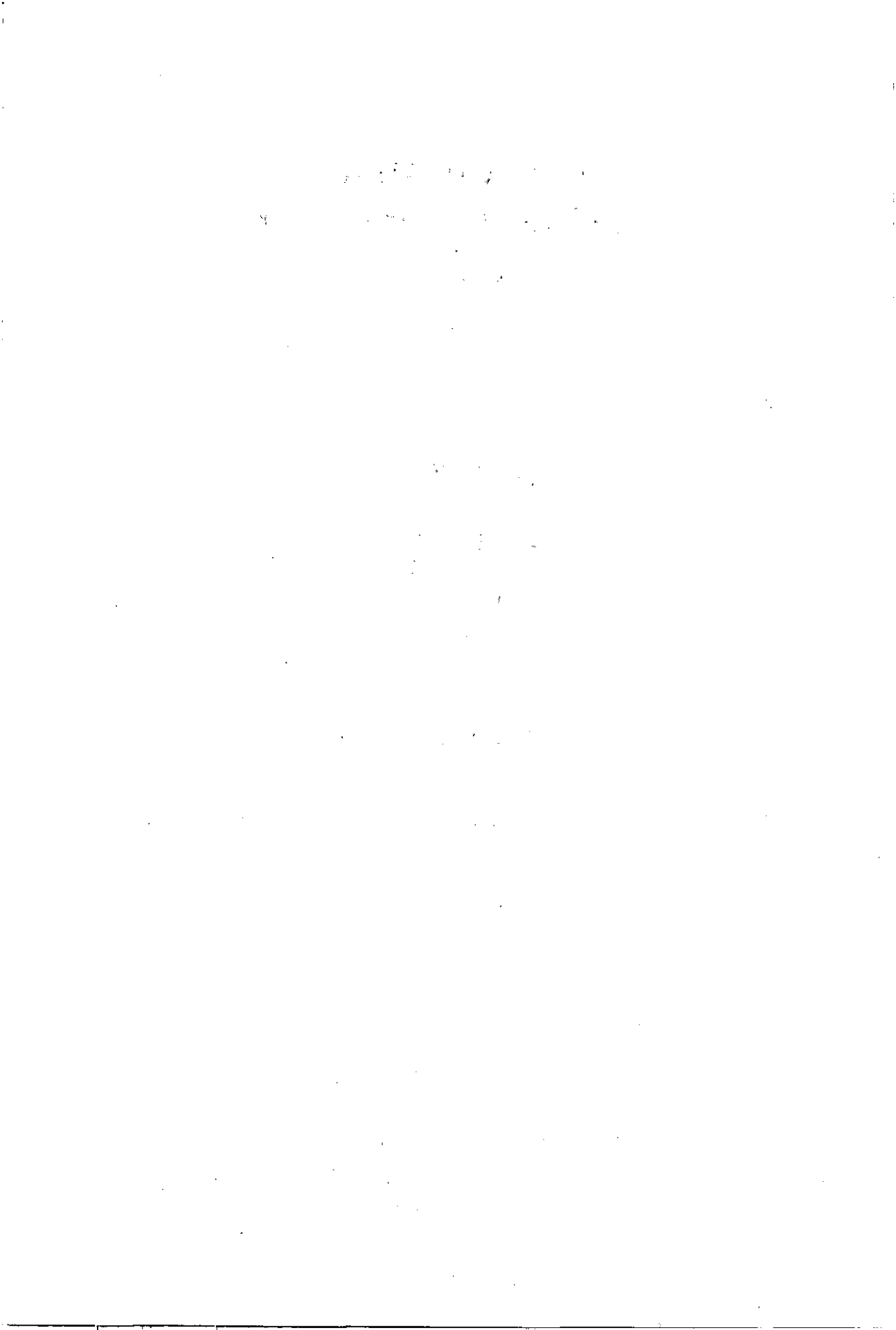


Northwest Atlantic
Fisheries Organization
(NAFO)



Meeting Proceedings
of the
General Council and Fisheries Commission
for 1997

Printed and Distributed by:
Northwest Atlantic Fisheries Organization
P. O. Box 638, Dartmouth, Nova Scotia
Canada B2Y 3Y9



Foreword

This is the annual publication of the Proceedings which contains the reports of all meetings of the General Council and Fisheries Commission including those subsidiary bodies held through 1997. The major aim of such an issue is to provide the Contracting Parties with a detailed consolidated text of all discussions initiated during the year. The proceedings of the Scientific Council are published annually in a separate issue of *NAFO Scientific Council Reports*.

SECTION I contains the Report of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC), 4-7 February 1997, Dartmouth, N.S., Canada.

SECTION II contains the Report of the STACTIC Working Group on Satellite Tracking, 2-4 April 1997, Dartmouth, N.S., Canada.

SECTION III contains the Report of the Working Group on Dispute Settlement Procedures (DSP), 14-16 April 1997, Dartmouth, N.S., Canada.

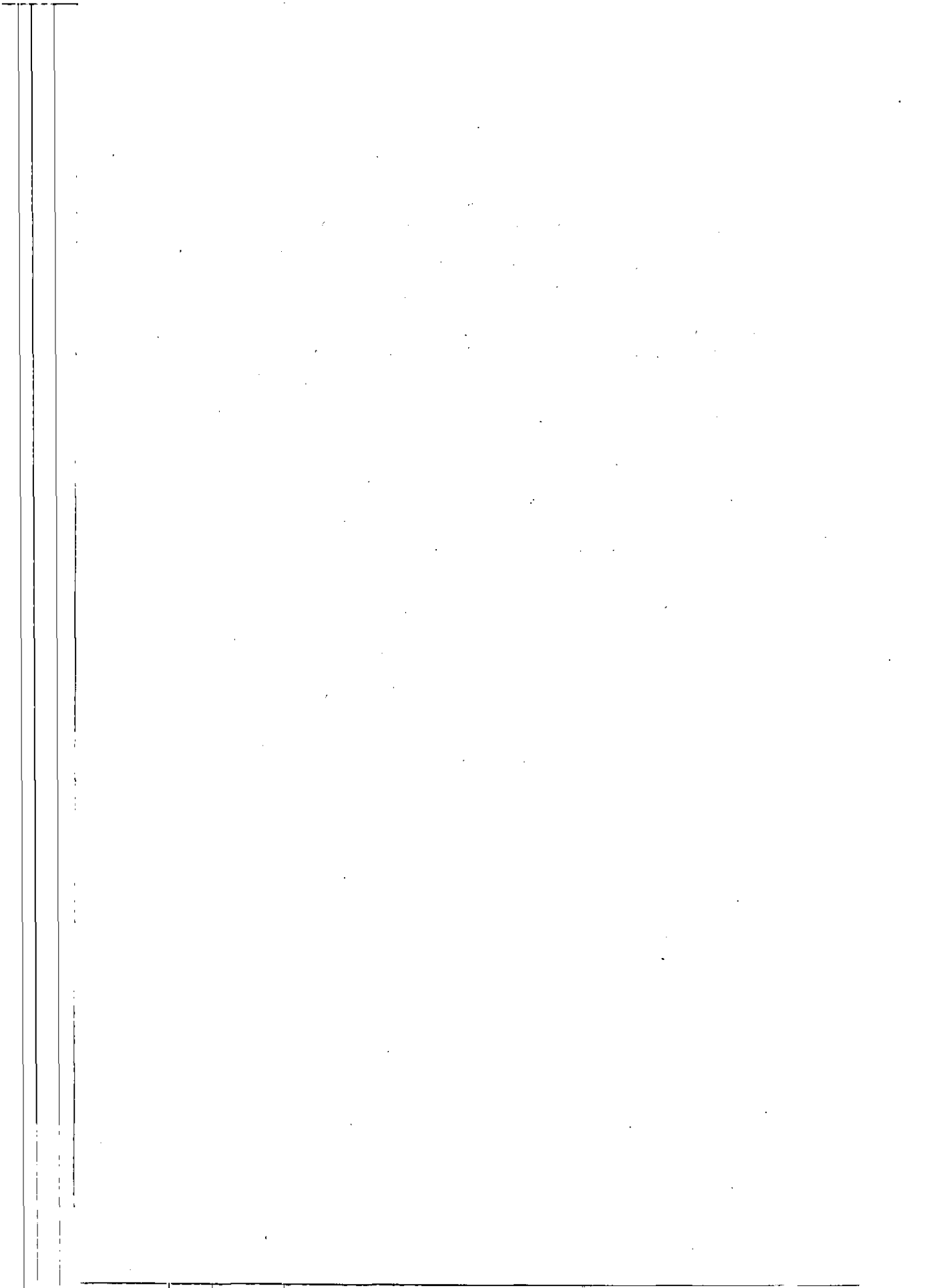
SECTION IV contains the Report of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC), 15-16 May 1997, Brussels, Belgium.

SECTION V contains the Report of the Standing Committee on International Control (STATIC), 24-26 June 1997, Copenhagen, Denmark.

SECTION VI contains the Report of the General Council including subsidiary bodies reports (STACFAD and STACFAC), 19th Annual Meeting, 15-19 September 1997, St. John's, Newfoundland, Canada.

SECTION VII contains the Report of the Fisheries Commission including subsidiary body (STACTIC), 19th Annual Meeting, 15-19 September 1997, St. John's, Newfoundland, Canada.

SECTION VIII contains the Report of the STACTIC Working Group on Satellite Tracking, 28-30 October 1997, Dartmouth, N.S., Canada.



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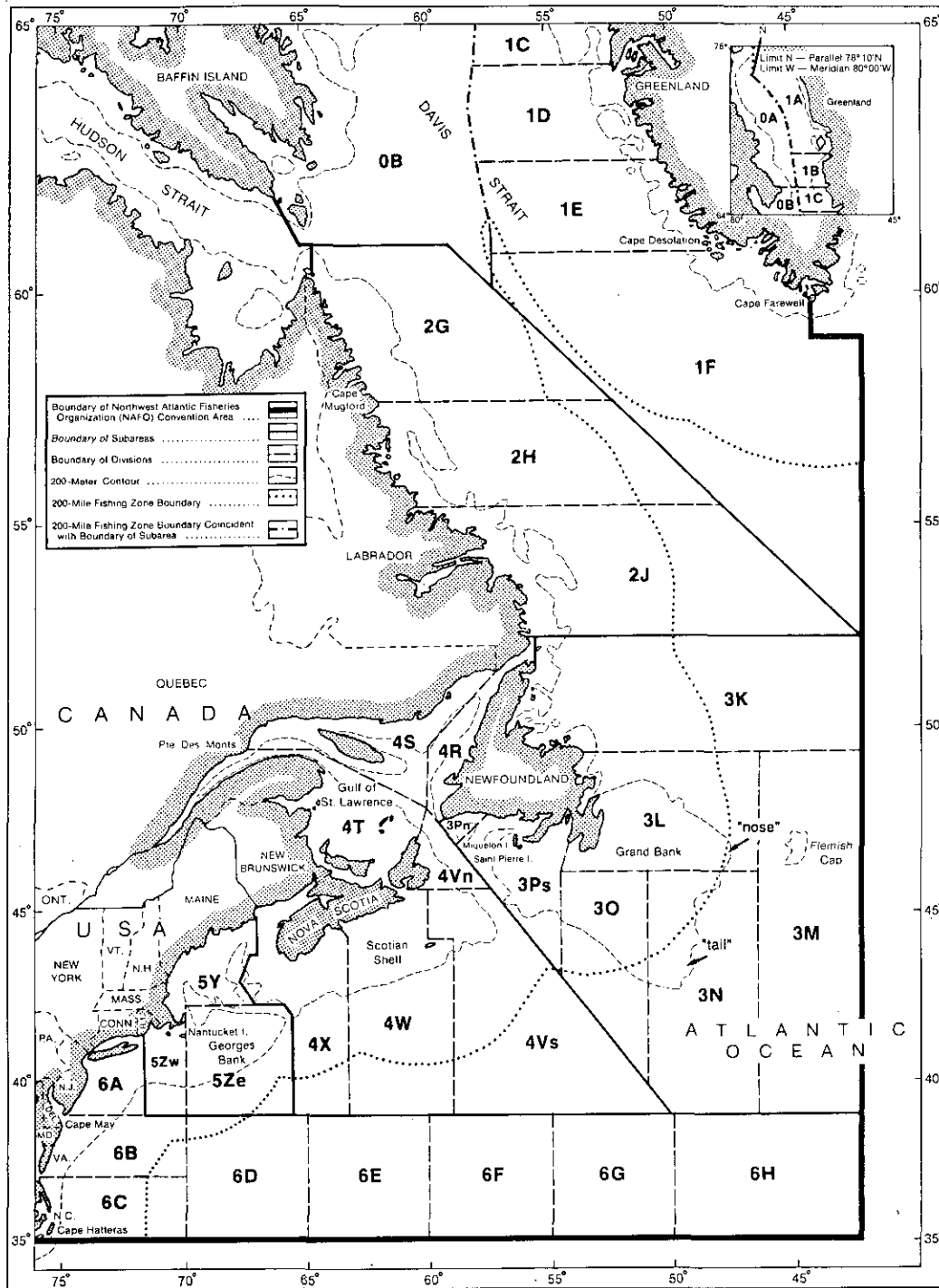
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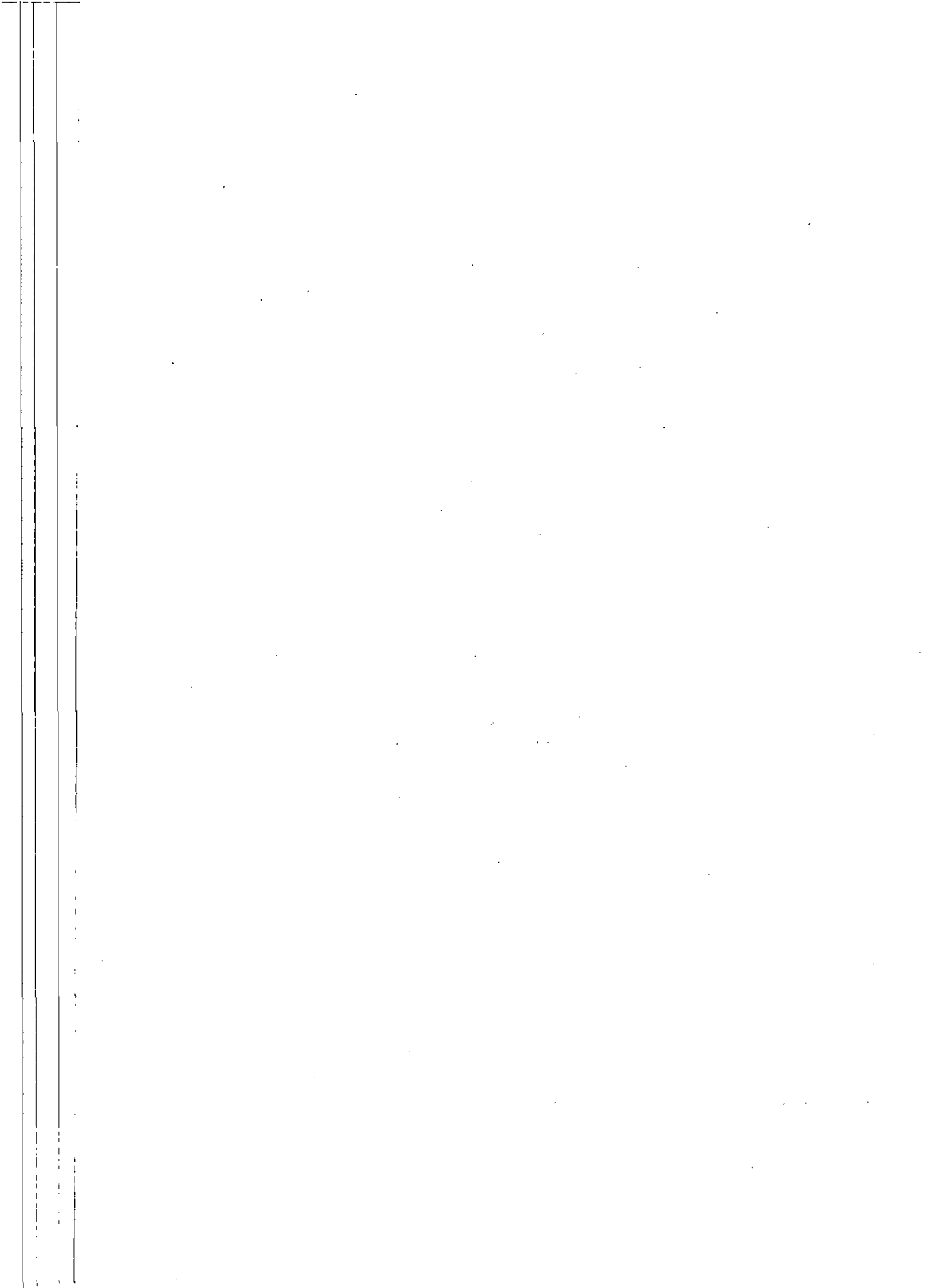
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The Convention Area to which the Convention on Future Multilateral Cooperation in the Northwest Atlantic applies





**Structure of the Northwest Atlantic Fisheries Organization (NAFO) in 1997
(as at 19th Annual Meeting, September 1997)**

Contracting Parties

Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, European Union (EU), France (in respect of St. Pierre et Miquelon), Iceland, Japan, Republic of Korea, Latvia, Lithuania, Norway, Poland, Romania, Russia and United States of America (USA).

President

A. Rodin (Russia)

Constituent Bodies

General Council	Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, EU, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Korea, Latvia, Lithuania, Norway, Poland, Romania, Russia and USA.	<i>Chairman</i> - A. Rodin (Russia) <i>Vice-Chairman</i> - R. Dominguez (Cuba)
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Scientific Council	Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, EU, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Korea, Latvia, Lithuania, Norway, Poland, Romania, Russia and USA.	<i>Chairman</i> - W. R. Bowering (Canada) <i>Vice-Chairman</i> - H. P. Cornus (EU)
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Fisheries Commission	Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, EU, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Korea, Latvia, Lithuania, Norway, Poland, Russia and USA.	<i>Chairman</i> - H. Koster (EU) <i>Vice-Chairman</i> - P. Gullestad (Norway)
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Standing Committees

General Council	Standing Committee on Finance and Administration (STACFAD)	<i>Chairperson</i> - J. Quintal-McGrath (Canada) <i>Vice-Chairman</i> - G. F. Kingston (EU)
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General Council (cont'd)	Standing Committee on Fishing Activity of non-Contracting Parties in the Regulatory Area (STACFAC)	<i>Chairman</i> - J. P. Plé (USA) <i>Vice-Chairman</i> - B. Buch (Denmark in Respect of Faroe Islands and Greenland)
Scientific Council	Standing Committee on Fishery Science (STACFIS) Standing Committee on Research Coordination (STACREC) Standing Committee on Publications (STACPUB) Standing Committee on Fisheries Environment (STACFEN) Executive Committee	<i>Chairman</i> - W. B. Brodie (Canada) <i>Chairman</i> - D. Power (Canada) <i>Chairman</i> - H. P. Cornus (EU) <i>Chairman</i> - M. Stein (EU) <i>Chairman</i> - W. R. Bowering (Canada)
Fisheries Commission	Standing Committee on International Control (STACTIC)	<i>Chairman</i> - D. Bevan (Canada)

Secretariat

Executive Secretary	L. I. Chepel
Assistant Executive Secretary	T. Amaratunga
Administrative Assistant	F. D. Keating
Senior Secretary	B. J. Cruikshank
Accounting Officer	S. M. Goodick
Desktop Publishing/Documents Clerk	F. E. Perry
Statistical Officer	G. M. Moulton
Graphic Arts/Printing Technician	R. A. Myers
Graphic Arts/Printing Technician	B. T. Crawford
Clerk-Typist	D. C. A. Auby
Statistical Clerk	B. L. Marshall
Statistical Clerk	C. L. Kerr

Headquarters Location

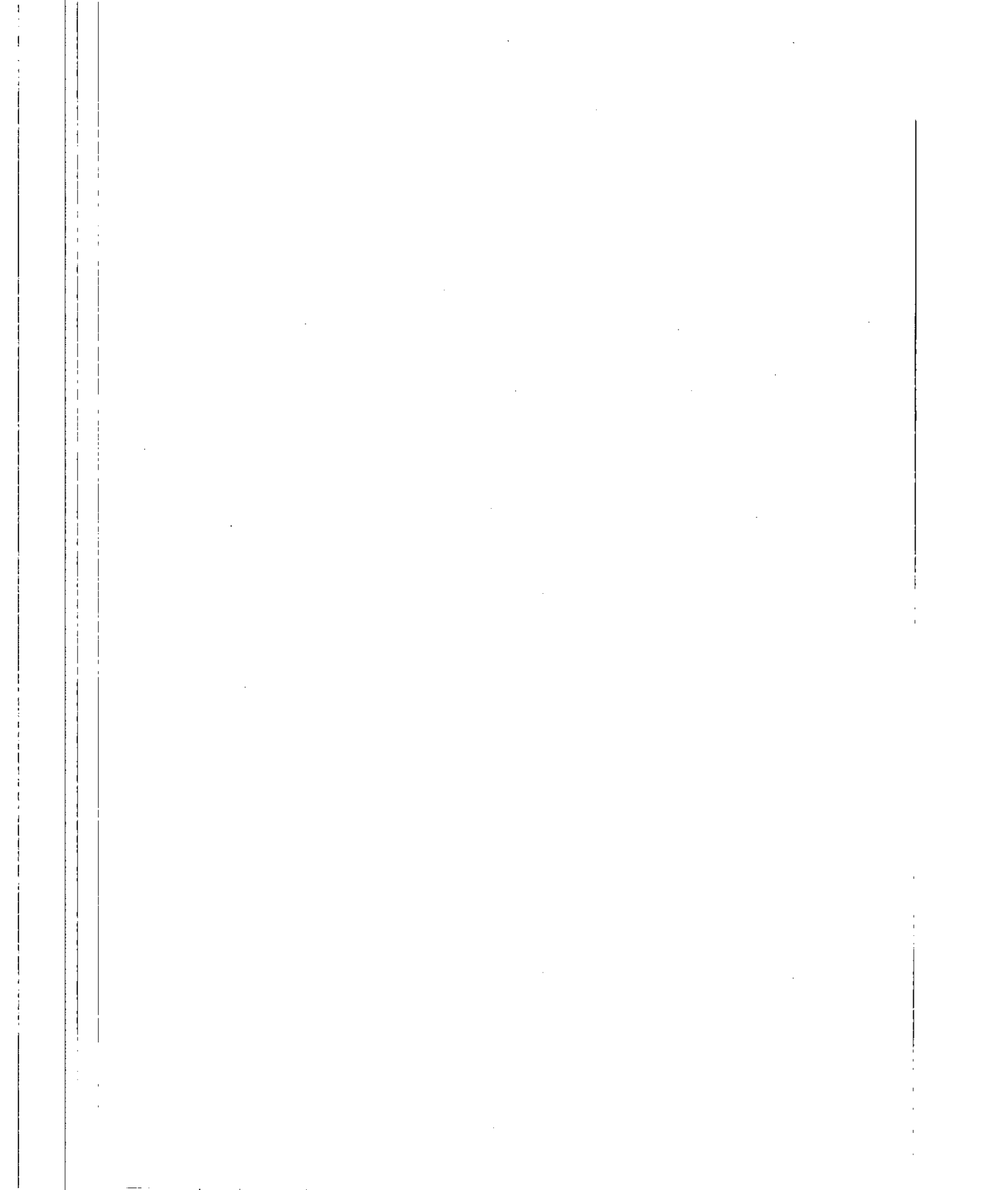
2 Morris Drive, Dartmouth, Nova Scotia, Canada

SECTION I

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Report of the Meeting of STACFAC

(GC Doc. 97/1)

**4-7 February 1997
Dartmouth, N.S., Canada**

This intersessional meeting was held in accordance with the decision by the General Council (GC Doc. 96/9, Part I, items 4.2 and 4.4) to call a STACFAC Meeting in February 1997.

1. Opening by the Chairman

The Meeting was called to order by the Chairman, Dr. J.-P. Plé (USA), who welcomed the delegates to this Meeting.

Delegates from the following Contracting Parties were present: Canada, European Union, France, Iceland, Japan, Norway and the USA. (Annex 1)

In his opening remarks, the Chairman stressed the importance of finding a resolution to the problem of the fishing activities of Non-Contracting Parties (NCPs) in the NAFO Regulatory Area (NRA). Although, as reported at the last Annual Meeting, only six NCP vessels were reported fishing in the NRA -- a considerable decrease from a few years ago -- this activity continues to undermine the conservation efforts adopted by the NAFO Contracting Parties. Moreover, if NAFO does not demonstrate to such NCPs its determination to deal with this problem, the recovery of the stocks in the NRA will likely attract more such NCP vessels. The Chairman stressed that any resolution must be effective, practical and consistent with international law. In this context, the decisions on this issue by the International Commission for the Conservation of Atlantic Tunas (ICCAT), at its 1996 Annual Meeting, sent a strong message to NCPs. The Chairman hoped NAFO will likewise send a strong message to NCPs that fish in the NRA.

2. Appointment of Rapporteur

Mr. Fred Kingston (EU) was appointed rapporteur.

3. Adoption of Agenda

The Agenda was adopted with the understanding that the points in Item 9 were not exhaustive. (Annex 2)

4. Review of 1996 final information on activities of Non-Contracting Party (NCP) vessels in the NAFO Regulatory Area (NRA)

Canada presented a paper on the activities of NCP vessels in the NRA from 1 January 1996 to 31 December 1996 (Annex 3). This paper indicated that seven NCP vessels had fished in the NRA during this time. Total catches were estimated at 5700 tons, of which 900 tons were cod, 4725 tons were redfish and 75 tons were flatfish. One vessel, the DANICA, registered in Honduras, had done most of the fishing, catching about 4150 tons of redfish.

It was noted that there was a decrease in the number of NCP fishing vessels over the same period the previous year (1995) and considerably less than compared with the late 1980's and early 1990's. Contracting Parties considered that this reduction can be attributed to factors such as the poor state of the stocks, certain success of various diplomatic demarches and recent developments, including the UN Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

5. Review of 1996 final information on landings and transshipments of fish caught in the NRA by Non-Contracting Parties

No additional information on landings since the last Annual Meeting was available.

6. Review of information on imports by Contracting Parties of groundfish species regulated by NAFO from Non-Contracting Parties whose vessels have fished in the NRA

No additional information on imports since the last Annual Meeting was available.

7. Reports by Contracting Parties on diplomatic contacts with Non-Contracting Party Governments concerning fishing by their vessels in the NRA

The Chairman referred to the information from the NAFO Secretariat concerning the disposition of the 1996 NAFO diplomatic demarches. The Chairman noted that at the request of NAFO, the United States was requested to deliver the demarches to Belize and Sierra Leone, on behalf of NAFO, and that Canada was requested to deliver the demarches to Panama and Honduras, on behalf of NAFO. The USA reported that it has so far received no responses to the demarches to Belize and Sierra Leone. Canada reported that it has not yet received a response to the demarche to Panama. Canada had not yet received confirmation that the demarche to Honduras had been delivered.

8. Discussion on the openness of NAFO

The Chairman noted that the mandate of the STACFAC is to address the problems arising from the fishing activities of NCPs in the NRA, including the issue of reflagging. However, in previous meetings of STACFAC, discussions took place which seemed to link the consideration given to a State to joining NAFO with that State's record of fishing activities in the NRA as a Non-Contracting Party. The Chairman recognized how some Parties may see linkage of these two issues, but noted that STACFAC does not have the authority to address issues associated with new membership.

Instead, all issues of membership in NAFO should be discussed by the General Council. The Chairman added further that STACFAC should recommend that the General Council address this specific issue in light of the work by STACFAC to develop a scheme to deal with NCP fishing activities in the NRA; this view was accepted by STACFAC.

STACFAC therefore recommended, without prejudice to the views of any Contracting Party participating in STACFAC, and in light of the work within STACFAC to develop a scheme to deal with Non-Contracting Party fishing activities in the NAFO Regulatory Area, that the General Council should examine what consideration should be given to any Non-Contracting Party fishing activities in the NRA by a State which seeks to join NAFO.

9. Discussion on the specific elements of a scheme to deal with fishing vessels from Non-Contracting Parties fishing in the NRA

- a) What are the relevant legal basis to support a NAFO scheme to deal with NCP fishing in the NRA

Concerning the relevant legal basis, reference was made to the UN Convention on the Law of the Sea (UNCLOS), the UN Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN Agreement), the FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, the FAO Code of Conduct for Responsible Fisheries, the NAFO Convention, the 1994 General Agreement on Tariffs and Trade (GATT), particularly Article XX(g), under the World Trade Organization (WTO), and general principles of international law, particularly the "due regard" principle.

The EU drew a distinction between the legal obligations for NAFO members, such as the NAFO Convention, and the legal obligations for NCPs, such as the "due regard" principle.

- b) Should measures be directed at a State or vessel

In discussing this topic, it was noted that whether a measure is directed at a State or vessel depends upon the type of measure to be used. Certain Contracting Parties (Canada, USA) expressed a preference for open language to allow flexibility for the most practical and effective result. Other Contracting Parties (EU, Norway, Iceland, France) expressed a preference for a vessel-by-vessel approach. In this context, Iceland distributed a copy of its proposed new Fishing Outside Iceland's Jurisdiction Act, of which Article 10 implements a vessel-by-vessel approach.

There appeared to be agreement that the NAFO scheme should adopt a vessel by vessel approach.

The EU also presented a paper (Annex 4) outlining a broad strategy to be considered for a possible NAFO Scheme to deal with NCP fishing vessels. This paper was a focus of some of the discussion under the remaining points of this agenda item.

- c) What criteria and procedures should be used to designate a vessel flying the flag from a NCP as "non-cooperative":

- sightings in the NRA
- diplomatic demarches
- courtesy boardings
- port State inspection

There was extensive discussion on this item, focusing on the issue of how to identify a non-cooperative vessel, the purpose of which was to determine the necessary conditions to be fulfilled in order to apply appropriate remedial measures. Proposed elements of this could include the sighting and identification of a NCP vessel fishing in the NRA and/or a diplomatic demarche to the flag State. Certain delegations (Canada, Norway, USA) expressed the view that a sighting was a sufficient condition for action, while others (EU, Japan) indicated that further steps were required as noted above.

Concerning the sighting and identification of a NCP vessel fishing in the NRA, Canada noted that it conducts extensive surveillance of the NRA. Consequently it would be unlikely to miss such a vessel particularly if it has been there for some time. Certain delegations also expressed the need for a second sighting of the NCP vessel in question before remedial measures can be taken.

Concerning diplomatic demarches, certain delegations (EU, Norway, USA) indicated that it was a means to communicate the sighting of a NCP fishing vessel in the NRA to the Flag State. Some delegations (EU, USA) also saw it as an opportunity to induce cooperation from the NCP. Canada mentioned the need for an expedited procedure for such demarches.

Concerning courtesy boardings, Canada presented a paper (Annex 5) indicating its courtesy boardings on NCP vessels in the NRA from 1 January 1996 to 31 December 1996. The EU noted that if a NCP vessel allows such a boarding, it is an indication of a willingness to cooperate. On the other hand, France pointed out that a refusal to allow such a boarding is evidence of non-cooperation.

d) What measures should be incorporated in the scheme

- port closures
- denial of landings in the ports of NAFO Contracting Parties
- trade measures

There was again extensive discussion on this item. Much of the discussion focused on whether port closures or denial of services should be incorporated into the scheme. Certain delegations (Norway, Canada, USA) were in favour of such a measure. Norway suggested that port closures should extend to vessels which support or supply any NCP fishing vessel from a non-cooperative NCP. Other delegations (EU, France) expressed opposition to incorporating port closures into the scheme. The EU also noted that port closures may be contrary to WTO rules, not falling under the exception of GATT Article XX(g).

Concerning denial of landings, the EU noted that the inspection of the NCP fishing vessel in question, in order to determine whether to deny landings under its proposal, could also be considered a "measure" under this scheme.

The Chairman noted that trade measures should be considered, but there was little discussion on this topic. The EU expressed the opinion that trade measures would be contrary to WTO rules.

e) If denial of landings adopted, what fish would be affected, how should the scheme deal with fish caught outside of the NRA

There was discussion that if NAFO regulated species are found as a result of a port inspection of a NCP fishing vessel from a non-cooperating NCP, then the entire catch will be denied landing.

- f) If port closures adopted, with the exception of cases of force majeure, how restrictive would such closures be

Since there was no consensus on whether port closures should be adopted, this issue was not discussed.

- g) Should a "black list" of "non-cooperative vessels" be established. If yes, how and when are such vessels added to the list, and how are they removed from the list

Contracting Parties were hesitant about the use of the term "black list". Contracting Parties did agree that the scheme needs to address when remedial measures would no longer be applicable to a particular vessel.

- h) Should the measures under the scheme distinguish between cooperative NCP and non-cooperative NCP vessels, if yes how

The Chairman noted that a cooperative NCP may be considered one which responds favourably to a NAFO demarche and takes action against its vessel(s), while a non-cooperative NCP would be one which does not. During the course of the discussion, reference was made to the introduction of the concept of a "cooperating party" in a recent ICCAT resolution, the practice under the North-East Atlantic Fisheries Convention (NEAFC) to allocate shares of certain TACs to non-members, and Article 17 of the UN Agreement concerning non-members of organizations and non-participants in arrangements. Certain delegations (EU, France) questioned the relevance of making such a distinction, since any scheme should target fishing vessels of non-cooperative NCPs. France suggested instead that the concept of a non-cooperative vessel is more practical, since certain NCPs may not have effective control over their vessels and it could help to address the problem of reflagging. The USA, on the other hand, found merit in identifying cooperative NCPs, assuming there are commercial fisheries for unregulated species in the NRA.

- i) How should the scheme deal with vessels engaged in transshipment which receive fish caught by a "non-cooperative" NCP fishing vessel

The discussion focused on the problem of transshipments at sea from NCP fishing vessel to a cargo vessel. Japan noted difficulties in imposing any type of measure on such cargo vessels, because its domestic legislation does not consider such vessels as fishing vessels and its location could make the enforcement impracticable. Certain delegations (Norway, Iceland, Canada) wanted the problem addressed in any scheme. In this context, Norway considered that transshipment to cargo vessels of NAFO Contracting Parties could at least be prohibited. Iceland noted that this issue is addressed in its domestic legislation. It was also noted that the UN Agreement Article 23(3) also permits a port State to prohibit certain transshipments. Some delegations (Iceland and Norway) pointed out that vessels which receive catches taken in the NRA by "non-cooperative" vessels should be treated in the same way as the vessels fishing in the NRA.

j) Should the measures represent minimum standards or a common rule

The Chairman stated that the issue to be addressed under this item is whether a NAFO Contracting Party would have discretion to take additional measures unilaterally in this regard.

Canada expressed a preference for minimum standards, noting Canada's different perspective on the NRA as a coastal state and the need for flexibility. Norway stated that only if the measures agreed were effective enough, the measures could be common rules. The EU preferred common rules, noting that the mention of minimum standards could be perceived by NCPs as indicating some disagreement amongst NAFO members. The USA recognized the need for common rules, but added that there should be some flexibility to impose tighter measures, consistent with international law.

k) In the event the measures under the scheme prove ineffective in deterring NCP fishing in the NRA, what subsequent measures can be taken

Contracting Parties agreed that any scheme can be reviewed and revised.

10. Preparation and distribution for comment/revision a Chairman's Provisional Draft NAFO Scheme to Deal with NCP Fishing in the NRA

On the basis of the previous discussion, the Chairman prepared and circulated a Draft of General Principles to be reflected in any scheme to deal with NCP fishing activities in the NRA (Annex 6).

11. Report and Recommendations to the General Council

STACFAC recommends, without prejudice to the views of any Contracting Party participating in STACFAC, and in light of the work within STACFAC to develop a scheme to deal with Non-Contracting Party fishing activities in the NAFO Regulatory Area, that the General Council should examine what consideration should be given to any Non-Contracting Party fishing activities in the NRA by a State which seeks to join NAFO.

12. Other Matters

STACFAC decided that another intersessional meeting was required before the next Annual Meeting, noting that the General Council at its 18th Annual Meeting had recognized the possible need for a second intersessional meeting of STACFAC. The EU proposed to host such a meeting 15-16 May 1997 in Brussels, Belgium. It was agreed that this meeting will continue work toward developing a scheme to deal with Non-Contracting Party fishing activities in the NRA.

13. Adjournment

The meeting adjourned at 1100 hrs on 7 February 1997.

Disposition of the Report

The Report was reviewed by the Representatives of the General Council during 12 March - 20 April 1997. Having presented and incorporated several editorial comments, the Report was adopted by the General Council.

Annex 1. List of Participants

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Alternate

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B. J. Cruikshank, Senior Secretary

Annex 2. Agenda

1. Opening by the Chairman, J. -P. Plé (USA)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of 1996 final information on activities of non-Contracting Party (NCP) vessels in the NAFO Regulatory Area (NRA)
5. Review of 1996 final information on landings and transshipments of fish caught in the NRA by non-Contracting Parties
6. Review of information on imports by Contracting Parties of groundfish species regulated by NAFO from non-Contracting Parties whose vessels have fished in the NRA
7. Reports by Contracting Parties on diplomatic contacts with non-Contracting Party Governments concerning fishing by their vessels in the NRA
8. Discussion on the openness of NAFO
9. Discussion on the specific elements of a scheme to deal with fishing vessels from non-Contracting Parties fishing in the NRA
 - a) What are the relevant legal basis to support a NAFO scheme to deal with NCP fishing in the NRA
 - b) Should measures be directed at a State or vessel
 - c) What criteria and procedures should be used to designate a vessel flying the flag from a NCP as "non-cooperative":
 - sightings in the NRA
 - diplomatic demarches
 - courtesy boardings
 - port State inspection
 - d) What measures should be incorporated in the scheme
 - port closures
 - denial of landings in the ports of NAFO Contracting Parties
 - trade measures
 - e) If denial of landings adopted, what fish would be affected, how should the scheme deal with fish caught outside of the NRA
 - f) If port closures adopted, with the exception of cases of force majeure, how restrictive would such closures be

- g) Should a "black list" of "non-cooperative vessels" be established. If yes, how and when are such vessels added to the list, and how are they removed from the list
 - h) Should the measures under the scheme distinguish between cooperative NCP and non-cooperative NCP vessels, if yes how
 - i) How should the scheme deal with vessels engaged in transshipment which receive fish caught by a "non-cooperative" NCP fishing vessel while fishing in the NRA
 - j) Should the measures represent minimum standards or a common rule
 - k) In the event the measures under the scheme prove ineffective in deterring NCP fishing in the NRA, what subsequent measures can be taken
10. Preparation and distribution for comment/revision a Chairman's Provisional Draft NAFO Scheme to Deal with NCP Fishing in the NRA
 11. Report and Recommendations to the General Council
 12. Other Matters
 13. Adjournment

Annex 3. Paper Presented by Canadian Delegation

Non-Contracting Party Fishing Activity in the Regulatory Area January 01 - December 31, 1996 (Preliminary)

Table 1. Groundfish Vessels 1986-1996

	86	87	88	89	90	91	92	93	94	95	96
Contracting Parties	196	182	179	198	218 ¹	220 ¹	155	197 ³	124 ⁵	88 ⁶	50
Belize	0	0	0	0	0	0	0	3	6	8	1
Caymen Islands	1	1	1	1	1	1	0	0	1	0	0
Honduras	0	0	0	0	0	1	2	6	3	2	1
Korea	1	1	3	5	6 ²	3	2	2	0	0	0
Mauritania	1	0	1	1	0	0	0	0	0	0	0
Malta	0	0	0	1	1	0	0	0	0	0	0
Morocco	0	0	0	0	0	1	1	0	0	0	0
Panama	8	12	20	24	24	25	27	14	7	1	1
Mexico/Chile	4	6	4	0	0	0	0	0	6	0	0
Sierra Leone	0	0	0	0	0	1	1	1	2	2	4
St. Vincent & the Grenadines	0	0	1	1	1	1	0	0	0	0	0
USA	15	9	11	14	9	0	0	4	8	0	N/A
Vanuatu	0	0	0	0	0	0	0	1	1	0	0
Venezuela	0	0	0	0	2	2	2	0	2	0	0
NCP Total	30	29	41	47	44	35	35	31 ⁴	27	13 ⁷	7
Overall Total	226	211	220	245	262	255	190	228	151	101	57

¹ Excludes thirteen (13) and nine (9) Norwegian vessels that fishes exclusively for capelin in 1990 and 1991 respectively.

² May include a squid fishing vessel registered in Taiwan (Her Wen No. 1).

³ Excludes 63 vessels that fished exclusively for shrimp.

⁴ Excludes ARNARNES, a St. Vincent registered shrimp trawler that transferred registry to Iceland in 1994.

⁵ Excludes 58 vessels that fished exclusively for shrimp.

⁶ Excludes 90 vessels that fished exclusively for shrimp.

⁷ Excludes CCLARABELLE, a New Zealand registered shrimp trawler.

Table 2 provides a list of NCP vessels that fished in the NAFO Regulatory Area in 1996. Nations of registry are identified.

Table 2. Non-Member Vessels 1996
Danica - Honduras
Austral - Sierra Leone
High Sierra - Sierra Leone
Porto Santo - Sierra Leone
Leone - Sierra Leone
Leone III - Panama
Ocean - Belize

Note: High Sierra was identified as having Belize (not Sierra Leone) registry in the January-July report. This was an error. However, this mistake was not reflected in the numbers.

Table 3. 1996 NCP Total Groundfish Catches				
NATION	Vessels	Effort	Catch	C/R
Belize	1	15	75	5.0
Honduras	1	175	4,150	23.7
Panama	1	50	275	5.5
Sierra Leone	4	180	1,200	6.7
Overall Total	7	420	5,700	13.6

Table 4. 1996 NCP Groundfish Catches by Species						
NATION	Estimated Catch (Mts)					Total
	Cod	Redfish	Flounder	Greenland halibut	Other	
Belize	75	---	---	---	---	75
Honduras	---	4,150	---	---	---	4,150
Panama	250	---	25	---	---	275
Sierra Leone	575	575	50	---	---	1,200
Total	900	4,725	75	---	---	5,700

The following tables show NCP activity and catch for the 1986-1996 period.

Table 5. NCP Fishing Activity 1986 to 1996				
Year	# of Different Vessels	Estimated Effort (Days)	Estimated Catch (Mts)	Catch Rate
1986	30	2,030	19,300	9.5
1987	29	2,640	29,400	11.1
1988	41	3,130	35,200	11.2
1989	47	3,290	35,400	10.8
1990	44	4,420	46,800	10.6
1991	34	4,000	47,300	11.8
1992	35	3,775	42,600	11.3
1993	31	3,217	34,200	10.6
1994	27	2,234	22,500	10.1
1995	13	900	10,950	12.2
1996	7	420	5,700	13.6

Table 6. NCP Groundfish Catches 1986 to 1996						
Year	Estimated Catch (Mts)					
	Cod	Redfish	Flounder	Greenland halibut	Other ¹	Total
1986	4,500	---	14,600	---	200	19,300
1987	5,400	20,900	3,100	---	---	29,400
1988	7,800	23,500	3,000	---	900	35,200
1989	5,900	24,000	4,500	---	1,000	35,400
1990	15,400	19,400	5,300	3,300	3,400	46,800
1991	11,600	17,050	11,650	6,150	850	47,300
1992	8,600	23,500	5,700	4,300	500	42,600
1993	4,100	9,950	15,900	4,150	100	34,200
1994	9,500	8,100	2,900	1,200	800	22,500
1995	2,250	7,700	1,000	---	---	10,950
1996	900	4,725	75	---	---	5,700

¹ various non-regulated species

Annex 4. Paper Presented by European Union Delegation

BROAD STRATEGY TO BE CONSIDERED FOR A POSSIBLE NAFO SCHEME TO DEAL WITH NON-CONTRACTING PARTY FISHING VESSELS

Non-Contracting Parties whose vessels fish in the NAFO Regulatory Area shall receive demarches from NAFO, by way of which they are invited to either become a member of NAFO or agree to apply NAFO Conservation Measures.

Contracting Parties shall collect information on the sighting of vessels which fly the flag of a Non-Contracting Party and which fish in the NAFO Regulatory Area. Such information shall be transmitted immediately, through the NAFO Secretariat, to all Contracting Parties as well as the relevant non-Contracting Party.

A Non-Contracting Party vessel which is sighted fishing in the NAFO Regulatory Area is presumed to be undermining the effectiveness of NAFO Conservation Measures.

When such a Non-Contracting Party vessel is voluntarily in a port of a Contracting Party, that Contracting Party shall, inter alia, inspect its documents, fishing gear and catch on board.

Where such an inspection establishes that the catch has been taken in contravention of NAFO Conservation Measures, landings and transshipments shall be prohibited. Information on the inspection and any subsequent action shall be transmitted immediately, through the NAFO Secretariat, to all Contracting Parties as well as the relevant Non-Contracting Party.

STACFAC shall review annually the information compiled and the actions taken under this scheme and, where necessary, recommend to the General Council any new measures that may be necessary to enhance the effectiveness of NAFO Conservation Measures.

Annex 5. Paper Presented by Canadian Delegation

Courtesy Boardings by Canada on Non-Contracting Party Vessels
January 1 - December 31, 1996

<u>Vessel Name</u>	<u>Country of Registry</u>	<u>Side #</u>	<u>Boarding Date</u>
High Sierra	Sierra Leone	3HN3V	February 7, 1996
"	"	"	February 29, 1996
Porto Santo	Sierra Leone	FN940912	February 18, 1996
Leone	Sierra Leone	FN940949	February 18, 1996
Danica	Honduras	HQID4	May 18, 1996
"	"	"	June 26, 1996
"	"	"	November 17, 1996

Annex 6. Chairman's Draft of General Principles

NAFO would deliver a demarche to all flag States notifying them of the NAFO scheme to deal with NCP fishing in the NRA and requesting their full cooperation in the conservation of the fisheries resources in the NRA.

(Against whom are measures directed)

1. Measures would be directed at vessels.

(Procedures and Criteria for designating NCP fishing vessels)

2. When a Contracting Party sights a Non-Contracting Party (NCP) vessel engaged in fishing activities in the NAFO Regulatory Area (NRA):

- (a) The Contracting Party which made the sighting shall provide such information to the NAFO Secretariat, which in turn shall notify all other Contracting Parties as well as the flag-State of the NCP fishing vessel. A Non-Contracting Party vessel which is sighted fishing in the NAFO Regulatory Area is presumed to be undermining the effectiveness of NAFO Conservation Measures.

Chairman's Note (CN): STACFAC should not preclude the possibility of inspections at sea - further discussion on this point is needed.

(Measures)

3. View A: When such a Non-Contracting Party vessel is voluntarily in a port of a Contracting Party, that Contracting Party shall, inter alia, inspect its documents, fishing gear and catch on board.

Where such an inspection establishes that the catch has been taken in contravention of NAFO Conservation Measures, landings and transshipments shall be prohibited. Information on the inspection and any subsequent action shall be transmitted immediately, through the NAFO Secretariat, to all Contracting Parties as well as to the relevant Non-Contracting Party.

- View B: In order to uphold the effectiveness of NAFO conservation and management measures, Contracting Parties may deny access to their ports to designated fishing vessels, except in cases of force majeure.

View C: The catches of Non-Contracting Party fishing vessels may not be landed in the port of a Contracting Party if their fishing has been in contravention of NAFO Conservation Measures. In such cases, the relevant vessels will be prohibited from being provided with services within the exclusive economic zones, the territorial waters or (inside the base-lines) the ports of the Contracting Parties.

View D: When a Non-Contracting Party vessel is presumed to be undermining the effectiveness of NAFO Conservation Measures, a Contracting Party may take action consistent with international law against such a vessel in order to prohibit landings.

View E: If any NAFO-regulated species are found on a designated fishing vessel, during the course of an inspection, then the Contracting Party shall prohibit landings of all the fish on such fishing vessel.

CN: To what extent are Non-Contracting Party vessels obliged to comply with NAFO Conservation and Management measures?

(Taking Measures)

4. See point 3 above.

(Scope of fish affected by prohibition on landings)

5. See point 3 above.

(Sighted vessels)

6. Measures would cease to have effect once the trip has ended.

CN: How to determine when a trip has ended?

(Transshipment)

7. (1) Transshipments in ports - the same prohibitions on landings in ports apply to transshipments in ports.

(2) Transshipments at sea -

View F - Contracting Party vessels shall not participate in transshipments to or from a sighted vessel.

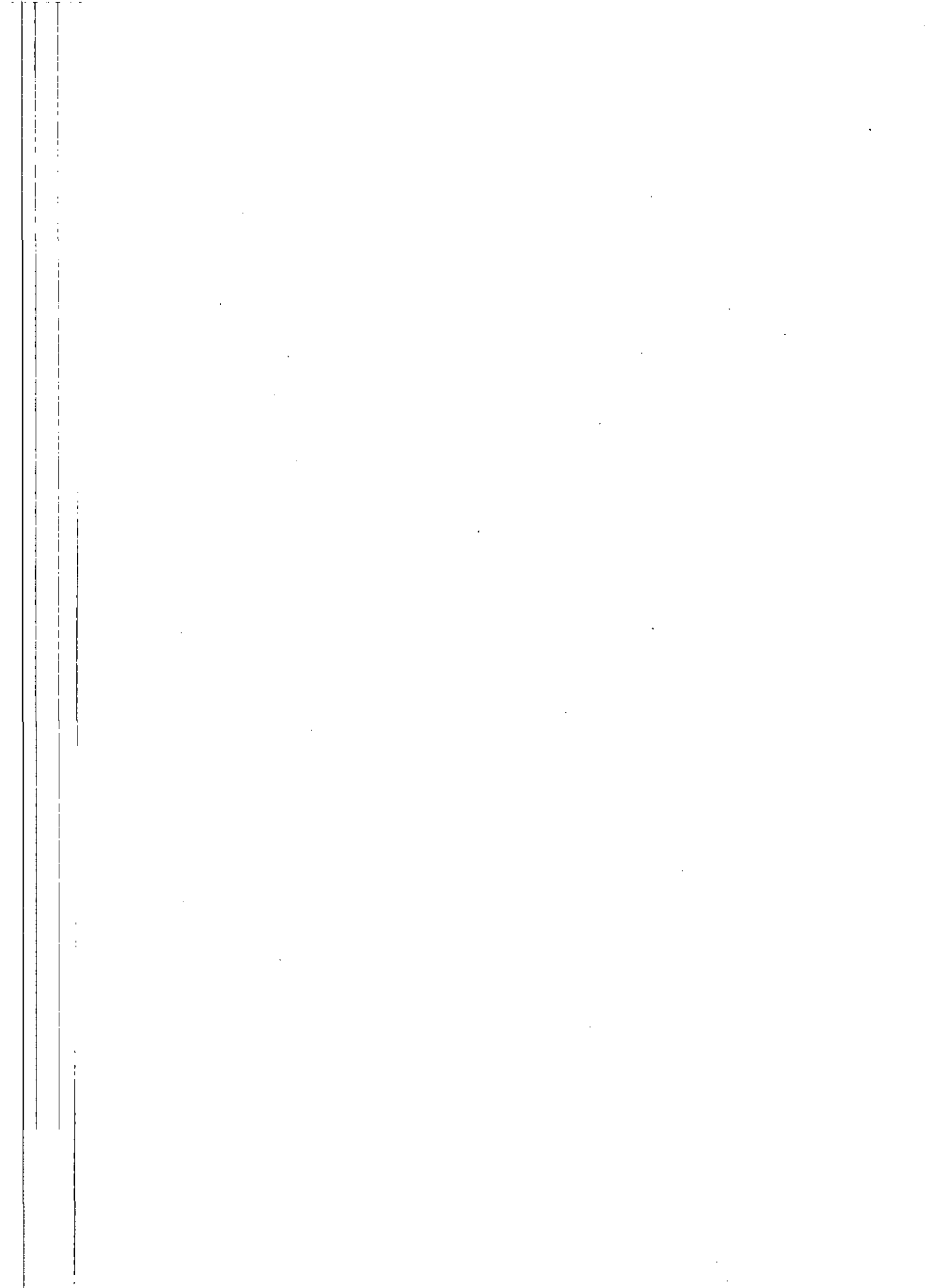
CN: The issue of transshipments between one NCP vessel and another NCP vessel was raised as an issue which needs further consideration.

(Review of the Scheme)

8. STACFAC shall review at least annually the information compiled and the actions taken under this scheme and, where necessary, recommend to the General Council any new measures that may be necessary to enhance the effectiveness of the scheme.

(Other considerations)

- A. Treat the scheme as a pilot scheme to be reviewed at a date to be specified - this recognises other possible consequences.
- B. Transparency in how in-port inspections of sighted vessels conducted.
- C. The content of the reports of in-port inspections of sighted vessels.

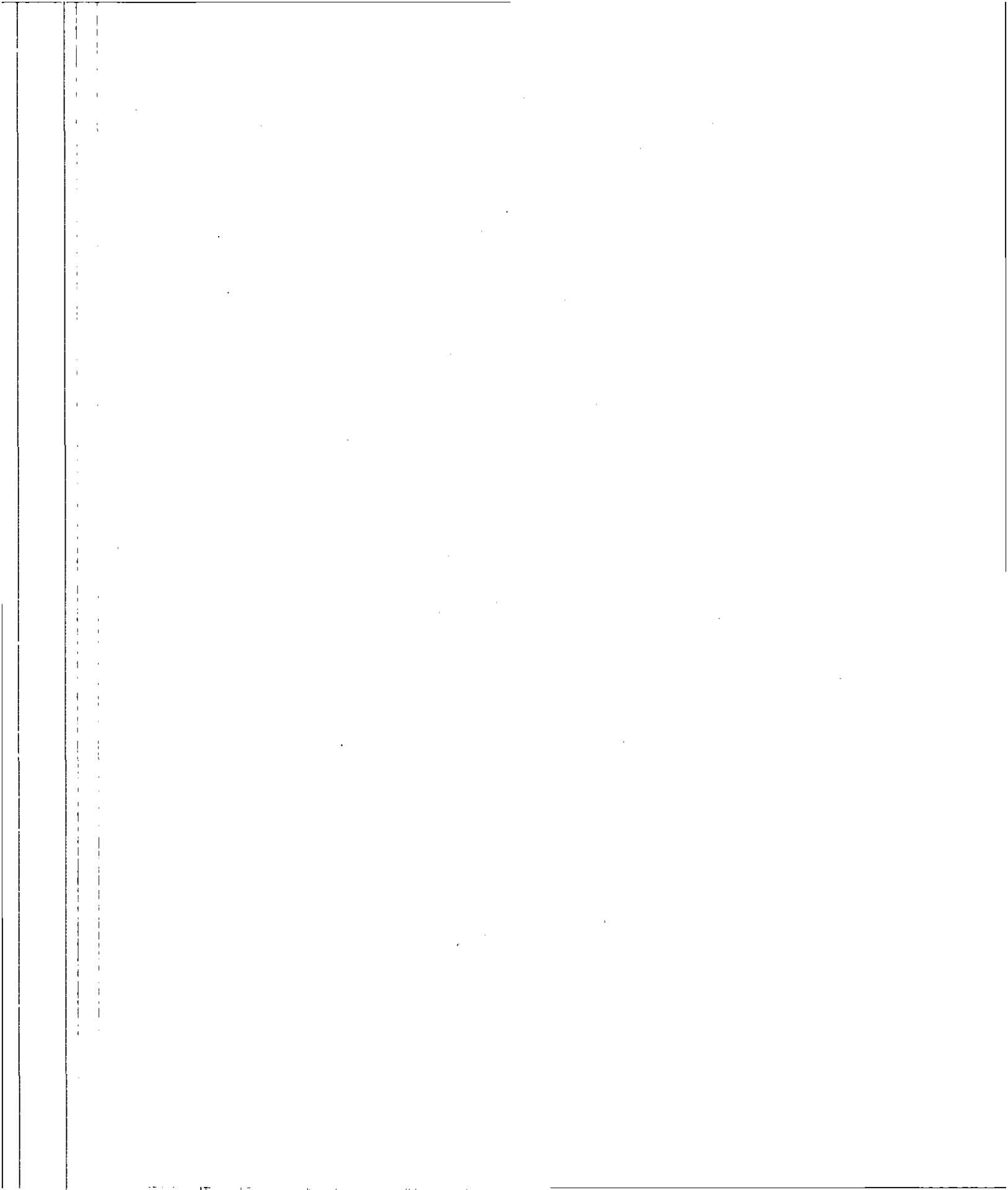


SECTION II

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Report of the Meeting of the STACTIC Working Group on Satellite Tracking 2-4 April 1997 Dartmouth, N.S., Canada

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Report of the Meeting of the STACTIC Working Group on Satellite Tracking

(FC Doc. 97/2)

**2-4 April 1997
Dartmouth, N.S., Canada**

This intersessional meeting was held in accordance with the decision by the Fisheries Commission (FC Doc. 96/13, Part I, item 3.2(c)) to convene a meeting of technical experts.

1. Opening of the Meeting

The Chairman, David Bevan (Canada), opened the meeting and welcomed all delegates (Annex 1).

2. Appointment of Rapporteur

Tony Blanchard (Canada) was appointed Rapporteur.

3. Adoption of Agenda

The terms of reference for the meeting were reviewed and after some discussion the agenda was adopted with item six amended as per attached. (Annex 2)

4. Report by delegates on their national programs and implementation of the NAFO Satellite Tracking Program during 1996

Reports by delegates of their national programs started with a presentation of Working Paper 97/1 by the delegate from Norway (Annex 3). The EU delegate questioned at what point the hail message is sent to the NAFO Secretariat, from the fishing vessel or from the Directorate of Fisheries. The Norwegian delegate responded that the data is uploaded to the Directorate of Fisheries system automatically. The monpol monitor reads position reports and determines whether the position falls in another countries EEZ or within a Statistical area (NEAFC or NAFO). This position is compared to the most recent position and if the move is sufficient to warrant a hail the hail is automatically generated and uploaded to the NAFO Secretariat. The Danish (Greenland) delegate asked if Norway has considered making systems tamper proof. The Norwegian delegate stated that they have not been able to address this question in detail but it is scheduled to be addressed in the domestic Norwegian large scale trials in 1997.

The Executive Secretary presented the NAFO Secretariat's report to the Meeting, Working Paper 97/2 (Annex 4). He emphasized that the most important component would be to combine the Satellite Tracking systems with the hail system making it less expensive and more manageable. The Norwegian delegate asked if hails from Norway or any Contracting Party could be uploaded to an X.25 subaddress. The Executive Secretary responded that he believes that there is the technology to develop a standardized format and we could go ahead with this as a Pilot Project. It was decided to refer this discussion to agenda item 6.

The delegate from Iceland presented its report, Working Paper 97/3 (Annex 5). The EU delegate questioned whether or not Iceland has attempted to send hail messages to the NAFO Secretariat and if so whether the message was generated at the vessel or earth station. The delegate from Iceland responded that they have not sent hail messages to date.

The delegate from Canada presented its report, Working Paper 97/4 (Annex 6). The Norwegian delegate questioned the security of using the internet. The Canadian delegate responded that they were in the early stages of the investigation into the security issue but no problems have been encountered so far. The EU delegate asked whether the system transmits only position reports or if hail reports were also sent. The Canadian delegate responded that hails were also sent, and there was no automation of the hails. A decision will be taken regarding automation of hails.

The delegate from Russia presented its report, Working Paper 97/5 (Annex 7). The EU delegate questioned how many Russian vessels in the NRA were equipped with satellite tracking. The Russian delegate responded that to date one vessel is working in the NRA. This vessel does not have a satellite tracking system.

The delegate from the EU presented its reports, Working Papers 97/6 and 97/7 (Annexes 8 and 9). The Norwegian delegate questioned whether the EU has considered an expansion of their system to send messages automatically, possible through X.25 or X.400 and if any problems had been experienced. The EU was not aware of any bugs in the system. The Danish delegate (Greenland) questioned whether the EU will require fishing vessels to communicate data to the Contracting Party and the NAFO Secretariat simultaneously. If so, this would put a burden on the vessels and require standardization and exclude some carriers. The EU delegate responded that domestically several ways have been identified to notify the Flag State and Coastal State simultaneously with one message being dispatched to two addresses. The same type of system could be developed for NAFO if this became a requirement in the future. The Icelandic delegate questioned if the EU system was transmitting positional data only. The EU responded that each member state is different and the political agreement is only to transmit positional data. In the future, the VMS system could be amended to include catches.

The Danish (Greenland) delegate stated that because Greenland had approximately 160 days fishing in the NRA, and 100% observer coverage they are not undertaking a satellite tracking program. He further stated that observers could deal with a wider range of conservation issues than satellite tracking. The delegate of Denmark was unable to provide information on the implementation of the satellite tracking by the Faroe Islands.

The delegate from USA stated that no vessels from the USA have fished the NRA but may do so in the future. Domestically the USA has approved satellite tracking if it meets the following conditions: it is tamper proof, it is automatic and in operation at all times, it is capable of tracking a vessel to within 400 meters, sends an hourly position, enables communication from ship to shore, responds to polling within 15 minutes, has 9600 baud ASCII format and will archive data for one year. Two systems have been approved; BoaTracs and Trimble Galaxy Inmarsat-C system. All the positional information is stored at the National Marine Fisheries Service and not provided to enforcement vessels. Discussions are in progress to allow access to the information by enforcement vessels. The EU delegate stated that the polling requirement excluded a particular service provider and asked if this was needed. The US responded that polling is a useful characteristic that will remain a requirement. The Norwegian delegate asked if the USA had any experience with the coverage of the BoaTracs system in the NRA. The USA delegate stated that it had no experience in the NRA and was not sure if the coverage extends to 3M.

The delegate from Denmark asked the Executive Secretary if there was any information from the Baltic States (Estonia, Latvia, Lithuania). The Executive Secretary stated that the Secretariat has not received any information from the Baltic States except hail information by fax, and some indication from the Argos satellite system of France that they were working with the Baltic countries to equip their vessels.

5. Costs associated with implementation of satellite tracking by Contracting Parties

While more detailed costs were described in the working papers, it was noted that there were a variety of costs ranging from \$3,500 US to \$12,000 US for an Inmarsat-C system. There was general agreement that costs were dropping significantly and the specific costs were unknown until a specific competitive tender was called.

6. Recommendation of hardware and software which should be installed at the NAFO Secretariat and, as appropriate, standardization of the report format

There was considerable discussion on the mandate of the Working Group. It was noted that the Fisheries Commission had mandated this Working Group to deal with the infrastructure at the NAFO Secretariat. It was further noted that according to the current NAFO Conservation and Enforcement Measures, the NAFO Secretariat is involved only in the receipt and transmission of hail reports. It was also noted that information pertaining to the geographical disposition of the fleet through satellite tracking positional information should be dealt with through direct bilateral cooperation between Contracting Parties, pursuant to Part VI section B.1.e of the NAFO Conservation and Enforcement Measures.

A number of Contracting Parties noted that technology exists that if acquired could make it possible to transmit data between fishing vessels and the NAFO Secretariat and have the Secretariat retransmit to Contracting Parties with an inspection presence in the NRA. These Contracting Parties further noted that standardized formats may be the least expensive approach to achieve this. However, technically, standardized formats are not required. Another Contracting Party noted that the Secretariat could be equipped with an appropriate system to recognize and interpret different formats.

While no consensus was reached on recommendations to take forward to the Fisheries Commission, several Contracting Parties might be willing to enter into arrangements with the NAFO Secretariat to electronically transmit hail information. Due to the limited mandate noted above there was no consensus on what new equipment and software should be provided to the NAFO Secretariat to accommodate this. The EU delegation stressed, however, that at present the European Union is the only Contracting Party to make available hail reports in a computer readable form on the basis of an agreed file format since 1994. The Working Group however wishes to bring to the attention of the Fisheries Commission that it is technically possible and relatively inexpensive to transmit in near real time any relevant information to the NAFO Secretariat and Contracting Parties with inspection vessels in the Convention Area.

7. Costs associated with implementation of satellite tracking by the NAFO Secretariat

Cost associated with recommendations have not been estimated. The Secretariat will work with Contracting Parties transmitting or wishing to transmit electronic data to the Secretariat, in order to determine costs and equipment requirements.

8. Recommendations to the Fisheries Commission and General Council (finance)

The Working Group recommended that the Fisheries Commission define the information needs and its distribution so that detailed proposals on equipment and software requirements and their associated costs can be developed by STACTIC.

9. Other Business

The delegations had an opportunity to observe the operation of the hail system at the NAFO Headquarters and in particular, to view the electronic retrieval, forwarding and storage of the hails.

10. Adjournment

The Report was adopted by the Working Group and forwarded to the Fisheries Commission. The meeting was adjourned at 1215 April 4, 1997.

Disposition of Report

The Report was reviewed by Representatives of the Fisheries Commission during 08 April - 07 May 1997. Having presented and incorporated some editorial corrections, the Report was adopted by the Fisheries Commission.

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SECRETARIAT

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Annex 2. Agenda

1. Opening of the Meeting by the Chairman, D. Bevan (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Report by delegates on their national programs and implementation of the NAFO Satellite Tracking Program during 1996
5. Costs associated with implementation of satellite tracking by Contracting Parties
6. Recommendation of hardware and software which should be installed at the NAFO Secretariat and, as appropriate, standardization of the report format.
7. Costs associated with implementation of satellite tracking by the NAFO Secretariat
8. Recommendations to the Fisheries Commission and General Council (finance)
9. Other business
10. Adjournment

Annex 3. Norwegian Satellite Tracking System - NAFO 1996/97

1.1 Equipment on board vessels

It was a decision by Norway that all of her vessels taking part in the Flemish Cap shrimp fisheries for 1996 should carry satellite tracking devices suitable for the NAFO trials.

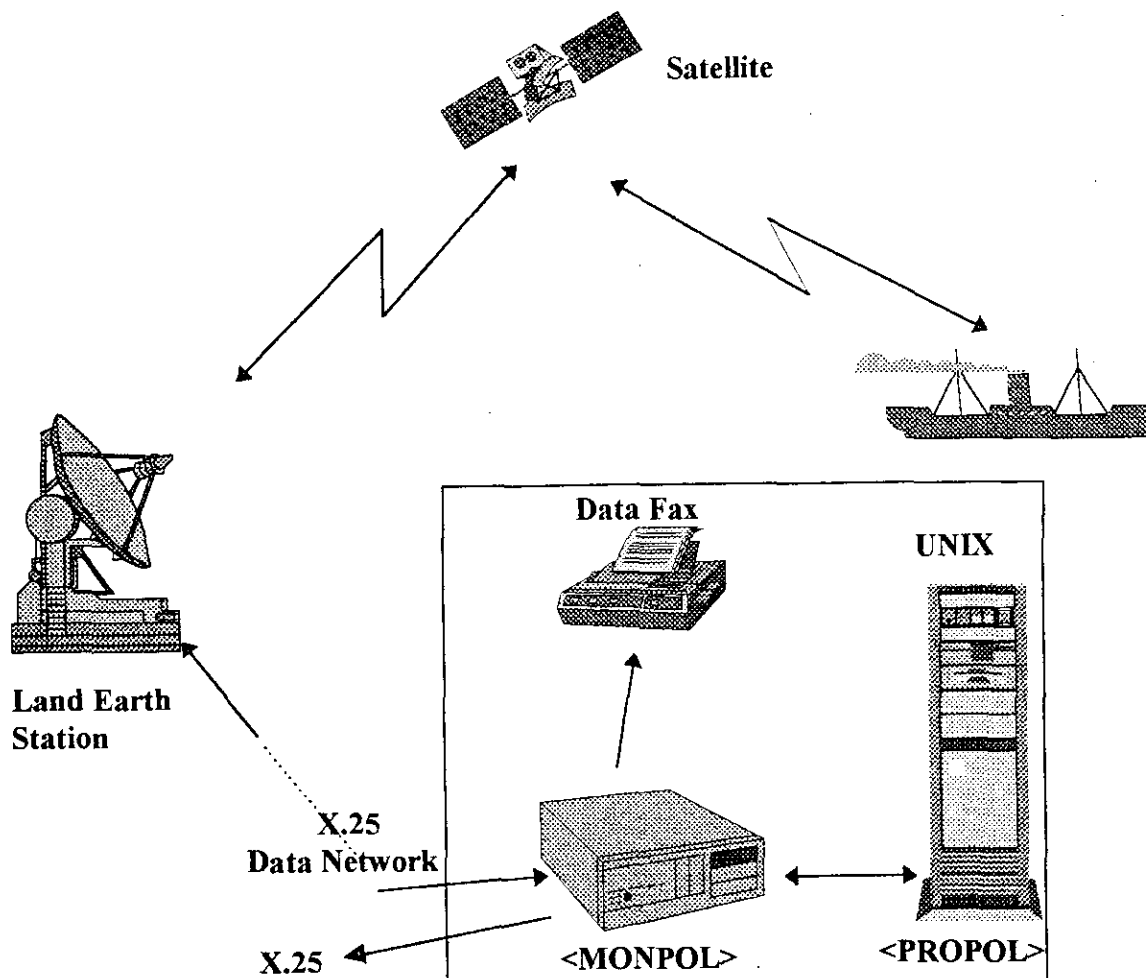
Out of 32 relevant Norwegian fishing vessels, about half were found to have Inmarsat-C equipment already installed before the start of the NAFO trials. Such equipment were, however, acquired for reasons other than tracking, and a fair amount of testing would be necessary to ascertain that tracking would work satisfactory. In the event not all those vessels chose to take part in the NAFO fisheries in 1996.

It was decided that a subsidy of NOK 20 000 (US \$3 000) should be provided by the Directorate of Fisheries for vessels buying their own tracking devices specifically to participate in the Flemish Cap shrimp fisheries. If the ship owner was not interested in buying such equipment, suitable tracking devices of the most inexpensive type would be provided by the Directorate of Fisheries at no cost to the vessel, for the duration of the trials.

During 1996, 6 ship owners took up the option to buy Inmarsat-C units specifically for the NAFO trials. Including 10 vessels which had Inmarsat-C already installed, this raised the number of Inmarsat-C units commissioned to 16. A total of 7 vessels had at any one time installed Argos units provided by the Directorate of Fisheries for tracking purposes, and 1 vessel had also installed Euteltracs equipment. One vessel first installed an Argos-GI unit, but later acquired Inmarsat-C equipment.

It was required that the tracking equipment should be operational before a vessel could sail for the NAFO area. The maximum number of Norwegian vessels active simultaneously in the NAFO area during 1996 reached 15 by mid July, as compared to a total of 23 vessels commissioned.

Be aware that the number of vessels is not equivalent to the number of satellite units. The reasons for this is that one of the vessels did carry two sets of equipment. It was anticipated that the Euteltracs system could not operate without interruptions in the Regulatory Area. As the necessary mechanism for automatic data exchange between the European and the Canadian systems had not been established by the time the vessel left for Flemish Cap, the vessel with Euteltracs equipment therefore also carried an Argos transmitter. All Hails forwarded from Norway to the Executive Secretary for this vessel were generated based on the Argos position reports.



1.2 Equipment at the Directorate of Fisheries

By the time of the 1995 NAFO Annual Meeting, the Directorate of Fisheries had already carried out a number of trials on satellite tracking of fishing vessels. An experimental system was therefore operational, whereby the Directorate of Fisheries could handle data both from Inmarsat-C and Argos on a 'real time' basis. The Directorate of Fisheries was also familiar with the Euteltracs system, although the Euteltracs position reports had to be uploaded to the Directorate of Fisheries via modem and a telephone connection, as Eutelsat could not provide a X.25 delivery service.

Basically, Argos and Euteltracs position reports have been collected by the service provider and reported to the customer (i.e. the Directorate of Fisheries) in batches. The Inmarsat-C position reports can be obtained in two ways, either as scheduled reports initialised by the vessel, or as reports initialised by request from a control centre (e.g. the Directorate of Fisheries). It is often held that the second option is the better. The second option provides what is called *Polled Data Reports*. The Inmarsat-C system allows polls for position reports to be issued to a specific vessel, or to a pre-defined group of vessels.

The system at the Directorate is set up in two parts. The first part <PROPOL> runs on a UNIX computer, and issues polls for position reports. Incoming position reports are also logged by this system, which then decides whether further action, such as the issuing of a Hail Report to a third party, must be initialised. With specific intervals, for the time being every 15 minutes, the system reads an operator-defined table to find out whether polls for position reports shall be issued over the Inmarsat-C system, and decides which satellite and *Land Earth Station* (LES) should be used. <PROPOL> can handle both Argos, Euteltracs and Inmarsat-C position reports.

The second part of the system <MONPOL> takes care of all actual data communication. <MONPOL> runs on one or more PCs. Basically X.25 is the preferred communication protocol. All Inmarsat-C traffic is handled via X.25, and all Argos data reports are submitted to the Directorate of Fisheries via X.25. A format for X.25 was agreed with Euteltracs, but no data on this format was received during 1996. The actual transmission of outbound Hails from <PROPOL>, in this trial the Hails to the NAFO Executive Secretary, is also handled by the <MONPOL> system. For the 1996 NAFO trials, such Hails were submitted by facsimile.

As the <MONPOL> system reads all incoming position reports and transcribes them to a standard format before uploading to <PROPOL>, the <MONPOL> system has been equipped with a module to decide which geographical area a specific position refers to. This may be a *National Economic Zone* (NEZ), or as in the case of the NAFO trials, a statistical subdivision.

1.3 The Hailing System

NAFO/FC Doc. 95/24 made no specific recommendations as to the format and standards to be followed for the reporting of Hails. It did, however, in section 8, list Universal Time Count (UTC) and World Grid System 84 (WGS-84) as possible options. Further, it drew the attention to the EU format developed by Denmark and Spain for use in data exchange.

The Norwegian party therefore decided to use those standards as a starting point. It was, however, apparent that the EU format did not cover all the data elements necessary for a NAFO hailing systems. Two new data elements were therefore introduced:

Field Code RC(new) - Radio Call Sign
Field Code RA(new) - Reporting Area
Field Code XR would refer to Vessel Side Number

It was decided that the satellite devices on board the Norwegian vessels should trigger an automatic Hail message every time a vessel crosses a subdivision line, whether this be between divisions or between divisions and outside the Convention Area. Although the system was capable of generating e.g. EXIT Hails specifically, it was decided that the Hail should in all cases be MOVE, to be reported in Field Code TM.

No effort was made to hail a crossing from the Regulatory Area into a NEZ.

As character set, the international ISO 8859.1 standard was adopted. In addition we took the liberty of reporting longitude (LO) and latitude (LA) according to the universally accepted decimal format, as this is better suited for handling by computer.

X.25 was our first choice as reporting media, with possible use of X.400 E-mail as a second best solution. As the X.25 installation at the NAFO Secretariat was not fully operational by mid February 1996, it was decided to use facsimile as reporting medium instead.

In retrospect, we have come to the conclusion that it would have been preferable to also include a Field Code SQ (new) for Sequence Number in the reporting format. This was not included for the 1996 trials, but was incorporated in the format for use in 1997.

An example of a 1996 hail message submitted by facsimile is given in Appendix 1.

2.1 Recent Developments

During the North Atlantic Fisheries Ministers Conference (NAFMC) meeting in Reykjavik in 1996, it was decided that an informal working group should report to the 3rd ministerial conference on current developments towards the application of common standards for the exchange of catch, position and activity data in the North Atlantic region, incorporating reference to work in NAFO and other relevant international organizations.

The Working Group should in particular aim at developing a standard for registration of catch and electronic data exchange that is compatible for both control and business use.

The NAFMC Working Group met in Torshavn 23-24 October, with delegates from Canada, the European Union, the Faroe Islands, Greenland, Iceland, Norway and Russia.

The Working Group inter alia decided to draw the attention of the Fisheries Ministers to the following:

A possible North Atlantic standard format for activity reporting and data interchange can be constructed by expanding the EU (Danish/Spanish) format to include other relevant data elements, for example those mentioned in the 1995 NEAFC report. If this approach is taken, efforts should be made to identify a body or organization which could accept responsibility for drafting and maintaining such a standard.

The Working Group also recommended that work on developing common standards, as proposed in the (Reykjavik) Communiqué, should continue.

At about the same time the Norwegian Directorate of Fisheries had accepted responsibility to organize the fisheries administration part of the Norwegian domestic trials on the use of satellite systems for fisheries purposes. As one of the main elements of these trials would be test automatic messaging systems, the Directorate of Fisheries decided that instead of starting off by defining a domestic format for the purpose of the trials, a better solution would be to try to adapt the recommendation of the NAFMC Working Group.

One comparatively great advantage with following this lead is apparent in the fact that a reporting scheme based on the EU (Danish/Spanish) model is not rigid, in the way that it does not assume a pre-defined array of elements to be reported. Rather, it allows elements to be added or taken away like building blocks, so as to set up messages tailored to specific needs with proper reference to the standard (re NAFO/FC Doc. 95/24, Annex 8).

The Directorate of Fisheries has consequently made an effort to define a number of data elements not included in the original EU (Danish/Spanish) proposal, enabling us to use this format as a basis for our domestic tests as well. A PC program <SATRAP> has been developed to set up messages according to this format for testing purposes, and matching data programs have been installed at the Directorate to cater for the automatic handling of incoming messages on a machine readable form. Although the Norwegian sea trials with this system is just about to start, one may hope that such trials could prove of value in setting up specifications for possible reporting schemes.

The EU Message Format as adapted to the Norwegian trials is outlined in Appendix 2.

It is the Norwegian view that to be of maximum value, a reporting scheme should be based on widely recognized standards. It should preferably operate equally well both in an E-mail environment (e.g. X.400) as well as implemented directly in a lower level protocol (e.g. X.25). In addition, the problem of authenticity is central to all automatic reporting schemes. Such problems are best resolved on an international basis.

APPENDIX 1: EXAMPLE OF HAIL MESSAGES

TELEFAX

From: The Norwegian Directorate of Fisheries
To: NAFO Executive Secretary

Bergen, 96-07-02 06:21

Re PILOT PROJECT FOR SATELLITE TRACKING (B.1.d)

Here are one or more HAILS regarding Norwegian fishing vessels,
as reported directly by computer

```
//SR//FR/NOR//AD/NAFO//RC/XXXX//XR/YYYY//NA/ZZZZ/  
/FS/NOR//TI/044400//DA/960702//TM/MOVE//AC//RA/3L/  
/LA/47.731//LO/-046.528//SP/110//CO/273//ER//
```

```
//SR//FR/NOR//AD/NAFO//RC/xxxx//XR/yyyy//NA/zzzz/  
/FS/NOR//TI/044400//DA/960702//TM/MOVE//AC//RA/3M/  
/LA/48.859//LO/-042.040//SP/87//CO/274//ER//
```

This is a copy of a real facsimile sent to the NAFO Executive Secretary. For reasons of anonymity, RC, XR and NA are given as XXXX, YYYY, ZZZZ and xxxx, yyyy, zzzz respectively for the two vessels.

APPENDIX 2: The EU Message Format as adapted to Norwegian trials

Draft Version 0.94E - February 1997

Field Code	Name	Type	Contents
SR	Start of Record	-	
FR	From	CHAR*5	ISO-3/NAFO/NEAFC
AD	Addressee	CHAR*5	ISO-3/NAFO/NEAFC
IR	Internal Register no	CHAR*12	(EU)
XR	External Register no	CHAR*12	Side Number
NA	Vessel Name	CHAR*30	ISO 8859.1
FS	Flag State	CHAR*3	ISO-3
DA	Date	NUM*6	YYMMDD
TI	Time	NUM*6	HHMMSS(UTC)
LA	Latitude (degrees)	SNUM*8	±99.9999 (WGS-84)
LO	Longitude (degrees)	SNUM*9	±999.9999 (WGS-84)
SP	Speed	NUM*3	Knots*10
CO	Course	NUM*3	360°scale
TM	Type of Message	CHAR*4	Codes
AC	Activity	CHAR*3	Codes
ER	End of Record	-	
TS	Trailer Start	CHAR*80	ISO 8859.1
TE	Trailer End	-	
AU	Authenticity Code	HEX*8	Hexadecimal
AG	Agreement	CHAR*4	
SQ	Msg. Sequence No	NUM*3	
TN	Tour Number	NUM*3	
CP	Control Point	CHAR*10	ISO 8859.1
RA	Reporting Area	CHAR*6	ICES/NAFO codes
RC	Radio Call Sign	CHAR*8	
FT	Forward To	CHAR*5	ISO-3/NAFO/NEAFC
TT	Transfer To	CHAR*8	Radio Call
TF	Transfer From	CHAR*8	Radio Call
PO	Port Name	CHAR*20	ISO 8859.1
MA	Master name	CHAR*30	ISO 8859.1
NZ	National Zone	CHAR*3	ISO-3
PL	Platform Number	NUM*9	
PQ	Position Quality	CHAR*1	ARGOS code
CA	Catch Items	CHAR*3 NUM*7	FAO-Codes, 10 pairs
HO	Items in Hold	CHAR*3 NUM*7	----"----
KG	Other Items	CHAR*3 NUM*7	----"----
CG	Count Groups	CHAR*3 NUM*7	----"----
RS	Return Status	CHAR*3	Codes
RE	Return Error Number	NUM*3	Lookup Table
MS	Text String	CHAR*32	ISO 8859.1
DF	Days Fished	NUM*5	
GG	Global Area Grid no	NUM*2	FAO Global Area Grid
GE	Gear	CHAR*3	FAO-Code
VO	Vessel Owner	CHAR*60	ISO 8859.1
VL	Vessel Length	NUM*3	Overall length, meters
VT	Vessel Gross Tonnage	NUM*4	GT 1969 Convention

TYPES OF MESSAGE:

INITIALISATION	MOVE
ENTRY	TRANSFER
EXIT	PORTCALL
CATCH	CONTROL
POSITION	NOTIFICATION

Abbreviation to the first four characters is encouraged.

TYPES OF ACTIVITY:

FIS	= Fishing
NOF	= Not Fishing
PRO	= Production
STM	= Steaming
HAR	= In Harbour

CONTROL POINT:

Typical values from Phonetic Alphabet: ALFA, BRAVO, CHARLIE etc.

RETURN STATUS:

ACK	= Acknowledged
NAK	= Not Acknowledged

FAO GLOBAL AREA GRID:

21	= NAFO Area
27	= NEAFC Area

etc. - Should be specified where misunderstandings are otherwise possible.

SPECIES/QUANTITY COMBINATIONS:

CA (Catch), HO (In Hold), KG (Species Distribution)

Ex: //CA/COD 123 HAD 2345 SAI 56789 HER 98765/

A maximum of 10 pairs of Species and Quantity; where Species are given as FAO code, and Quantities are Round Fresh Weight in kilos. The individual data elements are separated by space.

Only the Field Codes varies between the types of entries:

COUNT-GROUP SPECIFICATION:

Ex: //CG/PRA 13246 GR1 123 GR4 362 GR8 5312 GR6 14/

A maximum of 10 pairs of identifiers and values, where one pair (preferably the first) identifies Species and Total Quantity, and the following 9 or fewer pairs the Group(s) and the Value(s). The individual data elements are separated by space.

EXAMPLES:*Return Message without error specification:*

The Norwegian fishing administration NOR returns information to a vessel with Radio Call ABCD that her ENTRy message with sequence number 13, date 961203 and timestamp 12:55 has been ACKnowledged:

//SR//FR/NOR//RC/ABCD//TM/ENTR/RS/ACK//SQ/13//DA/961203//TI/125500//ER//

Return Message with an error specification:

The Norwegian fishing administration NOR returns information to a vessel with Radio Call ABCD that her CATCH message with sequence number 2, date 961203 and timestamp 12:45 has not been acknowledged. The error number is 713 (text found in look-up table):

//SR//FR/NOR//RC/ABCD//TM/CATC//RS/NAK//RE/713//SQ/2//DA/961203//TI/124500//ER//

USER-ASSIGNED ISO-3 CODES

(Ref. ISO 3166; 1993 E/F, Par. 7.3)

XXX	International Waters
XAA	Adjacent Area NOR-RUS
XBS	International Waters Barents Sea
XNS	International Waters Norwegian Sea
XEU	European Union (Waters)
XSV	Svalbard (Fishery Protection Zone)
XJM	Jan Mayen (Fishery Zone)

PREDEFINED ERROR MESSAGES

999	System Error at Other End
800	Your Message has Bad Parity
801	Your Password is Unknown
802	(not used)
803	Your message is Unreadable
804	Unknown Identifier in Message
805	No Message in Your Transmission
890	Pending, Waiting for Duplicate
899	System Error at Other End
700	No Interpretation Possible
701	OK, but No Initialisation
702	OK, but No Entry Message
703	OK, but No Exit Message
704	No Catch Message
705	OK, but Last Message is Missing
706	OK, but Some Messages Missing
707	Message OK, but Other Error
708	Your Message Already Received
710	Unknown Radiocall
711	Unknown Agreement
712	Unknown Area Code
713	Unknown Species
714	Unknown Adm.ISO-3 Code
715	Unknown Checkpoint
716	Unknown Harbour
720	Too many Vessels Active
721	Too many Fishing Days
730	Invalid Area/Agreement combination
790	Data Base Error
799	Contact Receiving Authority

Messages 990-998 are user defined to distinguish between various forms of System Errors.

Annex 4. Management and Administration of the Satellite Tracking Information at the NAFO Headquarters

1. Provisions (Part VI.B.1, Conservation and Enforcement Measures)

Each Contracting Party shall...transmit to the Executive Secretary, on a real time basis, messages of movement between NAFO divisions (as per the requirements of the Hail System outlined in Part III.E of these Measures) for its vessels equipped with satellite devices. The Executive Secretary shall, in turn, transmit such information to Contracting Parties with an inspection vessel or aircraft in the Convention Area.

2. Management, 1996

a) As per the requirements of the Hail System, the NAFO Secretariat is equipped with the following hard/software:

- PC 386, 8 megs of RAM; 125 megs of hard drive
- SVGA monitor, Dos 5.0; windows 3.1 and PROMCOM+
- X-25 connection, 2400 baud
- Data base of MS ACCESS 7.0

This technology has enabled the Secretariat to communicate hail messages between the Secretariat-Ottawa-Brussels on a regular basis.

b) The satellite tracking messages were transmitted to the NAFO Secretariat only from one (1) Contracting Party - Norway. During 1996 there were 283 satellite reports received at the Secretariat. The reports were, in turn, transmitted by fax to two (2) Contracting Parties with inspection presence - Canada and the European Union.

The satellite tracking hails were filed in a separate file but unlike hail reports not computerized due to very different protocol-format (please see Appendix 1).

3. Provisional costs of future satellite tracking programs at the Secretariat

The provisional costs could be projected from the information of the FC Doc. 95/24, first Working Group meeting on this issue.

- The basic annual cost for hard/software would be at the level:

INMARSAT	20,000 USD
EUTELSAT	13,000 USD
ARGOS	10,000 USD

- Service charges would be in the range of 4000-5000 USD.
- Labour costs (upgrade and train one specialist) would be in the range of 3,000-4,000 USD.

4. Conclusion

- There is no provision/decision or agreement made at NAFO for the purpose of management and administration of the Satellite Tracking Program;
- There are several systems available (and extensively used by some Contracting Parties in their waters and elsewhere) which could be deployed for the NAFO Area based on the major idea/principle of compatibility (modulated to the standard protocol-format).
- Consideration should be given to the possibility of unified NAFO system which could combine the hail reports and satellite tracking messages in one harmonious system. In this case, the existing NAFO technology of X-25 connection would be most helpful.

Hails by Norwegian vessels with satellite devices

TELEFAX

FROM: The Norwegian Directorate of Fisheries
 TO: NAFO Executive Secretary

Bergen, 96-11-11 16:30

RE: PILOT PROJECT FOR SATELLITE TRACKING (B.1.d)

//SR//FR/NOR//AD/NAFO//RC/JXXJ//XR/M 0003SM/
 /NA/INGAR IVERSEN//FS/NOR//TI/154600//DA/961111//TM/MOVE//AC/
 //RA//LA/66.451//LO/-030.303//SP//CO//ER//

//SR//FR/NOR//AD/NAFO//RC/JXXJ//XR/M 00033M/
 /NA/INGAR IVERSEN//FS/NOR//TI/154800//DA/961111//TM/MOVE//AC/
 //RA/3M//LA/47.276//LO/-043.996//SP//CO//ER//

 LEGEND

//SR	Start of record
//FR/	From (Contracting Party)
//AD/	To
//RC/	Radio call sign of vessel
//XR/	External number of vessel
//NA/	Name of vessel
//FS/	Country
//TI/	Time
//DA/	Date (yy,mm,dd)
//TM/	Type of report (entry, movement, etc.)
//AC/	Activity (steaming, fishing, etc.)
//RA/	Area
//LA/	Latitude
//LO/	Longitude
//SP/	Speed
//CO/	Course
//ER//	End of record

Annex 5. Icelandic National Report on Satellite Tracking Program and Its Implementation in 1996

As stated in STACTIC Working Paper 96/12, the Ministry for Fisheries acquired a tracking system to fulfil NAFO agreement for automatic position reporting for 35% of its fishing vessels operating in the NAFO area. The Icelandic Coast Guard was appointed to run the system on daily basis on behalf of the Ministry.

Contract was made with the company Marstar in Reykjavik for setting up a fleet tracking system hereafter referred to as "FTS". The system was operational in February 1996.

A maximum of 14 vessels have been tracked at the same time, all via Inmarsat C with communication via Goonhilly in the UK. To gain additional experience from the system, 3 Coast Guard vessels, one Coast Guard patrol aircraft and one Coast Guard helicopter have also been tracked.

All vessels had Inmarsat C previously onboard, so no effort was made to have fishermen purchase communication equipment for this purpose.

Following are specifications for the FTS used:

Specifications for the Marstar Fleet Tracking System: (FTS)
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General Description:

FTS uses Inmarsat C for transmission of position data in the current version. It is possible to get position data from other systems into the FTS, both manually, automatically from other FTS systems and from third party systems as specified by the customer.

FTS is divided into the following subsystems:

1. **User interface** which is graphical (GUI).
2. **Relational Database** that stores all data in the system.
3. **Communication subsystem** that receives position data from Inmarsat C or another FTS system.
4. **Event handler** that is responsible for logging all abnormal and selected normal events that occur in the tracking system.
5. **Reports** that can be used to monitor the state and activities in the system.

The users of the FTS are fisheries management personnel that do not have much prior training in computer system operation. The main operation of the FTS does therefore not require advanced skills in computer systems.

General specifications:

FTS version 1.1 will run on Sun-Sparc workstations using the OSF/Motif windowing system. Efforts are made in the design to be able to port a user interface version to MS-Windows. That version will not have any database nor communication subsystem of its own, but rely on a Unix-FTS running on the same network. A full version of FTS is supposed to be offered on Windows NT if it proves to be feasible because of market considerations.

Specific specifications:**User Interface:**

The user interface is based on a windowing system. There is one Main window containing a Main menu of the system. All major functions of the system can be performed by selecting items from the main menu, but there are often other methods (short cuts i.e. accelerator keys) that can activate the same operation.

Windows operations: The window operations can be divided into dialogue boxes which are used to input data and i.e. define the active set of vessels under consideration, etc. - and views containing graphical output of the system, i.e. vessel tracks.

Views and layers: A view is composed of different layers in which the graphics are drawn. The user can move and resize a view to show a defined geographic area. More than one view can show the same area (in different scale) at the same time, but if the underlining data changes, all views are updated. Each graphics layer in a view can individually be turned on or off. By having the different features of the maps in FTS on different layers, the user can turn on or off features such as coastlines, depth contours, text. etc.

Size and scale of data in views. The size of a view on the screen can be changed by resizing its window with standard window - system operations.

The scale of the data can be changed in three different ways:

1. **Zoom in operation**, which changes the scale of the map by a fixed factor (default 2,5) and centres about the point where the mouse was clicked.
2. **Zoom out operation**, which changes the scale of the map by a fixed factor (default 2,5) and centres about the point where the mouse was clicked.
3. **Window area operations**, where the user specifies two opposite corner points of an area and then clicks the mouse in the view where this area is to be shown.

Centering: A view can be centred around a point with the Window centre operation, where the user clicks on the point to be centred about.

Vessel selection and display. The user can select vessels to display by the following criteria:

1. **Vessel name** or any part of it.
2. **Inmarsat-C mobile-ID.** A list of ID's can be specified to be included or excluded from the selection.
3. **Vessel group.** A list of groups can be specified to be included or excluded from the selection.

4. **Area.** A list of predefined areas can be specified to be included or excluded from the selection.
5. **Class.** A list of classes can be specified to be included or excluded from the selection. A vessel is always of one class. A class is defined by the user and can be e.g. research vessel, fishing vessel or patrol boat.
6. **Flag.** A list of flags can be specified to be included or excluded from the selection. Each vessel always belongs to a state or country which is called its Flag state or simply its flag.
7. **Date and time.** A start and end period can be specified for the vessel track data, down to a minute or the last position can be selected.

All the above data items can be selected independent of each other, so the user can i.e. select all ships in an area and not in a specific class for the given period. The user can also choose if he wants the selected tracks to be added to any previous tracks displayed or if older tracks should be erased before the new ones are displayed.

Area operations. Areas can be used to select the data to be displayed as described above. The system can also be used to define an area and display areas.

The user can define up to 100 areas in the system. An area is defined as the co-ordinates of the points defining any polygon. The user can either input the co-ordinates via dialogue box or pick any point from a graphical view.

Poll control. Each vessel has defined a poll period i.e. the interval between automatic position transmissions. The poll period can be changed for individual vessel or the set of vessels currently defined in the graphical selection as described in "*Vessel Selection and Display*" above.

An immediate poll request can be sent at any time to an individual vessel or the set of vessels currently defined in the graphical selection as described in section "*Vessel Selection and Display*" above. If vessel do not respond to the poll an event is generated in the system as described in section "*Event Handler*".

Message transmission. The user can compose a message and transmit it to an individual vessel or the currently defined vessels.

Co-ordinate operations. The following co-ordinate-related operations can be performed by the user.

Point co-ordinates. The system will tell the latitude and longitude of a point selected by a mouse-click.

Distance measurement. The system can show the distance in kilometres between two points defined by the user with mouse-clicks.

Track operations. The user can click with the mouse on a track for a vessel. Then he gets a dialogue showing all data for the vessel. He can then select to look at all current position data for that vessel in a separate dialogue.

Graphical hard-copy output. The user can get a hard-copy output of the contents of a graphical view. The output can be either PostScript or Hewlett-Packard's PCL.

Data base

FTS uses version 7 of the relational database management system from Oracle Group. The database can also be accessed by external systems with standard networking software available from Oracle. This includes TCP/IP, X.25 and DECNET connections from PC's, Mac's, Unix machines and DEC-VAX.

Communications

FTS has built in functionality to retrieve Inmarsat-C reports from a LES. The system can concurrently connect to as many LES's in as many ocean regions as the owner prefers. There is one LES in each ocean region that is the primary LES in that ocean region.

The primary LES is used to transmit messages to vessels in that ocean region.

FTS can receive regular messages in the mailbox of the LES. These messages are sent to an e-mail alias called fts-messages.

Various checks are performed on each position that is received by the system. These checks include a test for all areas defined in the system, if speed is below critical speed in a control area, etc.

All this activity is logged to text-files and scripts are provided to aid in diagnosis of their contents. All data reports or messages that fail validity checks are stored away so they are available for diagnosis.

Communication interfaces. FTS can connect to a LES via direct X.25 connection, dial-up X.3/X.28 or even a leased line to the LES.

LES connectivity. FTS can connect to LES's from Hughes (i.e. Perth) and Thrane & Thrane (i.e. Blaavand in Denmark).

Event handler

Version 1.1 of the FTS can log events to the database where the user can list them out. The following events are logged to the database:

1. Vessel entering a control-area.
2. Vessel leaving a control-area.
3. A vessel reporting a power-up or login in an ocean region.
4. A vessel reporting a power-down or logout in an ocean region.
5. A vessel reporting speed below critical-speed in a control-area.
6. A vessel failing to respond to an individual poll.
7. A vessel failing to acknowledge a message transmission in its current ocean region.

A *control-area* is an area that is specified as such in the database. *Critical-speed* is an attribute of an area in the database but has only meaning if the area is a control-area. *Current ocean region* is an attribute of each vessel in the system that is automatically updated each time a position is received by the system.

Reports

The following reports can be generated by the system:

1. **List of vessels** containing all attributes of a given set of vessels. The following parameters can be used to select the set of vessels to be put in the report:
 - a. **Vessel name.**
 - b. **A specific class of vessels.**
 - c. **A specific group of vessels.**
 - d. **Vessels from a specific flag state.**
2. **Track data for a specific vessel** containing all position for the vessel in a given time period. All attributes of the position report are printed out including the origin.
3. **Event log report** can be generated for a specific event or all events in a given time period.

Interface specifications

User interface.

The user interface of the system is graphical and is designed to follow common standards i.e. CUA as closely as possible. The user communicates with the system with a combination of menu selections and dialogue boxes.

Hardware

The Sun-computers to be used for the system should be at least of the same performance as SparcStation LX with 32 MB of memory and a 500 MB disk. The system runs on all Sun / Sparc computers with better performance the LX and can therefore be scaled upwards.

A DAT-tape is recommended for backup, archive and update operation.

Software

The Sun-computer must run Solaris 2.3 or later version. It is possible to connect to the Oracle 7 database from other systems with optional connectivity software from Oracle.

Communications

The system can connect to a LES via X.25 synchronous or via X.3/X.28 asynchronous PAD connection at up to 56 kbit/sec.

Performance specifications

The FTS database can store information for 500 vessels and at least 750,000 position reports at any point in time. The system can also store information about 100 areas and 100 groups of vessels and a map.

The system can handle a map consisting of at least 150,000 vectors.

FTS can handle 250 vessel-reports/hour. Meaning that it can handle 500 vessels transmitting every other hour or 250 vessels transmitting every hour.

Number of users

A single user can use the system at any point in time on the Sun workstation. It will be possible later to connect up to 7 users to the systems database, up to 4 concurrently.

Security

The solaris operating system on the workstation can be set up such that passwords expire automatically and nobody can gain access to the workstation. The X-windows system can also be set up to require a password after a time-out.

Cost associated with implementation of satellite tracking: (in US dollars)
--

System cost:

Main system:	71.000
Maintenance:	23.700

Cost with the main system includes rent of the following:

- 2 ea. SUN SPARCstations/Solaris Unix
- 2 ea. Oracle SQL Run time Licence for SUN
- 2 ea. Intergraph Microstation for SUN
- 2 ea. Marstar Fleet Tracking System user licences

Included in the maintenance cost is a routine maintenance of the FTS and cost for some special requirements made by the Coast Guard, such as change of the format of printed data, notification of loss of reports from individual vessels and selection of automatic/ manual polling. Some expenses are also associated with initiation of individual vessels, that is to say download of DNID and programming of report interval, but that is though very limited as this was usually done direct by the Coast Guard. Included is also establishment of a fixed computer connection between the Coast Guard and the Directorate of Fishery.

Communication cost:

All tracked vessels report via Inmarsat C through Goonhilly LES in the UK.

The basic cost for position report is: 0,05 GBP for just the position, but 0,10 GBP if speed and heading is included.

As the FTS is configured to call the LES via X.25 every 30 minutes to extract the reports from a mail box there is an additional X.25 communication cost, which has proved to be nearly the same as the satellite communication cost. It should be noted that for immediate delivery to PSTN or PSDN address, there is no additional cost.

On average, since some vessels send speed and heading with the position and others do not, the cost per report has been about 0,10 GBP (15 US cents).

Result: (Extract from STACTIC Working Paper 96/12).

Some difficulties have been experienced in receiving the reports. The main cause for not receiving the reports have been:

1. When the satcom transceivers are connected to a PC that is also used for other purposes, some softwares, such as Windows Excel are blocking the transceiver. Possible cause is that the programs are writing to the same serial port as the transceiver is connected to and therefore the automatic reports are halted.
2. If the transceiver is occupied in other communication for the vessel at the pre-set reporting time, no position reports are transmitted.
3. A time-out report is issued by the FTS if the connection time to the LES exceeds the pre-set limit, and the connection is broken.
4. Since the system is currently using a dial up X.25 connection, a busy signal is sometimes received from the telephone system.
5. Some of the older Inmarsat transceivers have lost their DNID download data without any obvious cause. One case was that the download data became corrupted in the transceiver and it was not possible to rectify it, even though a new download was transmitted to the vessel repeatedly.
6. If vessels switch between Ocean regions momentarily, and then back again to the one they have the DNID download for, the transmission has to be manually started again. This problem disappears if a download has been done for both ocean regions.

Additional Trials in Iceland:

Additional systems have recently been taken on trial. This includes new reporting system as well as new tracking system.

New Reporting System:

Since January '97 two of the Icelandic Coast Guard vessels have been carrying "Boat Track" reporting and communication system. The purpose of the trial is to gain knowledge of the distribution of the Boat Track signal around Iceland. The trial is of too short a period yet to make any conclusion of its performance. This trial is supposed to last for the period of six months.

New Tracking Systems:

Together with the Boat Track reporting system is a tracking system from Boat Track which runs on PC's under Windows or Windows NT. The system is using dial up communication to extract position data.

Another new tracking system has also been taken on a six month trial. This is an Icelandic system which originally was aimed to fulfil requirements for automatic position reporting system for safety purposes, but has since been modified to receive and display radar data and is used as such at the Air Traffic Control centre in Reykjavik. The Coast Guard is using it to display Inmarsat C position reports from its own vehicles.

Annex 6. NAFO Satellite Tracking Program - Implementation in Canada during 1996

1. Canadian Coverage

1.1 NAFO Regulatory Area - Coverage in 1996

In 1996 there were 9 Canadian vessels which spent a total of 171 days in the NAFO Regulatory Area. Under the pilot project Contracting Parties with 300 days or more of effort in the NAFO Regulatory Area are required to install satellite tracking devices on 35% of its vessels. Even though Canada had less than 300 days of effort in the NAFO Regulatory Area, we did however install satellite tracking systems on 3 vessels which had anticipated fishing in the NAFO Regulatory Area. However, these vessels chose instead to pursue fisheries in Canadian fishing waters.

Of the 9 vessels which spent time in the NAFO Regulatory Area, 6 were northern shrimp vessels. These went to the NAFO Regulatory Area early in 1996 after environmental conditions forced them out of more northerly Canadian fishing waters. Some vessels went directly from northern shrimp to 3M without coming to port. There was not sufficient time to install the systems on these vessels. These vessels did not return to the NAFO Regulatory Area for the remainder of 1996.

As a result, none of the time spent in the NAFO Regulatory Area by Canadian vessels in 1996 was covered by satellite tracking.

1.2 Extent of Canadian Coverage Generally

Since June of 1995, Stratos Mobile Networks (formerly NewEast Wireless Telecom) has been providing vessel tracking and messaging services for the Department of Fisheries and Oceans through the REMS (Remote Electronic Monitoring System) project. This project includes all aspects of installation, commissioning, on-going maintenance, configuration, customer support and training.

A total of 31 complete vessel installations are involved in the project. Sixteen installations were utilized onboard chartered fishing vessels on the Canadian West coast during 1995 and 1996. This portion of the project is now completed. Of the remaining 15 installations, 7 were used on vessels off Newfoundland's East coast, with the remaining 8 currently being installed to accommodate trials in the Bay of Fundy area. These vessels will report their positions to a central fleet tracking centre designated by the Department of Fisheries and Oceans, as well as to any number of other locations defined by the Department of Fisheries and Oceans or vessel owners.

2. Equipment

The mobile equipment is a combination Inmarsat-C transceiver and GPS receiver. It is a small, lightweight electronic unit with a separate antenna referred to as either a Mobile Earth Station (MES) or a Ship Earth Station (SES). The Inmarsat-C system is a low speed Store-and-Forward data communications system. This means that the transmissions to and from an MES are stored in and forwarded by the LES (Land Earth Station).

The vessel can send and receive messages (either, a formatted message that DFO requires for NAFO, a free-form message or a position message) as required.

Inmarsat-C:

Inmarsat-C is a global data communications system developed by the Inmarsat (International Maritime Satellite Organization). Inmarsat owns four satellites that cover the four major ocean regions:

- Atlantic Ocean Region East (AOR-E)
- Atlantic Ocean Region West (AOR-W)
- Indian Ocean Region (IOR)
- Pacific Ocean Region (POR)

The system consists of three major components the Mobile Earth Station (MES), Land Earth Station (LES) and the Virtual Earth Station (VES).

- **MES**
The MES is the Mobile Earth Station, which is the unit which is installed on the Ship. This includes the Inmarsat communications and the GPS system.
- **LES**
The LES is a Land Earth Station, which are the units that communicate with the Inmarsat satellites. There are 29 LESs located around the world, each communicating with 1 or more of the 4 geostationary Inmarsat satellites that cover the 4 ocean regions.
- **VES**
The VES is a Virtual Earth Station, which is a store-and-forward data switch, that is able to connect to any of the 29 LESs. The VES has terrestrial links via a number of network connections.

The Inmarsat-C system is a low speed store and forward data communications link. This means that a shore-to-ship (or in the other direction) message would be received and acknowledged received in the LES before the transmission to the MES would take place.

The Inmarsat-C network is a digitally encoded, L-band system with a sophisticated satellite protocol. It ensures a high degree of data security and integrity.

GPS/Inmarsat integration (Galaxy Inmarsat-C System):

The GPS positioning capability is a part of an integrated system whereby the worldwide communications ability is combined with the precise navigation capability of the Global Positioning System (GPS) in a single integrated package.

The GPS component can provide access to as many as 8 GPS satellites for accurate positioning and the Inmarsat satellites and the Land Earth Stations (LESs) to provide communications. The system can be set to send a position record on timed intervals or can be polled at any time to provide a position report on demand. The Mobile Earth

Stations (MESSs) can be polled by a user from shore to change the interval that the MES is using to send its position records. So when there is a problem the system can be polled to give updated positions and smaller interval positioning. There is also a distress alert capability.

3. **Types of Information**

Under the *NAFO Conservation and Enforcement Measures* vessels fishing or intending to fish in the NRA are required to hail the position, date, time and catch on board when they Entry/Exit the NRA. They are also required to send messages when they move between NAFO divisions. This system is capable of sending various types of data. Broadly, these can be stated as follows:

- Hail Reports - Where the captain can fill in information on a form and have the information sent (Entry Message).
- Positional Data - These can be sent at particular intervals without interaction from the operator. The system can also be polled at sea and the interval changed or to give a position when queried.
- Freeform Messages - There is a place where the operator can type a message in ASCII format and send it by Internet e-mail, fax, telex, or to an electronic mailbox.

4. **Transmission of Data**

Vessel position information is automatically transmitted at 6 hour intervals (4 per day) to the Stratos data switch at St. John's, where the information is disseminated to several locations including the Department of Fisheries and Oceans CFIN database, as well as individual fishermen's locales. The information is sent via the Internet or retrieved via dial up using Stratos' shore-side software PC-Access. The Stratos data switch (VES, or *Virtual Earth Station*) has the ability to disseminate the same information, or portions thereof, to any number of locations worldwide by fax, Internet or to an electronic mailbox for dial up retrieval. The VES is also capable of setting or changing the position reporting intervals of each individual vessel.

5. **Connection to the Canadian Fisheries Information Network (CFIN)**

CFIN is a client-server system which includes an Oracle database which integrates allocations, licenses, surveillance and enforcement data, and catch information. The system is modular and open-ended, able to receive data from multiple sources using TCP/IP etc. Users at the Department of Fisheries and Oceans access CFIN from IBM-compatible 486/586 client PCs running application software written in Centura Corporation's SQL Windows software, and running under Microsoft Windows 3.x or Windows 95. The database is password-protected.

Data received on the Virtual Earth Station (VES) is written to a UNIX file on a computer which can be continually polled from a computer at the Department of Fisheries and Oceans. Retrieved records can then be automatically processed and added to the CFIN database. If errors are detected, records can be held for on-line correction then automatically added to the database. The polling process just referred to was extensively tested in early 1996. The Department of Fisheries and Oceans intends to implement the automated database incorporation and data correction routines in 1997.

6. Reporting Capability

6.1 Hail Compliancy

A Hails Compliancy routine in CFIN evaluates every positional record to determine whether it is justified by a corresponding Hail record. In cases of non-compliance, the system can generate appropriate letters to the Contracting Party and to the NAFO Secretariat.

6.2 Electronic Map Display

Selected positional data is extracted from CFIN and displayed in electronic map form using SPANS GIS and SPANS Map software.

6.3 Ad Hoc Reporting

Ad Hoc reports are generated using the Quest software package from Centura Corporation. Reports cover a range of topics such as last known position of selected vessels, or vessels of selected nations or Contracting Parties; hails received in a specified time period, etc.

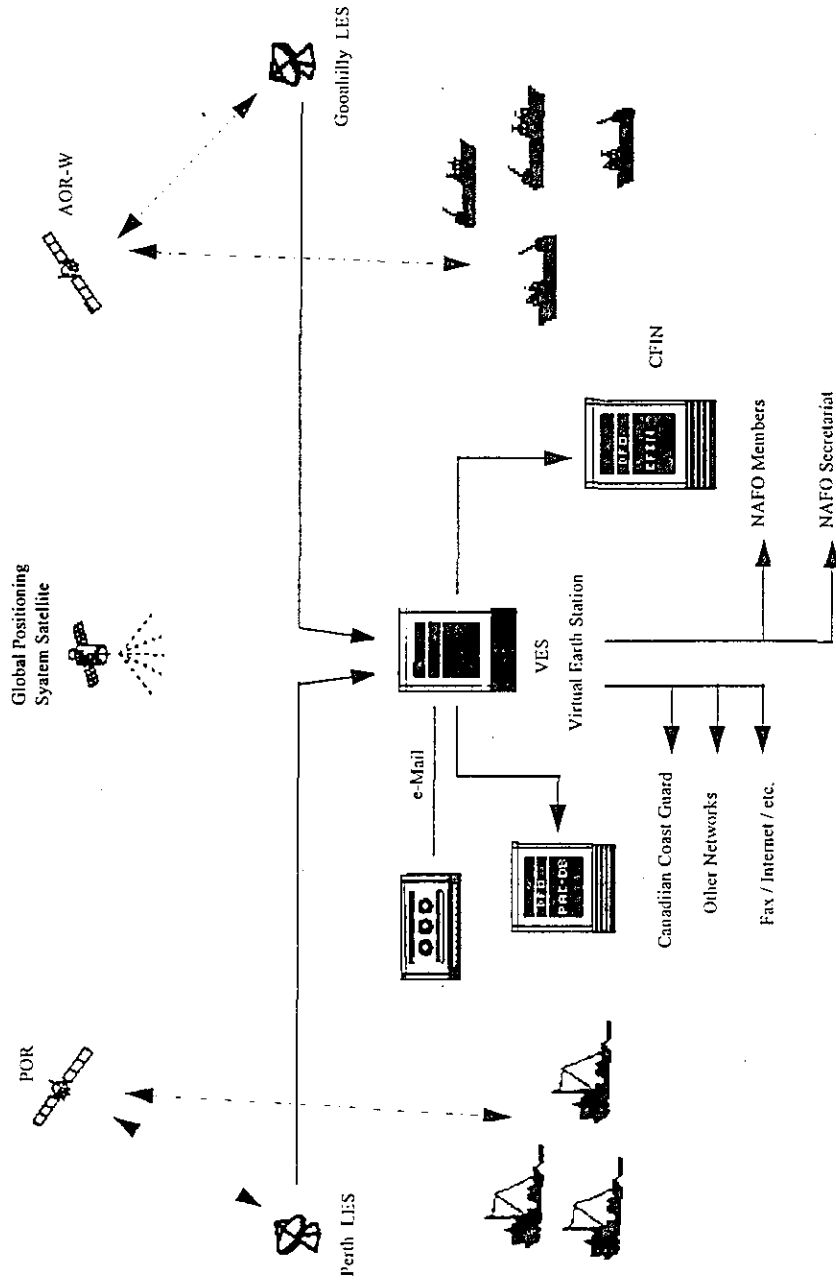
7. General Features

Vessel owners have taken advantage of this project also. Since the Department of Fisheries and Oceans has placed the equipment on board at no cost to the vessel owners, they have been given the ability to use the system for only the cost of the actual air time. The unique Stratos billing system allows individual crew accounts and/or shore side accounts to be established so that each user can be billed individually, without the need for the Department of Fisheries and Oceans to reconcile bills for personal messages. The system therefore provides an inexpensive efficient means of private communications for personal messaging as well as market information. The system also allows that vessels receive only their own vessel's position information at their personal computers, thereby protecting each of the owners' location data.

Shipboard users can send to Internet e-mail addresses, fax numbers or other private e-mail boxes. Many vessel owners without access to Internet e-mail have opted for the latter, with free PC-Access software provided by STRATOS, as well as free dial up, via public X.25 dial ports.

Implementation in Canada in 1996

NAFO Satellite Tracking Program



Remote Electronic Monitoring System (REMS)

Diagram 1

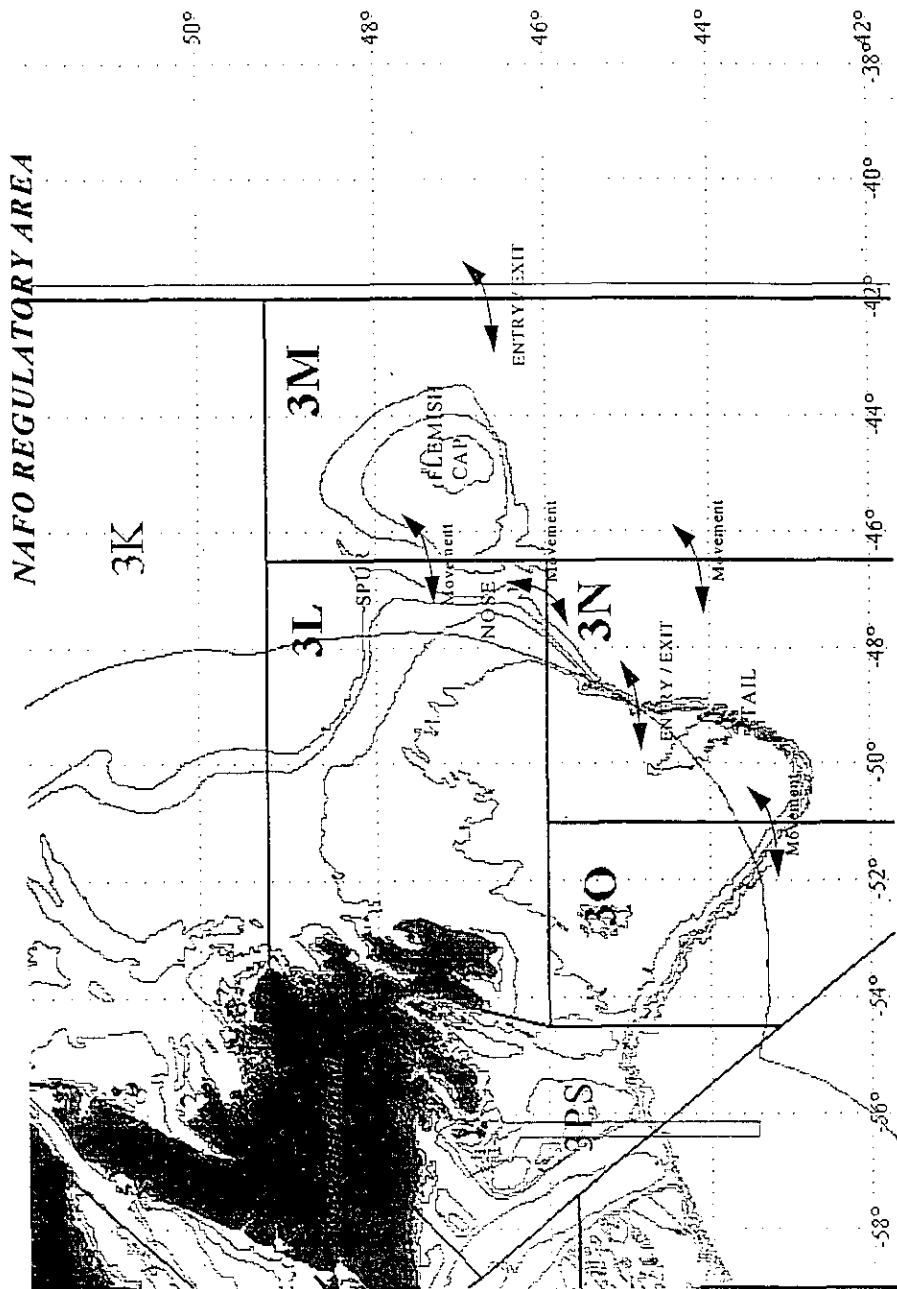


Diagram 2 NAFO REGULATORY AREA - VESSEL HAIL REQUIREMENTS

Annex 7. Approaches of Russia to Improvement of Bioresources Protection, Fishing Regulation and Fleet Surveillance

Development of world fishery, intensity of fishing, growing productivity and fishing fleet capacity are leading to exhaustion of fish stocks and disappearance of some fish species. That predetermined the necessity of searching new approaches to the problems of protection of fish resources, regulation of fishing effort and surveillance of fleet activities.

Fishing is regulated in all regions of Russia by the fishery regulations which take into consideration Russian national interests and mainly satisfy the demands of international conventions and agreements.

The Russian Fisheries Committee has a traditional structure of protection and reproduction of bioresources, regulation of fishing and fleet surveillance.

IT PROVIDES:

1) collection of operative information about the results of fishing effort to the Russian fishing vessels in all areas of the World Ocean on daily basis;

2) monitoring of the state of fish stocks in fishing areas and recommendations on fishing activities;

3) measures for protection and reproduction of fish resources and regulation of fishing;

4) operative inspection of fishing vessels and control of compliance with fishing regulations;

5) surveillance of fleet disposition and shipping safety measures.

The system operation is secured through the fish protection vessels, specific institutions dealing with protection of bioresources (so called Rybvod) and fleet surveillance service.

The Fisheries Committee of the Russian Federation has determined a general strategy in the sphere of fishing management, protection of fish resources and fleet surveillance.

The position of Russia takes into account protection of the national interests of the country as well as the demands of the international conventions and agreements.

The basis of the strategy is the creation of a complex monitoring system of fishing areas.

The main directions of the Russian strategy in the sphere of fishing regulation are:

- perfection of the judicial base,
- development of the organization structure of fish protection service and fleet surveillance,
- equipping the fleet and coastal organizations with modern electronic equipment, means of communication and telecommunication.

To provide continuous control of the vessels activity, the fishing fleet surveillance service has been established.

Protection of fish reserves is conducted by the regional organizations ("Rybvod") in cooperation with the Coast Guard.

The Committee has adopted a decision to create a few regional information centres on the Russian territory for monitoring of fishing.

One of them is the Murmansk centre. It must provide position control of vessels at seas of the European part of Russia. The Far East centre must control fishing at the Bering Sea and the seas of Okhotsk and of Japan.

We conducted with Norway and France joint experiments on using "Argos" and "Inmarsat" satellite systems for position control of vessels at sea.

Following the results of the experiments the Fisheries Committee has adopted a decision to purchase the equipment of the "Argos" regional processing centre and ship transmitters.

With the installation of equipment mentioned, in 1997, the information from the vessels will be received and processed at the Russian centre.

Creation of the regional centres is based on the experience of using traditional information systems and technologies of processing daily reports of the fishing vessels.

Vessel positions are displayed on the electronic map.. When necessary the map scale can be changed.

At user's request the necessary information on any vessel can be obtained; coordinates, catch, state of fish products on board the vessel, etc.

Thus, the Fisheries Committee, its fish protection institutions have a common information network providing collection and analysis of the real catch data.

Positive experience of the cooperation between the Russian Fisheries Committee and the Norwegian Fiskeridirektoratet has been accumulated at the Northern Basin. The information exchange through E-mail about fish landings in foreign ports has been conducted for more than two years. This data has been used to specify catches of vessels at the Barents and the Norwegian seas.

We consider it to be advisable to conclude such agreements with a number of states. That would increase integration of our countries in the sphere of using bioresources.

At present, fishing and fish protection vessels are being equipped with modern means of satellite communication transmitters "Argos" and computing technics.

The onboard program-technical complexes have been developed for fish protection inspectors. The implementation of complexes will enable the inspectors to operatively access the coastal data bases and get the necessary information on a separate vessel during its inspection at sea.

To improve quality and authenticity of the vessel accounts, the software for onboard electronic fishing logs, consaments and other documentation has been developed.

Special attention has been paid to provide protection of information and its confidentiality. It is planned to conduct field tests of those complexes at the beginning of 1997 at the Barents Sea.

We understand that the rational using of marine bioresources is the problem of international community which requires integration of efforts of all states.

Russia is going to further active work in international organizations and on interstate level in the spheres of fishing regulation, protection and rational using of bioresources on the basis of perfection of international law, international fishing statistics, creation of common information standards, wide usage of modern space technologies and technical decisions, integration into the world information and telecommunication environment.

Annex 8. EU Programmes for Satellite-Based Vessel Monitoring

1. INTRODUCTION

This paper is prepared for the NAFO STACTIC Working Group on the Satellite Tracking Program, NAFO Headquarters, Dartmouth, N.S., Canada, 2-4 April 1997. It provides an overview of recent developments in the European Community with respect to satellite based vessel monitoring systems (VMS) for fishing vessels. In particular, this paper provides some background information on the European Community approach to fishery control and enforcement, as well as a brief description of the current status of VMS, followed by an outline of both Community internal and external programmes in relation to satellite monitoring.

This paper ought to read in conjunction with a preliminary report on the European Community participation on satellite monitoring in the NAFO Regulatory Area.

2. BACKGROUND

Fishing is important to the European Union on two accounts. Firstly, the Community is one of the largest fish producers in the world. Secondly, as a consumer, the Community represents the largest global market for fishery products. The commitment of the Community to the sector has been expressed in the Common Fisheries Policy (CFP) which was formally adopted by the Council in 1983.

In response to internal and external events, the CFP has evolved from a basic policy into a comprehensive and dynamic fisheries regime. It now regulates all aspects of the fishing industry. The policy is comprised of three inter-linked elements made up of, conservation, markets and structural measures. Control and inspection are key components of the CFP which have the ultimate aim of improving compliance with regulations at all stages of the industry from harvesting through to processing and marketing.

Notwithstanding that the rules governing the CFP are adopted at Community level, the main responsibility for ensuring that the rules are applied and enforced rests with the competent inspection and control authorities of each individual Member State. Each Member state must police its own waters and control the activities on its territory.

The organisation of the Monitoring, Control and Surveillance (MCS) services differs from one Member State to another. Some have inspection services dedicated specifically to fisheries activities whilst others call on several different government departments which also perform functions other than fisheries surveillance.

Fisheries control entails big costs for the Member States. The sum of the control budgets of the individual Member States is estimated to ECU 300 million per annum. The Community is helping the Member States by providing financial aid to strengthen their control measures. In the past, Member States have mainly applied for a financial contribution to the purchase of fisheries protection vessels and aircraft. In 1995, the Fisheries Council has adopted a Decision that makes it possible, as from 1996 onwards, to provide additional financial aid to Member States for the introduction of modern technologies for fisheries control.

The European Union has advocated the use of modern technologies for MCS tasks. This approach is evident from the support the European Union has given to the research and development of satellite monitoring as a means to improve the enforcement of the common fisheries policy.

3. EU PROGRAMMES ON SATELLITE MONITORING

(i). EU Pilot projects for satellite monitoring (1994-1995)

In 1992, the Commission proposed the introduction of a continuous position-monitoring system using satellite communications for fishing vessels, in order to improve the effectiveness of surveillance of fishing activities¹.

Subsequently, the Fisheries Council of the European Union decided that Member States were to carry out pilot projects, in cooperation with the Commission, in order to assess the technology to be used and the vessels to be included in the above mentioned system (as provided for by Article 3 of Council Regulation (EEC) No 2847/93 establishing a control system applicable to the common fisheries policy, of 12 October 1993, hereafter called "the Control Regulation"). Commission Regulation (EC) No 897/94 laid down detailed rules for the pilot projects.

Thirteen EU Member States (Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, the Netherlands, Portugal, Finland, Sweden and the United Kingdom) have carried out pilot projects for satellite monitoring, involving up to 350 vessels throughout the Community.

Three different, commercially available, satellite-based vessel monitoring systems were used to track the movements of the participating vessels. Several Member States tested more than one of these systems. All Member States evaluated the potential of GPS-INMARSAT. Some Member States also tested ARGOS and/or EUTELTRACS. In a complementary project, Greece researched and tested a monitoring system which depended on VHF/DSC data communication as opposed to relying upon a satellite communication system. The United Kingdom also conducted trials with Automatic Position Recorders (APR), which store data onboard the vessel without transmitting information in real-time.

The way in which the pilot projects were set up is an illustration of the close co-operation between EU Member States to overcome technical and practical difficulties. Each Member State operated through a Fisheries Monitoring Centre (FMC), which was able to determine the position of its fishing vessels included in the pilot project, wherever they operate. The data from each vessel were always directed to the FMC of its Flag State. If the vessel's position was in the waters under the jurisdiction of another Member State, the Flag State FMC re-transmitted the position data to the Coastal State concerned. By this procedure each Member State received position information relating to all vessels included in the pilot project and located in waters under its jurisdiction or sovereignty.

¹ COM(92) 392 final.

The Scandinavian countries set up a regional model for data exchange. Denmark, Finland and Sweden operated a joint project, in which common hard- and software were installed in Copenhagen, Denmark.

The pilot projects were funded with ECU 10 million from the Community budget. The projects started in July 1994 and ended in December 1995. After the pilot project a number of Member States continued to use the systems as a means of improving and developing their understanding of this type of technology for fisheries enforcement and conservation purposes.

The pilot projects were coordinated by the European Commission. The Commission regularly organised meetings of the Expert Group Fisheries Control with the national officials in charge in the Member States in order to facilitate cooperation and to monitor the progress of the projects.

(ii). Evaluation of the pilot projects

The pilot projects proved the reliability of real-time satellite position monitoring and established that this type of technology will greatly enhance the efficiency and effectiveness of the existing aerial, surface and land based control resources.

Although the pilot projects in the Member States revealed a number of technical problems it also clearly demonstrates that these could be resolved by a joint approach between the project managers and the system providers. It was particularly evident that satellite based vessel monitoring technology has evolved considerably during the period of the project.

This trend is set to continue. The further development of ready-to-use products as well as the improvement in satellite services will greatly assist the realisation of the full potential of an operational system.

(iii). The utility of VMS

VMS provides information. This information may be limited to obtaining the position of a fishing vessels at a particular time and date. VMS provides the user, however, with this information at frequent time intervals. These intervals may vary. In some instances it may be appropriate to have position reports every ten minutes on the one hand, whereas in other instances it may be more appropriate to have daily position reports. Information derived from the VMS may also include the course and speed of a vessel. This information may be determined from the data stored on board the memory of equipment fitted on board the fishing vessel (the blue box) which is transmitted to the monitoring centre. Or in alternative, the monitoring centre may be able to extrapolate from several position reports received from a vessel the course and speed of the said vessel.

With VMS data it is possible to deduce the activity of vessels. For example, a series of consecutive positions at a speed in the range of 4-6 knots from a trawler may indicate that the vessel is towing gear. Precise position patterns of the activity of vessels will of course depend on the type of fishing vessel and the fishing activity pursued. Thus for example, the position, course and speed patterns of a long-line vessel will differ significantly from vessels engaged in other types of fishing.

VMS, if certain systems are relied upon, may also allow for the transmission of catch and effort data, and the benefits to be derived from this information are obvious for any management system which relies upon accurate catch and effort data to manage fisheries on a sustainable basis. VMS may also be designed to allow the transmission of advance notification prior to arrival or departure of a vessel in and from a port. This type of application is also of particular benefit in relation to monitoring fishing effort zones or in the case of sensitive or restricted fishing areas.

Indeed the utility of VMS continues to evolve and there may be further developments in the near future regarding the expansion of other applications such as an inter-face with an electronic logbook or the linking of VMS with vessel sensors placed in trawl winches which will allow the enforcement authorities to monitor the vessel more thoroughly.

VMS will not replace conventional enforcement tools such as patrol vessels and aircraft, it will nevertheless improve the efficiency and effectiveness of their deployment. Finally it ought to be pointed out that the probity and admissibility of the evidence derived from VMS will depend on the rules of evidence in the Member State in question.

(iv). Proposal for an operational Vessel Monitoring System (VMS)

In May 1996, the Commission presented a report on the pilot projects and a proposal for the introduction of an operational VMS to the Fisheries Council of the European Union².

The European Parliament supports the Commission proposal to introduce a VMS for Community fishing vessels³. The Parliament is also in favour of financial participation by the European Union in the setting up of this system. The Parliamentary report on VMS stresses the importance of the system being applied fairly in all Member States and the importance of not imposing excessive administrative burden on fishermen.

In December 1996 after considerable debate the Council reached a political agreement to introduce an operational system to monitor the activities of fishing vessels by satellite.

(v). Political Agreement

The VMS will be introduced in two phases.

In the first phase, which commences on the 30 June 1998, vessels exceeding 20 meters between perpendiculars (24 metres overall) in the following categories are required to be equipped:

- vessels operating in the high seas, except in the Mediterranean Sea,
- vessels operating in the waters of third countries, provided provisions have been made in Agreements with the relevant third country or countries for the application of a VMS to the vessels of such a country or countries operating in the waters of the Community,
- vessels catching fish for reduction to meal and oil.

² COM(96) 232 final, 96/0140(cns).

³ Opinion delivered on 13 December 1996 (not yet published in the Official Journal).

In the second phase, which commences on the 1 January 2000, all vessels exceeding 20 meters between perpendiculars (24 metres overall) are included in the system. There is, however, an exception for vessels operating exclusively within 12 nautical miles of the baselines of the flag Member State, and for vessels which operate at sea for less than 24 hours. The satellite-based vessel monitoring system shall apply to Community fishing vessels operating in third country waters only in the case where the third country or countries in question have accepted the obligation to apply a satellite-based vessel monitoring system to their vessels operating in the waters of the Community.

The devices fitted on board the fishing vessels shall enable the vessel to communicate its geographical position to the flag State and to the coastal Member State simultaneously.

An obligation is placed on Member States to establish and operate Fisheries Monitoring Centres which will be equipped with the appropriate staff and resources to enable Member States to monitor the vessels flying their flag as well as the applicable vessels flying the flag of other Member States and third countries operating in the waters under the sovereignty or jurisdiction of the said Member State.

The political agreement on VMS is being adopted in the form of a Council Regulation and further detailed rules for the implementation of the system will be adopted by the European Commission taking into account the opinion of the Management Committee for Fisheries and Aquaculture.

(vi). The cost/benefit of the VMS

The cost of the VMS will depend on the number of participating vessels and on the system(s) selected by the Member States. E.g. the annual cost of monitoring a fleet of 4,000 vessels is likely to be of the order of 8 Mecu. It ought to be pointed out, however, that costs may be substantially reduced if Member States and fishermen work together to choose the least expensive system that achieves the control and surveillance objectives.

The benefits from VMS will be derived from its utility and effectiveness as an enforcement tool to address the shortcomings in the enforcement of the CFP.

Firstly, VMS is the only control means that provides continuous information on the location of fishing vessels. This allows Member States to monitor directly the compliance with all provisions related to geographical restrictions, in particular closed areas and tie-up rules. In this respect all other control methods are more costly and less efficient for this purpose.

Benefits from satellite technology will further be achieved through the *synergy* with the conventional control means, in particular the improvement of the aerial and marine surveillance. Information provided by the VMS will improve the deployment of aircraft and patrol vessels. Less time will be spent with searching the fishing vessels, more time will be devoted to inspection. VMS may enable both aircraft flying hours and vessel sailing time to be reduced, hereby reducing the operational costs. An increase of 20% in the effectiveness of marine surveillance, which has an estimated annual cost of 100 MECU, is not unrealistic and already justifies the introduction of a VMS.

Furthermore, the shore-based inspectorate will benefit from the information provided by VMS. Its efficiency will be increased, since VMS will alert the inspectorate to possible illegal or unauthorised landings and transshipment, which have been traditionally very difficult to combat using conventional enforcement tools. VMS also offers valuable information with which the data in logbooks may be verified including the cross-checking of the catch area against positions recorded in the logbook. Further scope for improving control measures is provided by the facility introduced by VMS to collect more comprehensive statistics on fishing activity. Improved management information in turn enables the fishing activities to be better monitored.

Satellite monitoring also has a deterrent effect. Fishermen will be less inclined to mis-report their position and their activity, as they will be aware that the authorities are continuously monitoring their position. This form of preventive enforcement is very beneficial, it is however difficult to quantify. Its advantage over the deterrent effect of the traditional control means lays in its continuity and in its global geographical coverage.

The use of VMS and the exploitation of its communications features in real time would offer scope for much better coordination and greater *transparency* between the appropriate authorities. This would ensure equal treatment for all fishing vessels. This advantage is an essential one, but again cannot be quantified.

4. EXTERNAL PROGRAMMES ON SATELLITE MONITORING

(i). NAFO Pilot Project for Satellite Tracking (1996-1997)

The EU is involved in the pilot project for satellite tracking of the Northwest Atlantic Fisheries Organisation, see attached preliminary report for further details.

(ii). Fisheries agreement between the Kingdom of Morocco and the EU

In 1995, the European Union and Morocco concluded a four-year fisheries agreement that allows mainly Spanish fishing vessels to fish in Moroccan waters.

This agreement strengthens fisheries controls and includes a pilot project for satellite monitoring. Vessel tracking in the Moroccan fisheries zone will allow direct control of the provisions concerning fishing effort and geographical restrictions.

Morocco and the EU have set up a working party to lay down detailed arrangements for this pilot project. It is expected to be operational later this year.

(iii). Fisheries agreement between the Islamic Republic of Mauritania and the EU

In 1996 the EU and Mauritania concluded an Agreement in the sea fisheries sector. The Agreement stipulates that pending the implementation of a national satellite monitoring system for fishing vessels of similar type operating in Mauritania's fishing zone, both Parties agree to implement a bilateral satellite tracking project for Community vessels. Vessel tracking in the Mauritanian fisheries zone will allow a direct control of the provisions concerning fishing effort and geographical restrictions. Furthermore, it will allow for targeting inspections at sea and retrospective controls of the zones declared in the fishing logbook.

The Parties will set up a working group to define the procedures for setting up, implementing and financing the project.

5. DG XIV TRIALS (since 1992)

The Directorate General for Fisheries (DG XIV) of the European Commission has also been conducting its own trials since 1992. DG XIV is using its inspection vessel operating in the NAFO Regulatory Area for this purpose.

During 1992-1993, several systems have been tested on board the patrol vessel ERNST HÄECKEL: Argos, Euteltracs, Monicap and a GPS/Inmarsat mobile communication terminal (Capsat, from Thrane&Thrane). The respective monitoring software packages were installed at DG XIV's offices in Brussels, Belgium. A prototype for system integration, called MERCURE, was developed. MERCURE ran on a SUN station and was able to integrate data originating from Argos, Eutelsat and Monicap. Monicap as been developed by Portugal with support from the Community and is a tracking system based on GPS/Inmarsat.

In 1994 and 1995, the patrol vessel KOMMANDOR AMALIE was equipped with Argos and GPS-Argos. The Prodat system was tested as well, on board the research vessel BELGICA.

Further trials will be conducted as necessary.

Annex 9. Preliminary Report on the Results of the Pilot Project on Satellite Tracking Implemented by the European Union

1. INTRODUCTION

This document is prepared to describe the EU involvement in the NAFO pilot project for satellite tracking from a technical perspective.

This paper describes Member State participation in the pilot project and the the procedures used to transfer data from Member States' Fisheries Monitoring Centres (FMC) to the European Commission, DG XIV, and from the European Commission to the NAFO Secretariat in the framework of the pilot project for the NAFO regulatory area.

2. LEGAL BASE

The legal base for the establishment of the pilot project:

- NAFO Conservation and Enforcement Measures - Part VI.B.1
- Council Regulation (EC) N° 3070/95 of 21 December 1995 on the establishment of a Pilot Project on satellite tracking in the NAFO Regulatory Area.

3. OVERVIEW

During the period of the pilot project 35 % of the vessels fishing in the NAFO area are required to be equipped with a system able to transmit automatically satellite signals to a land based receiving station (FMC) permitting a continuous tracking of the vessel by the flag Member State. Four EU Member States have actually equipped vessels with satellite tracking devices in order to fish in the NAFO Regulatory Area (NRA)¹. The systems being used are based on GPS/INMARSAT.

During 1996, one Danish vessel was equipped with GPS/INMARSAT. Fifteen German vessels which comprise the entire deep sea fleet are equipped with VMS, but none of these vessels have operated in the NRA recently. Fourteen Spanish vessels have been equipped with a GPS/INMARSAT system. Sixteen Portuguese vessels held NAFO licences and 7 of these vessels carried the MONICAP "blue boxes". No UK vessel has operated in the NAFO area in 1996.

The position reports from the vessels are transmitted on a real time basis to the flag Member State which is obliged to transmit the corresponding data to the Commission. However, the Member States and the Commission still have some minor technical issues to resolve relating to the transmission of this information.

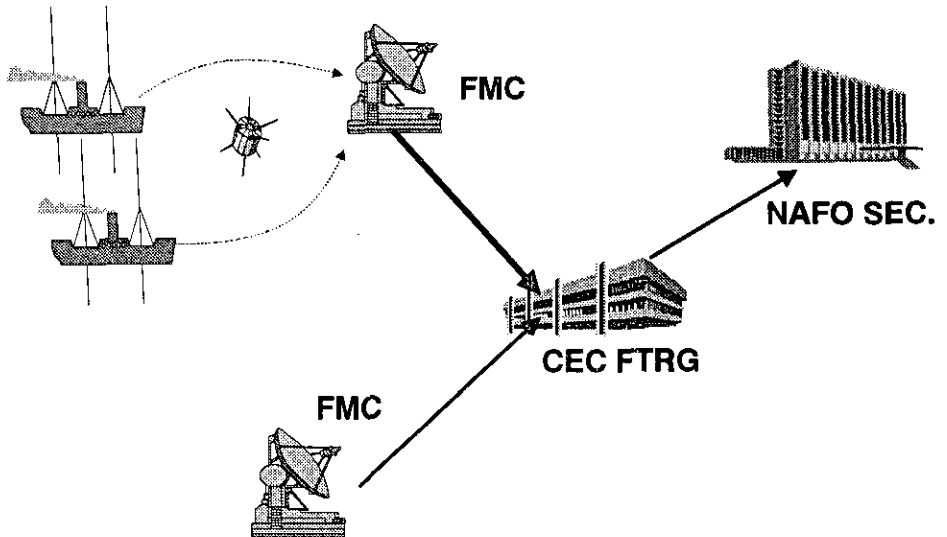
The onward transmission of information to the NAFO Secretariat will be undertaken through similiar procedures as the ones relied upon in the NAFO hail system automation pilot project, as referred to in the STACTIC Working Paper 97/2 under item 2(a).

The total cost of the project is estimated at 0.5 MECU.

¹ Denmark, Germany, Spain, Portugal. The United Kingdom will participate in 1997 if vessels flying the UK flag operate in the NAFO Regulatory Area.

4. MESSAGE FLOWS

In practice the system should operate as follows. Vessels equipped with satellite monitoring devices and fishing in the NAFO regulatory area communicate position reports on a regular basis to the flag Member State's Fisheries Monitoring Centre (FMC). This information is consolidated into hail reports and where applicable geographical distributions are communicated to the European Commission (Directorate General for Fisheries - DG XIV) collects the incoming messages, maps them to the appropriate data exchange format and forwards these to the NAFO Secretariat.



5. MESSAGES

Under the pilot project three message types are foreseen:

- i) hail reports
- ii) position reports (transmission from the flag Member State to the European Commission)
- iii) geographical distribution

The development of the hail report messages is currently being pursued as a priority given the requirement of onward transmission to the NAFO Secretariat.

It should be kept in mind that the European Commission receives message of movements between NAFO divisions (as per the requirement of the hail system) from the EU Member States concerned. The messages received by the European Commission are batched together and forwarded regularly to the NAFO Secretariat. The format used for the transmission of messages to the NAFO Secretariat is independent of the systems used to track the vessels.

The format used for the purpose of the pilot project may differ from the specification set out in the forthcoming application regulation for the implementation of an operational satellite based VMS for Community fishing vessels exceeding 20 meters between the perpendiculars (24 meters length overall).

6. COMMUNICATION WITH THE EUROPEAN COMMISSION

For the purpose of the pilot project the preferred method of communication with the European Commission is through the File Transfer Gateway facility (FTRG).

The FTRG facility acts as the hub for the transfer of messages between the Member States and the Commission and between the Commission and the NAFO Secretariat. It is situated at the European Commission's Telecommunications Centre in Luxembourg and is accessible via various communication protocols.

7. VESSEL TRACKING SYSTEMS APPLIED BY THE MEMBER STATES

7.1 DENMARK (to be completed)

7.2 GERMANY (to be completed)

7.3 SUMMARY OF SPANISH PILOT PROJECT ON THE NAFO AREA

The Spanish Pilot Project on the NAFO area, is based on the hardware, software and communications infrastructure existing at the Spanish National Center, to which some essential modifications are being incorporated in order to fulfil the requirements demanded by Council Regulation (EEC)N° 3070/95.

The Spanish vessel monitoring system under INMARSAT-C, is embodied in the Control Center of National Fishing Vessels (Madrid), with interchanges data with the Blue Boxes installed on board the fishing vessels through two Coastal Stations (LES), SINTRA (Portugal) and BURUN (Holland). Likewise, the system can be connected to 5 international Terminals, one of which that belonging to the Commission.

The Spanish fishing vessels who participate in this Pilot Project, have been chosen among those authorized to fish in the NAFO Area during the year 1997. It is envisaged to install mobile equipments in 15 of these ships, thus completing the 35 per cent share contemplated in the Council Regulation.

Fourteen of the selected vessels are now equipped with their corresponding Blue Box, eight of which will incorporate the new operative software.

Tests of communication with the Commission, have already been successfully carried out. The process of updating the mobile equipment installed in 1996, is under way, while the installation of the new units in the remaining vessels, is waiting for the arrival of these ships to port.

On the other hand, the Spanish Blue Box, admit different communication systems (multitransceiver), apart from being closed and sealed, detecting any possible manipulation by the crew members, and fulfilling some strict norms of quality.

Among the more important functionalities of the Blue Box, there are the following:

- Capture of position.
- Periodic transmission of positions.
- Detection of transfer of ports, special zones, NAFO divisions and subdivisions.
- Detection of begins/end of fishing operations.
- Reception of messages of the Center of Control.
- Activation of SOS messages.
- Presentation of messages in display.
- Report from anomalies in the blue box.
- Capacity of connection of an external P.C.
- Storage of messages.

The Fisheries Monitoring Center, channels and analyze the whole information of the fishing fleet equipped with Blue Box. The most important functionalities are:

- Graphic Presentation of the stage of pursuit.
- Access to the data of the ships.
- Administration and presentation of the messages sent by ships.
- Administration of the transmission of messages to the ships.
- Creation of special zones and ports.
- Presentation of routes of ships.
- Shipping of messages to C. International.
- Administration of warnings of incidences.
- Generation of Reports and Statistical.

Modifications on Vessel Monitoring System

Between the modifications to be implemented on Vessel Monitoring System, we have the following:

- All the messages originated by the blue box in STORE and FORWARD will be made with verification of delivery in satellite.
- Option of choosing the individual format of shipping of each type of messages to the Center of Control by the operator.
- Automatic Retransmissions to the Commission, of the data of the ships received at the Control Center, endorsed by a fax line in case of wrong operation of the main system.
- Temporary change of coastal station in case of failure of the main one.
- Discrimination of cost of transmissions when there are several addressees.
- Connection of an external P.C.

In summary, Spain is making good way with respect to the communications to the Commission. Similar progress is being made with regard to the installation and modification of the mobile equipment. It is hoped to start sending vessel data to the European Commission Centre in accordance with Council Regulation No. 3070/95 during the second week of April.

ESQUEMA DEL SISTEMA DE MONITORIZACIÓN NAFO

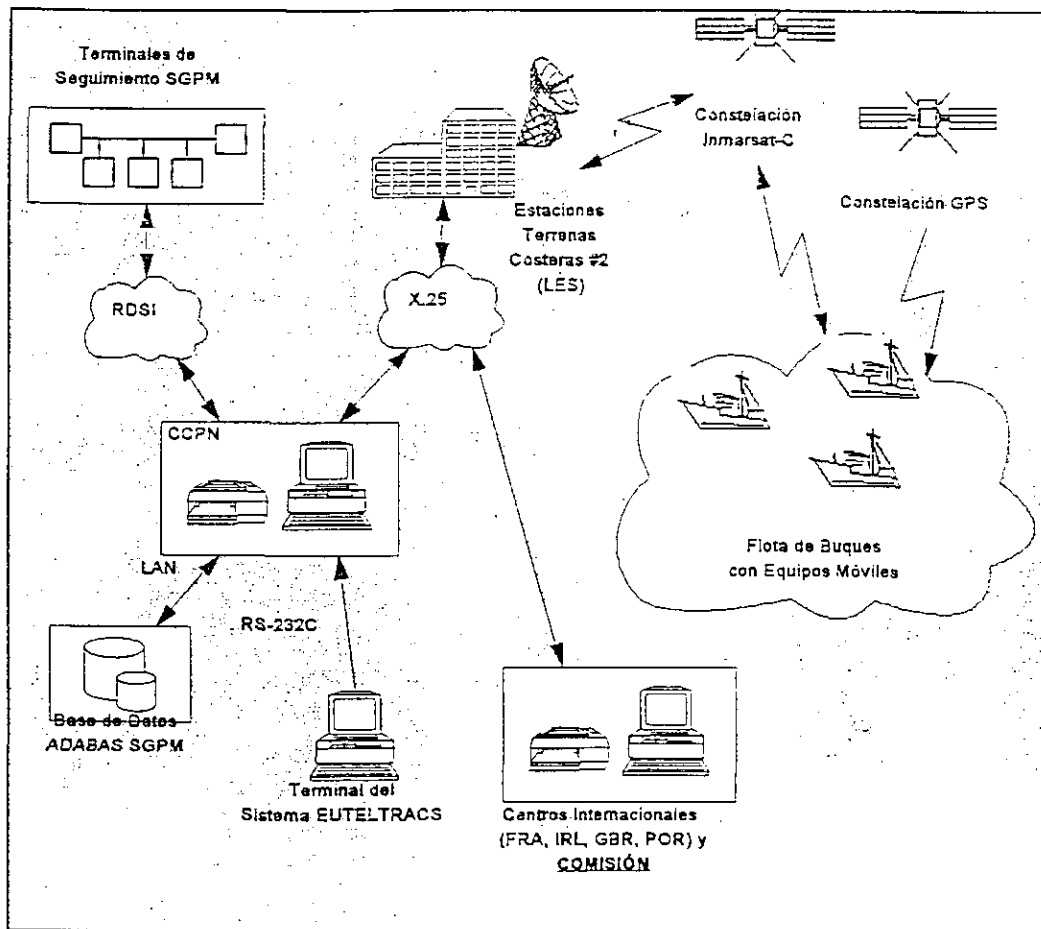
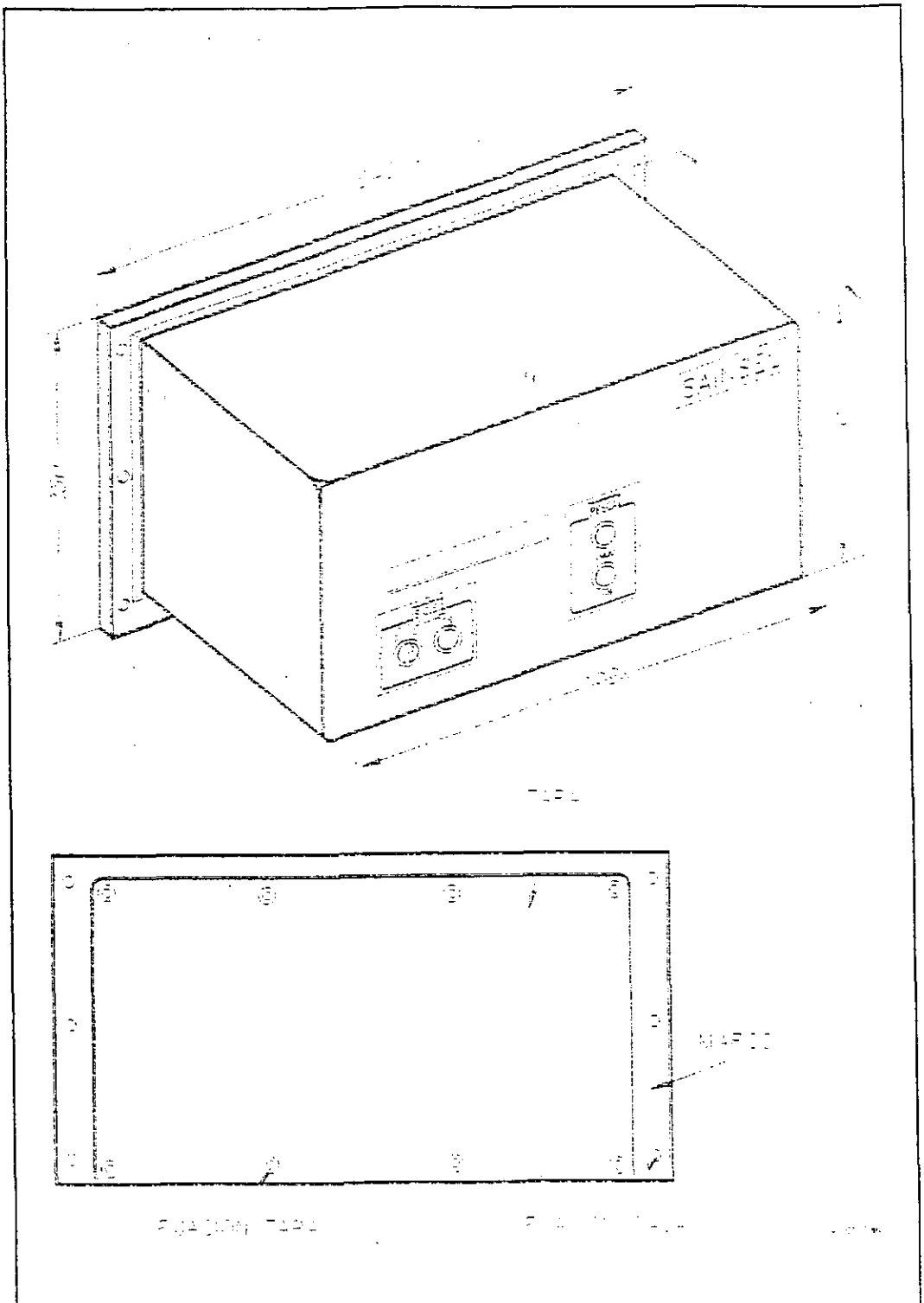


Fig. 1 Diagrama del Sistema MPVS-NAFO



Ilustr. 5 Caja del equipo móvil. Vista exterior.

7.4 SUMMARY OF PORTUGUESE TESTS

STATISTICAL DATA

16 Fishing vessels in the NAFO area
 7 Vessels with the Blue Box installed
 (2 vessels have the box software with the NAFO divisions)

December/96

	Periodic msg.	Hail msg.	Lost msg.
Vessel 1	94	18	1
Vessel 2	91	12	4 (+ 1 error)

EQUIPMENT COSTS

1 Blue Box _____ 2 000 000 PTE (10 000 ECU)
 7 Blue Boxes (Pilot Project) _____ 14 000 000 PTE (70 000 ECU)
 16 Blue Boxes (All the vessels) _____ 32 000 000 PTE (160 000 ECU)

SOFTWARE COSTS (Control Centre + Blue Boxes concerning only the NAFO Pilot Project)

_____ 2 200 000 PTE (11 000 ECU)

TRANSMISSION COSTS

- 1 Vessel/1 Month 90 periodic messages (8H)
 15 hail messages (average value)

With samples (10 minutes) _____ 30 000 PTE (150 ECU)
 Without samples _____ 8 000 PTE (40 ECU)

- 1 Vessel/1 Year (Considering that each vessel fishes, on average, 4 months by year in the NAFO area)

With samples (10 minutes) _____ 120 000 PTE (600 ECU)*
 Without samples _____ 32 000 PTE (160 ECU)*

*These values don't include the periodic messages when the vessel is not fishing in the NAFO area.

- **7 Vessel/1 year** (Considering the vessels in the Pilot Project)

With samples (10 minutes)	_____	840 000 PTE (4 200 ECU)
Without samples	_____	224 000 PTE (1 120 ECU)

- **16 Vessel/1 year** (Considering all the vessels)

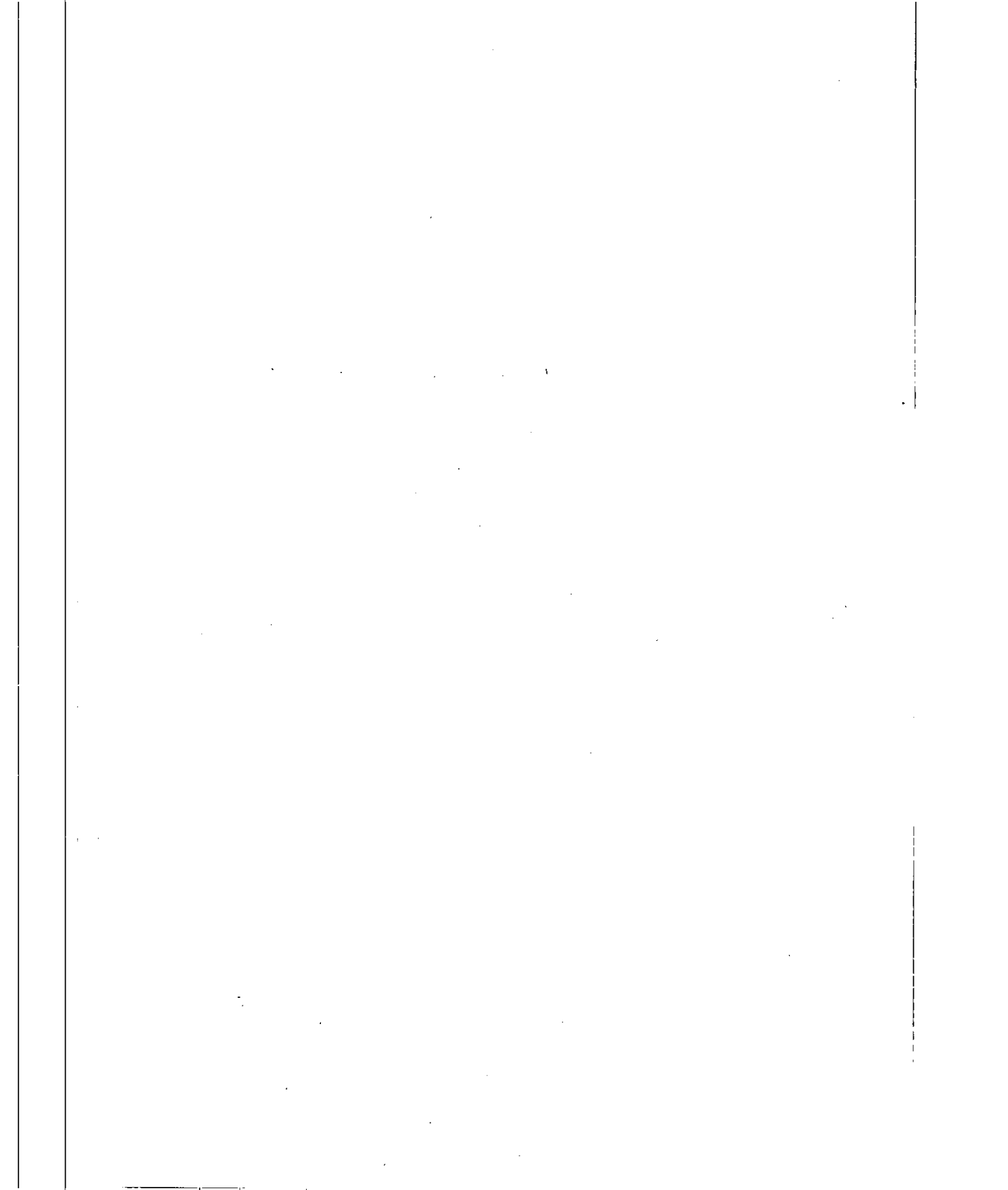
With samples (10 minutes)	_____	1 920 000 PTE (9 600 ECU)
Without samples	_____	512 000 PTE (2 560 ECU)

SECTION III

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Report of the Meeting of the Working Group on Dispute Settlement Procedures (DSP)

(GC Doc. 97/3)

**14-16 April 1997
Dartmouth, N.S., Canada**

This intersessional meeting was held in accordance with the decision by the General Council (GC Doc. 96/8, Part I, item 4.6xxv) to convene a meeting of the Working Group early in 1997.

1. Opening by the Executive Secretary

The Meeting was opened by the Executive Secretary, L. I. Chepel, who welcomed all delegates. The following Contracting Parties were represented at the Meeting: Canada, Denmark (in respect of Faroe Islands and Greenland), European Union, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Latvia, Lithuania, Norway and the United States of America (Annex 1).

2. Election of the Chairman

Mr. Dag Mjaaland (Norway) was elected Chairman.

3. Appointment of Rapporteur

Mr. Fred Kingston (EU) was appointed Rapporteur.

4. Adoption of the Agenda

The Agenda was adopted as amended. (Annex 2)

5. Examination of the desirability and, as appropriate, of the development of DSP

The Working Group had an extensive and wide-ranging discussion on these matters.

Concerning the issue of **whether NAFO DSP were desirable**, delegates either declared that such procedures were *desirable* or were prepared to keep the issue open for future consideration. On this basis, without prejudice to any such final decision in this regard, the Working Group agreed to proceed with an examination of possible elements on the development of DSPs.

During the discussion on this issue, concerns raised included the importance of dispute prevention; whether it is desirable to shift decision-making "from the political arena to lawyers" because of DSP; and whether there is an urgent need to establish NAFO DSP.

Concerning the development of such DSP, the following issues were raised:

- the **type of dispute** to be covered under any DSP. This coverage could be limited solely to the use of the objection procedure under Article XII of the NAFO Convention, or broadened to cover disputes concerning certain management and conservation measures or all types of disputes.

Concerning the **objection procedure**, certain delegates noted that its use has been the source of major recent conflicts within NAFO and, consequently needs to be addressed on an urgent basis. Other types of disputes can be dealt with in the context of the DSP within 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 opened for signature in New York on December 4, 1995 ("UN Agreement") and the United Nations Convention on the Law of the Sea, done at Montego Bay on December 10, 1982 ("UNCLOS"). Other delegates stated that the objection procedure is part of the balance negotiated in the NAFO Convention, as a means to maintain consensus in NAFO's decision-making process, and therefore, should not be limited. Instead, any DSP should address subsequent action by the objecting party rather than use the procedure itself. It was pointed out that the objection procedure is a conventional right and certain delegates questioned whether the assertion of such a right could give rise to a dispute in the proper sense. In this context it was also noted that the concept of an "abuse of right" is recognized under international law, for instance in Article 300 of UNCLOS. Some delegates observed that the UN Agreement itself might provide a basis for scrutiny of objections.

- whether NAFO needs to develop its own DSP or are the procedures laid down in the UN Agreement and/or UNCLOS sufficient? Certain delegates noted that the UN Agreement is not yet in force, may not be applicable to all NAFO Contracting Parties, does not apply to discrete stocks and does not provide for timely decisions. Other delegates argued that the existing procedures in the UN Agreement and/or UNCLOS can be adapted by NAFO to address these concerns;
- whether any decision arising out of any DSP be binding;
- whether NAFO should incorporate its DSP by an **amendment to the NAFO Convention or by a Protocol**. Most delegates, in principle, were in favour of an amendment, since it would apply equally to all Contracting Parties, including new participants. However, a Protocol would make any DSP easier to put into effect, since, under Article XXI of the NAFO Convention, just one Contracting Party could block an amendment. Certain delegates, while expressing a desire to incorporate a DSP into NAFO by way of an amendment, suggested that the Protocol route be used in a situation in which a very small minority of the NAFO Contracting Parties would most likely block an amendment;
- which Party has the initial **burden of proof** in any possible NAFO DSP;
- whether a Panellist needs to have an **arms-length relationship** with the disputing Parties; and
- the **qualifications** of any Panellist - does one need to be a "NAFO expert"?

6. Review of papers and proposals on DSP

The Working Group reviewed two papers on DSP, namely the Canadian proposal entitled "Proposed Canadian Protocol on the Settlement of Disputes under NAFO Convention Article XII" (GC Working Group W.P. 97/1 - Annex 3), along with an "Explanatory Note" (GC Working Group W.P. 97/2 - Annex 4), and an EU paper entitled "Broad Strategy to be Considered for a Possible NAFO Dispute Settlement Mechanism" (GC Working Group W.P. 97/3 - Annex 5).

(i) Canadian Proposal

As an introduction, Canada stated that its objective is not to eliminate the right of NAFO members to object but to prevent the abusive use of the objection procedure by a procedure which seeks to ensure that an objection can only be made on clear, justifiable grounds and that this will be subject to review before a panel of experts. The Canadian proposal has been revised from earlier proposals. It is in the form of a Protocol targeted only to the use of the objection procedure. Its main elements are:

- a party which objects must be able to justify its objection;
- the establishment of an expert panel to consider any challenged objection, the procedure of which is modelled on the DSP of the World Trade Organization (WTO) and the North American Free Trade Agreement (NAFTA);
- participation by other Parties; and
- rapid time-lines to ensure that disputes are resolved during an ongoing fishing season.

According to Canada, the principal advantages of its proposal are its tight time-frame and its applicability to discrete high sea stocks.

The Working Group then examined in detail the Canadian proposal. Issues raised included its compatibility with the systems established under the UN Agreement and UNCLOS; the extent to which an objecting Party has to justify its objection (e.g. filing a management plan with its objection); the competence of the Panel; burden of proof; whether there ought to be an arms-length relationship between Panellists and NAFO Contracting Parties; qualifications of Panellists; costs; time lines (approximately 3 months); and the consequences on the original NAFO decision if an objection is upheld or partially upheld.

(ii) EU Paper

The EU stated that its paper was a reflection paper, setting out certain elements for a possible NAFO dispute settlement mechanism. It proposes that NAFO could incorporate, by an amendment to the NAFO Convention, the existing DSP set out in Part XV of UNCLOS.

The Working Group then examined the EU paper. Points raised included:

- the use of the NAFO objection procedure would **not itself constitute a dispute** under this proposal, but rather, for example, any subsequent failure to adopt the necessary conservation measures;
- Article 30(5) of the UN Agreement could be used as the substantive law to be applied;
- reference was made only to UNCLOS because the UN Agreement does not cover discrete stocks;
- a decision of an *ad hoc* expert panel could be applied as a provisional measure. Such a decision could be rendered within a tight time-frame; and
- the issue of the competency of any panel established needs to be addressed.

On the basis of the discussion, the EU agreed to prepare a more detailed paper for consideration at the next NAFO Annual Meeting.

7. Review of relevant instruments, including the UN Agreement on Straddling and Highly Migratory Fish Stocks, UNCLOS

The Working Group examined in detail various instruments to determine whether a DSP should be and could be established either by a Protocol or an amendment to the NAFO Convention. These instruments included:

- the NAFO Convention;
- the UN Agreement, in particular Articles 10(k), 27-32 and 44 thereof;
- UNCLOS, in particular Part XV thereof; and
- the 1969 Vienna Convention on the Law of Treaties, in particular Article 41 thereof.

It was **concluded** that the NAFO Contracting Parties are free to agree to establish their own particular DSP for NAFO, whether through an amendment to the NAFO Convention or through a Protocol between some Contracting Parties.

8. Report to the General Council

The Working Group on Dispute Settlement Procedures **recommended** that, on the basis of the discussion at this meeting, the General Council should examine the issue of a possible NAFO DSP at the next NAFO Annual Meeting.

Furthermore, the Working Group on Dispute Settlement Procedures **recommended** that the General Council authorize it to continue its work and to convene a meeting shortly after the end of the NAFO Annual Meeting. In this regard, matters for particular attention include the issue of the desirability of a NAFO DSP, further consideration of the approaches in the Canadian and EU papers, including a possible combination of the two approaches and the competence of any panel which could be established under such approaches, including the type of "disputes" to be covered and the applicable law.

9. Other Matters

There were no other matters for discussion.

10. Adjournment

The Meeting adjourned at 1300 hrs on 16 April 1997.

Annex 1. List of Participants

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 T. Amaratunga, Assistant Executive Secretary
 B. J. Cruikshank, Senior Secretary

Annex 2. Agenda

1. Opening by the Executive Secretary, L. Chepel
2. Election of the Chairman
3. Appointment of the Rapporteur
4. Adoption of the Agenda
5. Examination of the desirability and, as appropriate, of the development of DSP
6. Review of papers and proposals on DSP
7. Review of relevant instruments, including the UN Agreement on Straddling and Highly Migratory Fish Stocks, UNCLOS
8. Report to the General Council
9. Other matters
10. Adjournment

Annex 3. Proposed Canadian Protocol on the Settlement of Disputes Under NAFO Convention Article XII

Background:

At the 1996 NAFO Annual Meeting in St. Petersburg, Canada circulated a proposal for the adoption of a dispute settlement mechanism to deal with objections under the NAFO Convention (GC Working Paper 96/3). This proposal is intended to address a problem identified in NAFO as long ago as 1988.

In 1988 the General Council recognized that the inappropriate use of the NAFO objection procedure *"may lead to damage of the living resources of the Northwest Atlantic"* and called on Contracting Parties to *"avoid excessive or inappropriate use of the objection procedure against the regulatory measures adopted by the Fisheries Commission"* (GC Doc. 88/8).

In 1989 the General Council developed this theme further by calling for *"compliance with the NAFO management framework in place since 1979, and compliance with NAFO decisions in order to provide for conservation and maintain the traditional spirit of cooperation and mutual understanding in the Organization"* (Resolution found at GC Doc. 89/4, Appendix 10).

Canada first proposed the creation of a dispute settlement mechanism in NAFO at the 1992 NAFO Annual Meeting (GC Working Paper 92/6). Canada's 1992 proposal called for the creation of a dispute settlement mechanism as an amendment to the NAFO Convention. The current Canadian proposal, which supersedes the 1992 proposal, calls for the establishment of a Protocol to provide for dispute settlement with respect to the objection procedure.

Canada's Proposed Protocol:

Canada wishes to make it clear that it is not the purpose of the proposed Protocol to override or to eliminate the NAFO objection procedure. The Protocol is aimed at enhancing the long-term conservation and sustainable use of the fishery resources of the NAFO Regulatory Area ("NRA"). The Protocol therefore reflects the objectives of the NAFO Convention, which was established to implement the clear desire of NAFO Parties to conserve fish stocks in the NRA. It builds upon the conservation objectives of both the 1982 *United Nations Convention on the Law of the Sea* ("UNCLOS") and the 1994 *Agreement for the Implementation of the Provisions of the United Nations Convention of the Law of the Sea of 10 December 1982, Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (commonly referred to as the UN Fish Agreement or "UNFA").

It was never the intention of the NAFO Convention to allow a Party to object arbitrarily to a proposal of, or a measure adopted by, the Fisheries Commission. The Canadian Protocol therefore seeks to ensure the responsible use of the objection procedure in situations where a Party considers that a proposal of, or a measure adopted by, the Fisheries Commission:

- (a) is inconsistent with the provisions of the NAFO Convention or UNFA;
- (b) unjustifiably discriminates in form or in fact against the Objecting Party; or
- (c) does not adequately take into consideration the provisions of Article XI(3) and (4) of the NAFO Convention with respect to quotas in the Regulatory Area.

Other key features of the Canadian Protocol are:

- the establishment of expert Panels to resolve disputes concerning the validity of specific objections;
- provision for the participation in the dispute settlement proceedings by third Parties (i.e. other Parties to the Protocol) and non-Parties (i.e. NAFO members that are not Parties to the Protocol);
- rapid timelines for the presentation of written and oral argument before the Panel and for the rendering of a decision, in order to ensure that disputes are resolved during a current fishing season; and
- the expert Panels must consider the interests of all NAFO Contracting Parties, including those that are not Parties to the Protocol.

The Protocol would be binding only on those NAFO Contracting Parties that have accepted it.

The Advantages of Dispute Settlement Protocol:

The intention of the Canadian proposal is to minimize conflicts by providing an objective third party mechanism to resolve disagreements which can lead to overfishing and confrontation. The Protocol thus supports cooperation and mutual understanding within NAFO.

UNFA provides for binding dispute settlement related to straddling stocks and highly migratory stocks (Article 30). The Canadian proposal is not intended to supplant the procedures provided for in UNFA. However, the principal advantages of the proposed specific dispute settlement mechanism under the NAFO Convention over the more general dispute settlement procedures under UNFA are:

- a tight time-frame which is intended to provide decisions before excessive fishing can affect NAFO-managed stocks; and
- applicability to discrete high seas stocks in the Flemish Cap which are not subject to UNFA.

As noted above, the objective of the current Canadian proposal is not to eliminate the objection procedure under Article XII of the NAFO Convention, but to establish clear guidelines for its use. Canada is of the view that the excessive or inappropriate use of the objection procedure should be open to challenge, and that it is in the interest of all Contracting Parties to have disputes resolved through a quick and effective binding dispute settlement process designed specifically for NAFO.

Annex 4. Explanatory Note to the Canadian Proposal for a Protocol on the Settlement of Disputes Under Article XII of the Convention

Canada is proposing the establishment of a Protocol to the NAFO Convention to provide for dispute settlement with respect to the "objection procedure" under Article XII of the Convention. The purpose of the Protocol is to prevent abuse of the objection procedure by seeking to ensure that objections are made only on clear, justifiable grounds. This will enhance the long-term conservation and sustainable use of the fishery resources of the NAFO Convention Area, an objective shared by all NAFO Contracting Parties.

The main features of the Canadian draft Protocol are as follows:

- an agreement by the Parties to the Protocol to limit their use of the objection procedure to the grounds set out in the Protocol;
- the establishment of expert panels to resolve disputes over the use of the objection procedure;
- rapid timelines for the presentation of written and oral argument before the panel and for the rendering of a decision, to ensure that disputes are resolved during a current fishing season;
- provision for the participation in the dispute settlement proceedings by Third Parties and non-Parties; and
- affirmation that the Protocol is without prejudice to the rights of the Parties under the 1982 Law of the Sea Convention or the 1994 U.N. Fish Agreement.

Canada first proposed the creation of a dispute settlement mechanism in NAFO at the 1992 annual meeting. The attached text is intended to supersede Canada's 1992 proposal (GC Working Paper 92/6).

CANADIAN PROPOSAL

PROTOCOL ON THE SETTLEMENT OF DISPUTES UNDER ARTICLE XIII OF THE CONVENTION

THE PARTIES TO THIS PROTOCOL,

RECOGNIZING the importance of achieving the conservation and management objectives of the Northwest Atlantic Fisheries Organization (NAFO),

TAKING INTO ACCOUNT 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* opened for signature in New York on December 4, 1995, in particular the Agreement's provisions on compulsory and binding settlement of disputes, its provisions obligating States to pursue cooperation either directly or through appropriate fisheries management organizations or arrangements, and its provisions obligating States to cooperate to strengthen existing organizations and arrangements to improve their effectiveness for the conservation and management of the stocks subject to their authority,

RECOGNIZING that disputes may arise from time to time regarding the use of the objection procedure provided in Article XII of the NAFO Convention, and that it is in the interest of conservation, and of all NAFO Contracting Parties, to have such disputes resolved through a quick and effective compulsory and binding dispute settlement process designed specifically for NAFO,

HAVE AGREED as follows:

ARTICLE I: DEFINITIONS

In this Protocol:

NAFO Convention means the *Convention of Future Multilateral Co-operation in the Northwest Atlantic Fisheries*, done at Ottawa on October 24, 1978;

Party means a Party to this Protocol;

Objection means:

- (i) an objection by a Party to a proposal of the Fisheries Commission, pursuant to Article XII(1) of the NAFO Convention; or
- (ii) a notice by a Party of its intention not to be bound by a measure adopted by the Fisheries Commission, pursuant to Article XII(3) of the NAFO Convention.

Objecting Party means a Party that has presented an Objection;

Contesting Party means a Party, including an Objecting Party, that requests the establishment of a Panel to determine the validity of an Objection;

UNFA means 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* opened for signature in New York on December 4, 1995; and

UNCLOS Convention means the United Nations Convention on the Law of the Sea, done at Montego Bay on December 10, 1982.

ARTICLE II: OBJECTIVES

The objectives of this Protocol, as elaborated more specifically through its provisions, are to:

- (a) enhance the long-term conservation and sustainable use of the fishery resources of the NAFO Convention Area; and
- (b) provide for a prompt and effective method to resolve disputes arising under Article XII of the NAFO Convention.

ARTICLE III: LIMITS ON THE RIGHT TO PRESENT OBJECTIONS

1. A Party may present an Objection only if it considers that a proposal of, or a measure adopted by, the Fisheries Commission:
 - (a) is inconsistent with the provisions of the NAFO Convention or the UNFA;
 - (b) unjustifiably discriminates in form or in fact against the Objecting Party; or
 - (c) does not adequately take into consideration the provisions of Article XI, paragraphs 3 and 4, of the NAFO Convention with respect to quotas established in the Regulatory Area.

ARTICLE IV: ROSTER

1. The Executive Secretary shall establish by _____, and maintain a roster of individuals who are willing and able to serve as Panelists. Each Party may submit up to five nominees for inclusion in the roster, and shall describe the relevant qualifications and experience of each of its nominees.
2. Roster members shall have expertise or experience in fisheries conservation or management, international law, other areas covered by the NAFO Convention or the resolution of disputes arising under international agreements, and shall be chosen on the basis of objectivity, reliability and sound judgement.

ARTICLE V: REQUEST FOR A PANEL

1. Following receipt by the Executive Secretary of an Objection, a Contesting Party may request in writing the establishment of a Panel to determine the validity of the Objection. The Contesting Party shall deliver the request to the Chairman of the General Council. The Chairman of the General Council shall promptly transmit a copy of the request, through the Executive Secretary of NAFO, to each NAFO Contracting Party.

2. Where more than one Contesting Party requests the establishment of a Panel related to the same Objection, a single Panel shall be established.

ARTICLE VI: PANEL SELECTION

1. Except as provided elsewhere in this Protocol, the procedures set out in this Article shall apply to Panel selection.
2. Where a Contesting Party requests the establishment of a Panel:
 - (a) The Panel shall comprise three members.
 - (b) Within ten days of the date on which the request for a Panel is transmitted to the NAFO Contracting Parties pursuant to Article V, the Contesting Party and the Objecting Party shall each select one Panelist from the roster.
 - (c) Within twenty days of the date on which the request for a Panel is transmitted to the NAFO Contracting Parties pursuant to Article V, the Contesting Party and the Objecting Party shall agree on the selection of the third Panelist, who shall serve as Chair of the Panel. If the Contesting Party and the Objecting Party cannot agree on the Chair, they shall decide by lot which of them shall select the Chair from the roster. The Chair shall not be a citizen of either the Contesting Party or the Objecting Party.
3. Where there is more than one Contesting Party, the Contesting Parties shall seek to agree on the selection of a single Panelist. If the Contesting Parties are unable to agree, the Chairman of the General Council shall, within five days of the end of the ten day period specified in paragraph 1, select a Panelist from the roster on behalf of such Contesting Parties.
4. Where there is more than one Objecting Party, the Objecting Parties shall seek to agree on the selection of a single Panelist. If the Objecting Parties are unable to agree, the Chairman of the General Council shall, within five days of the end of the ten day period specified in paragraph 1, select a Panelist from the roster on behalf of such Objecting Parties.
5. Where an Objecting Party alone requests the establishment of a Panel, that Party shall select one Panelist from the roster and notify the Chairman of the General Council of its choice within ten days of the date on which the request for a Panel is transmitted to the NAFO Contracting Parties pursuant to Article V. The Chairman of the General Council shall, within five days of the end of the ten day period, select a second Panelist from the roster. Within twenty days of the date on which the request for a Panel is transmitted to the NAFO Contracting Parties pursuant to Article V, the two Panelists shall appoint a third Panelist who shall serve as Chair.

ARTICLE VII: PARTICIPATION BY THIRD PARTIES

Any Party that is not a Contesting Party or an Objecting Party, on delivery of a written notice to the Chairman of the General Council, shall be entitled to attend all hearings of the Panel, to make written and oral submissions to the Panel, and to receive written submissions of each Contesting and Objecting Party.

ARTICLE VIII: PARTICIPATION BY NON-PARTIES

Any NAFO Contracting Party that is not a Party to this Protocol, on delivery of a written notice to the Chairman of the General Council, may attend all hearings of the Panel, make written and oral submissions to the Panel, and receive written submissions of each Contesting and Objecting Party, provided that the Contesting and Objecting Parties so agree.

ARTICLE IX: ROLE OF EXPERTS

On request of a Contesting or Objecting Party, or on its own initiative, the Panel may seek information and technical advice from any person or body that it deems appropriate, provided that the Contesting and Objecting Parties so agree.

ARTICLE X: DECISION OF THE PANEL

1. Unless the Contesting and Objecting Parties otherwise agree, the Panel shall, within fifteen days of the conclusion of the hearing, present its decision to the Chairman of the General Council, through the Executive Secretary. Decisions of a Panel shall be by majority.
2. If the Panel determines that the Objection does not meet the criteria of Article III, it shall declare the Objection to be invalid. If the Panel determines that the Objection meets the criteria of Article III, it shall declare the Objection to be valid.
3. If the Panel determines the Objection to be invalid:
 - (i) on the expiration of ten days following the date of the decision, or on such date as may be specified in the decision, the proposal of the Fisheries Commission shall become a binding measure on the Objecting Party; or
 - (ii) the measure adopted by the Fisheries Commission shall continue to be binding on the Objecting Party.
4. If the Panel determines the Objection to be valid:
 - (i) the proposal shall not become a binding measure on the Objecting Party, pursuant to Article XII(1) of the NAFO Convention; or
 - (ii) the measure shall cease to be binding on the Objecting Party, pursuant to Article XII(3) of the NAFO Convention.
5. In making its determination, the Panel shall consider the interests of all NAFO Contracting Parties, including those that are not Parties to this Protocol.

ARTICLE XI: RELATION TO OTHER AGREEMENTS

This Protocol shall be without prejudice to the rights and obligations of Parties under the UNFA Agreement or the UNCLOS Convention.

ARTICLE XII: RULES OF PROCEDURE

The Panel proceedings shall be conducted in accordance with the Rules of Procedure set out in the Annex. The Panel may adopt such additional rules of procedure, consistent with the NAFO Convention and this Protocol, as it deems necessary.

ARTICLE XIII: ACCEPTANCE

Any Contracting Party to the NAFO Convention may become a Party to this Protocol by written notification of acceptance to the Depositary.

ARTICLE XIV: DEPOSITARY

The Government of Canada shall be the Depositary.

ARTICLE XV: ENTRY INTO FORCE

This Protocol shall enter into force on the date of receipt by the Depositary of the notification of acceptance which brings the number of notifications of acceptances to _____.

ARTICLE XVI: WITHDRAWAL

1. Any Party may withdraw from this Protocol on December 31 of any year by giving notice to the Depositary on or before the preceding June 30.
2. Any other Party may withdraw from this Protocol on the same December 31 by giving notice to the Depositary within one month of the receipt of a copy of a notice of withdrawal given pursuant to paragraph 1.

ARTICLE XVII: NOTIFICATION

The Depositary shall promptly notify the Executive Secretary in writing of the receipt of each notification of acceptance or withdrawal. The Executive Secretary shall thereupon transmit the information to all Contracting Parties to the NAFO Convention.

ARTICLE XVIII: RESERVATIONS

This Protocol shall not be subject to reservations.

ANNEX: RULES OF PROCEDURE

OPERATION OF PANELS

1. The Chair of the Panel shall preside at all of its meetings. A Panel may delegate to the Chair authority to make administrative and procedural decisions.
2. Except as otherwise provided in these rules, the Panel may conduct its business by any means, including by telephone, facsimile transmission or computer links.

3. If a Panelist dies, withdraws or is removed, a replacement shall be selected as expeditiously as possible in accordance with the selection procedure followed to select the Panelist.
4. Any time period applicable to the Panel proceeding shall be suspended for a period beginning on the date the Panelist dies, withdraws or is removed and ending on the date the replacement is selected.

PLEADINGS

5. The Objecting Party shall deliver its written submission to the Executive Secretary of NAFO no later than 10 days after the date on which the last Panelist is selected. The Objecting Party shall describe in its submission how the proposal or measure that is subject of the Objection is inconsistent with the provisions of the NAFO Convention or the UNFA Agreement, unjustifiably discriminates in form or in fact against the Objecting Party, or does not adequately take into consideration the provisions of Article XI, paragraphs 3 and 4, of the NAFO Convention with respect to quotas established in the Regulatory Area.
6. The Contesting Party shall deliver its written submission to the Executive Secretary no later than 10 days after the date of delivery of the written submission of the Objecting Party. Each Third Party and non-Party shall deliver its written submission to the Executive Secretary no later than the date on which the submission of the Contesting Party is due.
7. The Executive Secretary shall forward the written submissions immediately upon receipt by the most expeditious means practicable to the other participating Parties and to the members of the Panel.

HEARING

8. The Chair shall fix the date and time of the hearing in consultation with the participating Parties and the other members of the Panel.
9. The hearing shall be convened at the headquarters of NAFO, or at such other place as may be agreed by the Contesting and Objecting Parties, no later than thirty days following the formation of the Panel.
10. The hearing shall be conducted by the Panel in the following manner, ensuring that the Objecting Party or Parties and the Contesting Party or Parties are afforded equal time:
 - (i) Argument of the Objecting Party or Parties;
 - (ii) Argument of the Contesting Party or Parties;
 - (iii) Presentation of the Third Party or Parties; and
 - (iv) Presentation of the non-Party or Parties.

DECISION OF THE PANEL

11. Upon receipt of the decision of the Panel pursuant to Article X, the Chairman of the General Council, through the Executive Secretary, shall forthwith transmit the decision to all NAFO Contracting Parties. Reasons in writing shall be communicated to the Chairman of the General Council within ninety days of the decision. The Chairman of the General Council shall, through the Executive Secretary, promptly transmit such reasons to all Contracting Parties to the NAFO Convention.

CLERK

12. The Executive Secretary of NAFO shall serve as clerk to the Panel and provide for all necessary facilities and arrangements.

EXPENSES, FEES AND COSTS

13. The rules regarding expenses and the level of fees for Panelists and experts shall be established by the General Council.

Annex 5. Broad Strategy to be Considered for a Possible NAFO Dispute Settlement Mechanism

Disputes may arise in situations in which Contracting Parties hold clearly opposite views concerning the question of the performance or non-performance of obligations under the NAFO Convention. Whether there exists a dispute is a matter for objective determination. The mere claim of the existence of a dispute by a Contracting Party does not prove its existence.

The objection procedure under Article XII of the NAFO Convention grants a Contracting Party a conventional right, the assertion of which cannot be construed as giving rise to a dispute in the proper sense.

A possible NAFO dispute settlement mechanism should cover all kinds of disputes, e.g. disputes concerning the conservation and management of both straddling fish stocks and "discrete stocks", enforcement issues, budgetary matters or rights of membership.

A possible NAFO dispute settlement mechanism could consist of an agreement of the Contracting Parties to apply *mutatis mutandis* the provision relating to the compulsory and binding settlement of disputes set out in Part XV of UNCLOS to any dispute arising within NAFO.

With a view to ensuring a timely dispute settlement mechanism for NAFO, consideration might be given to the incorporation of a pre-trial process through an ad hoc expert panel in order to resolve the dispute expeditiously. The decisions of such a panel, while not binding in nature, could form the basis for renewed consideration by the parties concerned of the matter out of which the dispute arose. If, as the result of this procedure the dispute is not settled, the decisions of the panel could be applied as provisional measures, pending the outcome of a final dispute settlement procedure if the parties concerned wish to pursue the matter through recourse to binding procedures for the settlement of disputes under Part XV of UNCLOS.

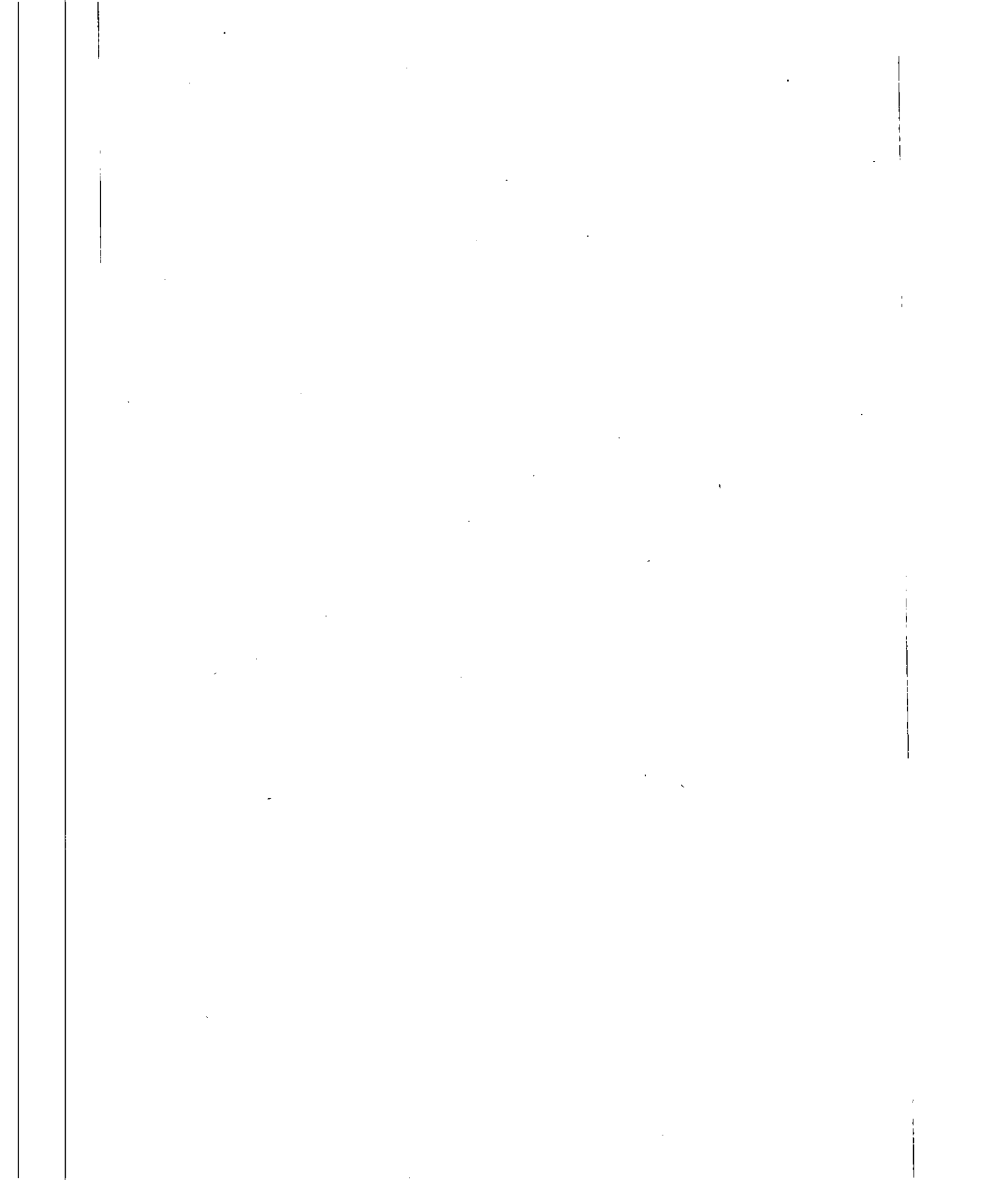
A possible NAFO dispute settlement mechanism should be applicable to all Contracting Parties, by way of an amendment pursuant to Article XXI of the NAFO Convention.

SECTION IV

(pages 109 to 126)

Report of the Meeting of the Standing Committee on Fishing Activities by Non-Contracting Parties in the Regulatory Area (STACFAC) 15-16 May 1997 Brussels, Belgium

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Report of the Meeting of STACFAC

(GC Doc. 97/2)

15-16 May 1997
Brussels, Belgium

This intersessional meeting was held in accordance with the decision by the General Council (GC Doc. 97/1, item 12) to call a STACFAC Meeting in February 1997.

1. Opening

The Meeting was called to order by the Chairman, J.-P. Plé (USA). The Chairman, on behalf of the meeting, thanked the European Union for the invitation and hosting the meeting in Brussels. He hoped that the meeting would be very productive with the participation of many delegations and it would enable STACFAC to make progress before the Annual Meeting in St. John's, Canada, September 1997.

Delegates from the following Contracting Parties were present: Canada, Denmark (in respect of Faroe Islands and Greenland), European Union, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Norway and the USA (Annex 1).

2. Appointment of Rapporteur

L. Chepel, Executive Secretary, was appointed Rapporteur.

3. Adoption of Agenda

The Agenda was adopted. (Annex 2)

4. Developing a scheme to deal with non-Contracting Parties fishing in the NAFO Regulatory Area (NRA)

4.1 The Chairman highlighted the major findings and ideas developed during the first intersessional STACFAC Meeting in Halifax, February 1997 as follows:

The scheme would: (1) target specific vessels; (2) presume that an NCP vessel, which is sighted engaged in fishing activities in the NRA, is fishing in a manner that undermines NAFO conservation and management measures; (3) incorporate a notification procedure such that once a NAFO party sights a NCP vessel engaged in fishing activities in the NRA, that information is shared with the NAFO Secretariat, other NAFO Parties and the flag-State of the NCP vessel; (4) require NAFO Contracting Parties to prohibit landings and transshipments of fish in their ports from NCP vessels (although it was unresolved what evidence is necessary to trigger this provision); (5) be communicated to all States which are NCPs; and (6) undergo annual review, at which time other measures, if necessary, would be considered.

The Chairman noted that although there has been a substantial decrease of NCP fishing in 1996 (only 7 vessels), there was still an unacceptable level of NCP activity in the NAFO Regulatory Area. Although the Parties were not asked to present new data on NCP fishing activities, the Japanese delegation circulated information on imports of five species of groundfish from non-Contracting Parties in 1996 (Annex 3).

He also emphasized that the previous intersessional meeting has already made good progress and this current meeting offered a good opportunity for the Committee to continue work on a possible scheme for presentation to the General Council at the Annual Meeting, September 1997.

4.2 The Contracting Party Representatives agreed in principle with the Chairman's introduction and stressed the following concrete issues:

- minimum level of standards of the scheme and requirements;
- openness of the scheme for modification and updating;
- practicability of the scheme regarding its implementation as a whole;
- time-frame for communication of the relevant information between Contracting/non-Contracting Parties, NAFO Secretariat and others;
- NCP vessel inspections at sea to provide complete data on their activity.

4.3 Subsequent Contracting Party Representatives discussion centered around such essential elements as:

- practical terms of the scheme implementation regarding NCP vessels landings and port calls;
- feasibility of monitoring all activities regarding different regulations and conditions for NCP vessels (no logbooks, no hail reports, etc.);
- sightings of NCP vessels in the NRA as sufficient evidence to triggering a mechanism of actions (under the scheme) against NCP vessels.

4.4 The Chairman elaborated further on the issue of the burden of proof and explained that the USA has had some experience with the use of a "rebuttable presumption" in U.S. fishery legislation. Under such a structure any presumption of violation or illegal fishing activity would remain unless rebutted by appropriate documentation, if available, by the NCP, and the burden of proof would rest with the NCP.

Several Representatives welcomed the Chairman's information re "rebuttable presumption" and noted that standardized procedures would be appropriate to consider in this case.

Other Representatives preferred a "prima facie" application (interpretation) of presumption which would be regarded as an exception. In case of "prima facie" approach, the burden of proof would also rest with the NCP and require inspection in the ports of Contracting Parties. In addition, courtesy boardings should be viewed as an indication of cooperation.

4.5 The Chairman asked the meeting participants to consider more clear guidelines on inspections and the trigger mechanism which could bring about the prohibition of landings. He turned the attention to the EU position of prohibiting all fish off-load and to the Canadian presentation calling for complete set of the NAFO Conservation and Enforcement Measures regulating fisheries, by-catches and quotas. He noted that ICCAT requires compliance with all conservation and management regulations.

The various views of Representatives of Contracting Parties were the following:

- all NCP vessels should have to rebut any presumptions before any fish landing occurred, and at the same time, they should be subject to inspection in the port;
- all fish subject to regulation by NAFO should be subject to NAFO inspection;
- the rebuttable presumption would rest with the vessel;
- to consider application of Articles 17 of the UN Fish Agreement (1997) re the obligations and duties of the states fishing at the high seas and Article 18 re duties of coastal states to take any measures against the NCP fishing vessels undermining objectives of conservation of fish stocks, etc.

- 4.6 The Chairman briefly summarized the discussions noting that basic building blocks were appearing among the delegates that gave promise towards developing a draft paper (the scheme) for its presentation to the General Council. He further stressed amongst other issues, the problem of the by-catch (and its landing) as discussed above and urged to work along the acceptable lines of interpretation, and asked for feedback from participants.

Several Representatives referred to NAFO/FC Doc. 96/1 (Conservation and Enforcement Measures), noting two (2) distinct parts of the Measures, which are:

- Parts I to II dealing with protection resources; and
- Parts III-VII dealing with vessel requirements, inspection and enforcement.

It was suggested that the application of Parts I and II was perhaps most relevant to NCPs.

- 4.7 Several Representatives questioned the basic rationale of introducing a "green book" (with reference to NAFO FC Doc. colour) of NAFO Conservation Measures for NCP use, and exchanged ideas along the following lines:

- there would be a number of measures as mentioned above;
- Part VII of the NAFO Conservation and Enforcement measures re mandatory inspections CP vessels in ports should equally apply to NCP;
- the burden of proof should be placed on the master of the NCP vessel requesting port call and landing of fish;
- the NCP vessels working outside of the NAFO regime should be "black listed";
- courtesy boardings and possible incentives to NCP to accept the boardings (by NAFO inspectors) should be considered by NAFO.

- 4.8 The Chairman reviewed the progress of discussions and cautioned that imposing less restrictive measures on a NCP may encourage Contracting Parties to reflag to NCP.

The Delegates exchanged their views on the possibility of reflagging and agreed that this would be a distant possibility, but in general there would be more disadvantage to this than benefits for Contracting Parties. The Chairman emphasized that this issue of reflagging should be constantly monitored at STACFAC.

- 4.9 The Chairman then proposed to explore the issues of the duration of fishing voyage (NCP) and duration that measures would be applied to NCP vessels.

Considering the duration of fishing trip (of NCP vessel), the Delegates discussed several scenarios re combined trips and port calls with landing or without landing, etc. The Representative of Iceland suggested to seek information from shipowners. The general agreement was that no concrete recommendations or guidelines were available and the practical approach should be the consistent monitoring of the NCP vessels fishing in the NRA.

- 4.10 The Chairman then proposed that the group discuss transshipment issues in context of two scenarios: (a) between NCP vessels; and (b) between CP and NCP vessels.

He noted that under (a) the receiving vessel should have the same responsibility as the fishing vessel. There was agreement in principle on this situation. The Representative of Iceland informed that in their national legislation, the main target was fish/catch (not vessel), and if that catch (of prohibited species from the specific area) was subject of transshipment to other vessel that vessel would be prohibited to enter Icelandic port for landing, provisions, supplies, etc. The Representative of Japan noted that Japan's legislation does not consider cargo vessels as fishing vessels and suggested that NAFO consider language on transshipment currently being considered by ICCAT, i.e. "Contracting Parties shall ensure that their flag-State vessels only receive high seas transshipments of ICCAT species from Contracting Parties".

Under scenario (b), transshipment between CP and NCP, the general view was to explore this possibility more in the future and report to the General Council. In principle, the delegate agreed that transshipment between CP and NCP vessels should be discouraged. The Chairman noted that he will consult further with the Chairman of the General Council on this issue.

- 4.11 The Chairman and Delegates reviewed progress made during the first day of the meeting and agreed that there were many new elements and positive "building blocks" toward development of a NAFO scheme. Therefore, the Delegates asked the Chairman to prepare a draft paper (Chairman's Working Paper) for presentation at the next day's session. The next day this paper, attached in Annex 4, was introduced by the Chair with a brief explanation of major rationale asking for comments.

The Representatives of Contracting Parties presented the following general and concrete comments/proposals:

- the paper should clearly invite NCPs to cooperate with NAFO;
- the sightings of vessels and circulation of information should be a part of the scheme;
- there should not be any strict limit of duration of voyage;
- practical elements of the scheme should include NAFO regulations and UN Fish Stocks Agreement.

- 4.12 The Chairman introduced his paper for item by item discussion and suggested some modification by including a paragraph along the lines "...in order to ensure the conservation of fish stocks pursuant to the provisions of the NAFO Convention, the NCP vessels engaged in fishing and transshipment in the NRA are called upon to observe the NAFO Conservation and Enforcement Measures...".

The following agreements and proposals were recorded:

- a) To incorporate an introductory statement at the beginning of the scheme which should clarify which vessels would be subject to this scheme.
- b) On paragraph 3, the Representative of France presented a modification (in first sentence) as follows: "... the vessel will be asked for a courtesy boarding by the nearest inspector." The Delegates agreed in principle with this emphasis on courtesy boardings however, they proposed to find some other paragraph for this purpose.
- c) Paragraph 5 was considered primarily in connection to interpretation and practical application of the "*inter alia*" concept regarding inspections and documents. Further discussion on this point may be necessary, but at this point it was suggested that the Parties consider "any other matter relating to the vessel's activities in the NAFO Regulatory Area".
- d) On paragraph 6, extensive comments were exchanged re the "rebuttable presumption" in the context of its practical application due to the rights of coastal states and international law. Some delegations noted to this interpretation that states should not be limited (in the NAFO scheme) in their sovereign rights under the international law. The other essential subject was criteria and formulations of the NAFO measures in the text of the scheme re catches/species, entry/exit notification, courtesy boarding, hail reports, catch information to Secretariat, logbooks, fishing in closed areas, etc. The Representative of Japan also expressed the view that fish which had clearly not been caught in the NAFO Regulatory Area should not be subject to NAFO Conservation and Enforcement Measures. At the outcome of discussion on this paragraph, portions of it remain in brackets to reflect the need for further discussion among the Parties.
- e) On paragraph 7, the Delegates presented several suggestions to incorporate some provisions for broad circulation of relevant information to other interested bodies, like NEAFC, and to consider appropriate format/documentation for the management and administration of the scheme (similar to STACTIC experience).
- f) Paragraph 8, the duration of the trip, was taken out of the text as per previous agreement.
- g) Regarding paragraph 9, the Delegates presented several suggestions and interpretations re sovereign rights and access to ports. The general view was to keep this issue very simple and make a reference to the international law only in general terms. Some Delegates thought it would be relevant to spell-out more concrete provisions. The USA Representative proposed an introductory phrase to the paragraph in the terms of: "When a NCP vessel is sighted fishing or engaging in fishing or fish processing in the NRA..." As the outcome of discussion, it was decided to include some parts of this paragraph in square brackets for further discussion.
- h) In paragraph 10, the reference to "trade measures" should be deleted.

A revised STACFAC Working Paper, as modified following this discussion, is attached in Annex 5.

- 4.13 The Chairman closed the discussions on this issue and introduced the transshipment issue postponed from the previous session (Annex 6).

The Delegations stressed that the transshipment issue is a very complicated and important one, which could open a "loophole" in NAFO actions if it was not resolved properly. Some thought that transshipments between CP vessels and NCP vessels should be prevented by Contracting Parties and agreed that this item was a relevant matter for STACTIC and Fisheries Commission, who deal with Contracting Parties' regulations. Other delegates believed that STACFAC had authority to prescribe measures on CPs with regard to the scheme. It was suggested to call a joint meeting of STACFAC and STACTIC.

The Chairman stressed the importance of finding an acceptable solution on this subject and to close the "loophole". He proposed to carry on further deliberations on this subject.

4.14 In his closing remarks, the Chairman reminded the Delegates that much progress had been made during the meeting, that several issues in developing a scheme remained to be resolved, and that the draft (Annex 5) will be considered at the Annual Meeting. He underlined several outstanding questions left for consideration at the upcoming meeting of STACFAC and General Council in September 1997, as follows:

- finalization of provisions of paragraph 6 with regards to items a,b and c in brackets with emphasis on concrete measures and regulations;
- agreement on the text of paragraph 9 (see paragraph 9 of Chairman's Working Paper and paragraph 11 of Revised STACFAC Working Paper);
- consultation with the Chairmen of the Fisheries Commission and General Council on issues related to transshipment.

The Chairman encouraged all Delegations to continue their work and consultations so that a scheme might be adopted at the Annual Meeting.

5. Report and Recommendations to the General Council

This report of the May 15-16, 1997 meeting will be circulated to the General Council before the 1997 Annual Meeting. In addition, STACFAC will meet on 15 September and will report to the General Council at the opening session, 16 September 1997.

6. Other Matters

There were no matters under this item.

7. Adjournment

The Meeting was adjourned at 1500 hrs on 16 May 1997.

Adoption of the Report

The Report of STACFAC has been finalized through two (2) circulations of the drafts to the Heads of Delegations of STACFAC and General Council and, therefore, adopted in accordance with the established procedure.

Annex 1. List of Participants

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L. I. Chepel, Executive Secretary

B. J. Cruikshank, Senior Secretary

Annex 2. Agenda

1. Opening by the Chairman, J.-P. Plé (USA)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Continue work toward developing a scheme to deal with Non-Contracting Parties fishing in the NAFO Regulatory Area
5. Report and Recommendations to the General Council
6. Other matters
7. Adjournment

**Annex 3. Japanese Import of the 5 Species of Groundfish
from Non-Contracting Parties, in 1996**

(unit; ton-product weight)

Nation	Redfish	Cod	Others*	Total
Morocco	-	-	-	-
Panama	-	-	-	-
Sierra Leone	-	-	-	-
Honduras	3	-	-	3
St. Vincents	-	-	-	-
Venezuela	-	-	-	-
World	65,650	55,855	89,178	210,683

*American plaice, Yellowtail flounder, Witch flounder, and other flatfishes.

NOTE: The above figures may well include fish caught outside the NAFO Regulatory Area.

Annex 4. Chairman's Working Paper

1. Upon adoption of the Scheme, the NAFO Secretariat will communicate the details of the Scheme and the NAFO Conservation and Enforcement Measures to all States which are not Party to the NAFO Convention whose vessels have fished or may fish in the NAFO Regulatory Area.
2. The measures contained in the Scheme are to be directed at Non-Contracting Party vessels identified in accordance with paragraph 3.
3. A Non-Contracting Party vessel which is sighted fishing, engaged in fish processing operations, or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area is presumed to be undermining the effectiveness of NAFO Conservation and Enforcement Measures. In the case of transshipment activities, the presumption of undermining NAFO Conservation and Enforcement Measures applies to all Non-Contracting Party vessels engaged in such activities.
4. When any NAFO Contracting Party sights a Non-Contracting Party vessel engaged in fishing, fish processing operations, or engaged in the transshipment of fish or fish products with another Non-Contracting Party vessel in the NAFO Regulatory Area, such sighting information shall be transmitted immediately to the NAFO Secretariat. The NAFO Secretariat will then transmit this information to all NAFO Contracting Parties and to the flag-State(s) of the sighted vessel(s) within one business day of receiving this information.
5. When a Non-Contracting Party vessel which has been sighted and reported as fishing, fish processing or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area, enters a port of any NAFO Contracting Party, such vessels may not offload any fish until it has been inspected by authorized Contracting Party officials knowledgeable in the NAFO Conservation and Enforcement Measures and this Scheme. Such inspections shall include, *inter alia*, the vessel's documents, fishing gear and catch onboard.
6. If a sighted Non-Contracting Party vessel enters the port of a Contracting Party, it may be allowed to rebut the presumption, during the course of a port inspection, that it undermined the effectiveness of NAFO Conservation and Enforcement Measures by establishing that:
 - [a. there are no species on board subject to NAFO regulations; and that the vessel has not contravened any other NAFO Conservation and Enforcement Measures [to be determined]]; or,
 - [b. there are no regulated species on board the vessel; and, that the vessel has not contravened any other NAFO Conservation and Enforcement Measures [to be determined]]; or,
 - [c. the vessel has not contravened NAFO Conservation and Enforcement Measures [to be determined].]

If the sighted Non-Contracting Party vessel fails to rebut the presumption that it undermined the effectiveness of NAFO Conservation and Enforcement Measures, landings and transshipments of all fish from such vessels shall be prohibited in all Contracting Party ports.

7. Information on the results of all at-sea and port inspections of Non-Contracting Party vessels, and any subsequent action, shall be transmitted immediately through the NAFO Secretariat to all Contracting Parties and to the relevant flag-State(s).
8. The period during which a particular sighted Non-Contracting Party vessel is subject to inspection shall cease to apply once the vessel undergoes a port inspection and the trip has ended.
9. Nothing in this Scheme affects the exercise by NAFO Contracting Parties of their sovereignty over their ports in their territory in accordance with international law. In exercising this sovereignty, NAFO Contracting Parties may deny access to their ports, or deny services within their ports, exclusive economic zones or territorial sea to Non-Contracting Party vessels sighted fishing, engaged in fish processing operations or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area. In accordance with international law, Non-Contracting Party vessels may enter such ports in cases of *force majeure*.
10. The Standing Committee on Fishing Activities of Non-Contracting Parties in the NAFO Regulatory Area (STACFAC) shall review annually the Scheme and the actions taken under the Scheme and, where necessary, recommend to the General Council any new measures, including trade measures, that may be necessary to enhance the observance of NAFO Conservation and Enforcement Measures by Non-Contracting Parties.

Chairman's Working Paper

Other Issues

1. Transshipment Activities involving Contracting Party and Non-Contracting Party vessels.

A possible loophole created by any NAFO scheme to deal with Non-Contracting Party activities is that such vessels may attempt at-sea transshipment of their fish or fish products to a Contracting Party vessel. To prevent this from developing, STACFAC should recommend to the General Council that the Council urge the Fisheries Commission to adopt a Conservation and Enforcement Measure prohibiting all at-sea transshipment activities between Contracting Party vessels and Non-Contracting Party vessels. (Note such a prohibition would also serve to deter Contracting Party vessels from transshipping to a Non-Contracting Party vessel in order to circumvent NAFO Conservation and Enforcement Measures.)

2. Cooperation with NEAFC.

In order to keep better track of the activities of Non-Contracting Party vessels in the North Atlantic Ocean, STACFAC should recommend to the General Council that the NAFO Secretariat be directed to explore means whereby NAFO and the North-East Atlantic Fisheries Commission (NEAFC) can share information on the fishing/fish processing/transshipment activities of vessels which are not members of either organization and which are sighted operating in the North Atlantic Ocean.

Annex 5. Revised STACFAC Working Paper

The NAFO Contracting Parties adopt this scheme with due regard to the rights, duties and obligations of States whose vessels fish on the high seas as expressed in the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, the 1982 United Nations Convention on the Law of the Sea, the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1992 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, the FAO Agreement to Promote Compliance with International Conservation and Management measures by Fishing Vessels on the High Seas and general principles of international law, particularly the due regard principle.

1. In order to ensure the effective conservation and management of fish stocks under the conservation and management authority of NAFO, Non-Contracting Party vessels engaged in fishing, fish processing or transshipment of fish or fish products in the NAFO Regulatory Area are called upon to observe the NAFO conservation and management measures.

2. Upon adoption of the Scheme, the NAFO Secretariat will communicate the details of the Scheme and the NAFO Conservation and Enforcement Measures to all States which are not Party to the NAFO Convention whose vessels have fished or may fish in the NAFO Regulatory Area.

3. The measures contained in the Scheme are to be directed at Non-Contracting Party vessels.

4. A Non-Contracting Party vessel which is sighted fishing, engaged in fish processing operations, or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area is presumed to be undermining the effectiveness of NAFO conservation and management measures. In the case of transshipment activities, the presumption of undermining NAFO conservation and management measures applies to all Non-Contracting Party vessels engaged in such activities.

5. When any NAFO Contracting Party sights a Non-Contracting Party vessel engaged in fishing, fish processing operations, or engaged in the transshipment of fish or fish products with another Non-Contracting Party vessel, in the NAFO Regulatory Area, such sighting information shall be transmitted to the NAFO Secretariat. The NAFO Secretariat will then transmit this information to all NAFO Contracting Parties and to the flag-State(s) of the sighted vessel(s) within one business day of receiving this information.

6. The NAFO Contracting Party which sighted the Non-Contracting Party vessel(s) will attempt to inform such vessel(s) that it has been sighted as fishing, engaged in fish processing operations, or engaged in the transshipment activities in the NAFO Regulatory Area and is presumed to be undermining NAFO conservation and management measures and that this information will be distributed to all NAFO Contracting Parties.

7. In the event that any Non-Contracting Party vessel which is sighted engaged in fishing, fish processing operations, or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area consents to be boarded by NAFO inspection officials, the findings of the NAFO inspection officials shall be transmitted to the NAFO Secretariat. The NAFO Secretariat will transmit this information to all NAFO Contracting Parties and to the flag-State(s) of the boarded vessel(s) within one business day of receiving this information. The Non-Contracting Party vessel(s) which is boarded shall be provided with a copy of the findings of the NAFO inspection officials.

8. When a Non-Contracting Party vessel which has been sighted and reported as fishing, fish processing or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area, enters a port of any NAFO Contracting Party, such vessels may not offload any fish until it has been inspected by authorized Contracting Party officials knowledgeable in the NAFO conservation and management measures and this Scheme. Such inspections shall include, the vessel's documents, log books, fishing gear, catch on board and any other matter relating to the vessel's activities in the NAFO Regulatory Area.

9. If a sighted Non-Contracting Party vessel enters the port of a Contracting Party, it may [be allowed to] rebut the presumption, during the course of a port inspection, that it undermined the effectiveness of NAFO Conservation and Enforcement Measures by establishing that:

[a. there are no species on board subject to NAFO regulations; and that the vessel has not contravened any other NAFO conservation and management measures [to be determined]]; or,

[b. there are no regulated species on board the vessel; and, that the vessel has not contravened any other NAFO conservation and management measures [to be determined]]; or,

[c. the vessel has not contravened NAFO conservation and management measures [to be determined].]

If the sighted Non-Contracting Party vessel fails to rebut the presumption that it undermined the effectiveness of NAFO conservation and management measures landings and transshipments of all fish from such a vessel shall be prohibited in all Contracting Party ports.

10. Information on the results of all at-sea and port inspections of Non-Contracting Party vessels, and any subsequent action, shall be transmitted immediately through the NAFO Secretariat to all Contracting Parties and to the relevant flag-State(s).

11. [When a NCP vessel is sighted as fishing, fish processing or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area] Nothing in this Scheme affects the exercise by NAFO Contracting Parties of their sovereignty over the ports in their territory in accordance with international law. [In exercising this sovereignty, NAFO Contracting Parties may deny access to their ports, or deny services within their ports, exclusive economic zones or territorial sea to Non-Contracting Party vessels sighted fishing, fish processing or engaged in the transshipment of fish or fish products in the NAFO Regulatory Area. The measures provided for in this paragraph may be applied during the twelve month period following a reported sighting.]

12. The Standing Committee on Fishing Activities of Non-Contracting Parties in the NAFO Regulatory Area (STACFAC) shall review annually the information compiled and the actions taken under this scheme and, where necessary, recommend to the General Council any new measures that may be necessary to enhance the observance of NAFO Conservation and Enforcement Measures by Non-Contracting Parties.

Revised STACFAC Working Paper:
Other Issues

1. Transshipment Activities involving Contracting Party and Non-Contracting Party vessels.

A possible loophole created by any NAFO scheme to deal with Non-Contracting Party activities is that such vessels may attempt at-sea transshipment of their fish or fish products to a Contracting Party vessel. To prevent this from developing, STACFAC should recommend to the General Council that the General Council urge the Fisheries Commission to adopt a Conservation and Enforcement Measure prohibiting all at-sea transshipment activities between Contracting Party vessels and Non-Contracting Party vessels. (Note, such a prohibition would also serve to deter Contracting Party vessels from transshipping to a Non-Contracting Party vessel in order to circumvent NAFO Conservation and Enforcement Measures.)

2. Cooperation with NEAFC.

In order to keep better track of the activities of Non-Contracting Party vessels in the North Atlantic Ocean, STACFAC should recommend to the General Council that the NAFO Secretariat be directed to explore means whereby NAFO and the North-East Atlantic Fisheries Commission (NEAFC) can share information on the fishing/fish processing/transshipment activities of vessels which are not members of the respective organization and which are sighted operating in the North Atlantic Ocean.

Annex 6. Transshipment Issue

A. Inside NRA

- 1) Contracting Parties shall ensure that their vessels do not receive transshipment in the NRA from NCP vessels.
- 2) Transshipment from CP vessels to NCP vessels.
(For STACTIC)
- 3) Transshipment between two NCP vessels. The receiving vessel shall be treated as the sighted one.

B. Outside NRA

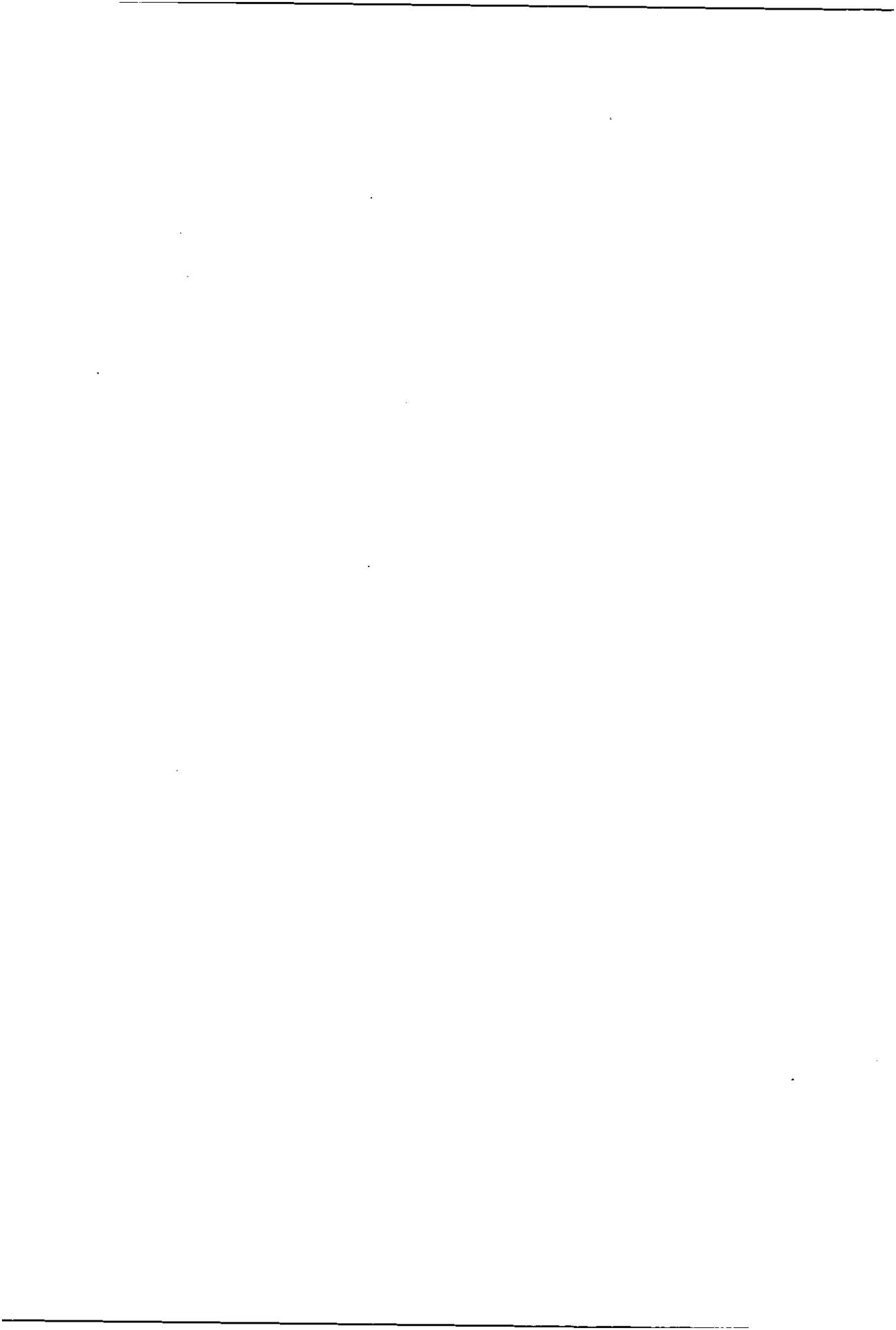
- 1) CPs shall ensure that their vessels do not receive transshipment from sighted NCP vessels. (normal criminal rules apply)
- 2) CPs shall ensure that their vessels do not receive transshipment from non-sighted NCP vessels that have taken the catch in contravention of the NAFO conservation and management measures. (normal criminal rules apply)
- 3) When CP vessel has received catch from a sighted vessel, the vessel may only land catches in port of its own flag State and the other CPs shall therefore prohibit its landing. (normal criminal rules apply in CP)

SECTION V

(pages 127 to 201)

Report of the Meeting of the Standing Committee on International Control (STACTIC) 24-26 June 1997 Copenhagen, Denmark

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Report of the Meeting of STACTIC

(FC Doc. 97/3)

**24-26 June 1997
Copenhagen, Denmark**

This intersessional meeting was held in accordance with the decision by the Fisheries Commission (FC Doc. 96/13, Part I, item 4.37) to call a STACTIC Meeting in June 1997.

1. Opening of the Meeting

The Chairman, D. Bevan (Canada) opened the meeting at 1000 on 24 June 1997. Representatives from the following Contracting Parties were present: Canada, 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 and the United States of America (Annex 1).

2. Appointment of Rapporteur

Paul Steele (Canada) was appointed Rapporteur.

3. Adoption of Agenda

The agenda was adopted as attached (Annex 2).

4. Review of Implementation of Conservation and Enforcement Measures

a) Hail System

The Executive Secretary reported on the implementation of the hail system (Annex 3-Working Paper 97/4). He indicated that the operation of the system had greatly improved. The Executive Secretary recommended that the computerized hail report system be utilized by all Contracting Parties. This would require Contracting Parties to centralize all hail reports in their headquarters and transmit the reports to the NAFO Secretariat database.

The representative from Norway pointed out that satellite tracking can also be used to monitor the fishery and generate hails. It was also noted that the North Atlantic Fisheries ministers Conference, at the meeting in Torshavn in May, 1997, urged the relevant regional fisheries management organizations to take the necessary steps to complete the work of providing a standardized format for activity reporting and data exchange, suited also for the use of satellites.

The representative from Iceland indicated that the hail system should play a greater role in catch reporting. He also stated that hail information should be available to all Contracting Parties and that the NAFO Conservation and Enforcement Measures should be amended to remove the confidentiality element with regard to hail reports.

The confidentiality issue was raised again later in the meeting. The Icelandic representative proposed that the NAFO Hail System be made more transparent by removing the confidentiality clause (Part III.E.3 of the Conservation and Enforcement Measures). He stated that wider

availability of hail reports would help to deal with complaints about alleged non-compliance with the fishing day limits in the shrimp fishery, related to some particular interpretations of the term "fishing day".

There was considerable discussion on this issue. The European Union representative stated that the confidentiality of the hail reports must be respected. He also suggested that Iceland could receive hail information, pursuant to Part III.E.2 of the Conservation and Enforcement Measures, if they deployed a patrol vessel to the Regulatory Area.

The representative of Iceland stated that this proposal would not solve the problem as, due to Part III.E.3 of the Conservation and Enforcement Measures, it would still not allow Iceland to publish the hail data.

The Canadian representative suggested that, as an alternative, the Executive Secretary could produce summary reports of the hail information, which could then be distributed to Iceland and other Contracting Parties on an annual basis. The Icelandic representative accepted that such reports would be an improvement, but re-stated that the removal of the confidentiality clause would be the preferred solution.

The European Union representative suggested that, if Iceland wishes to pursue this matter, they should submit a formal proposal to the Fisheries Commission to seek an amendment to the Conservation and Enforcement Measures. The Chairman agreed, and he advised the Icelandic representative that the issue would have to be addressed through the Fisheries Commission.

b) Submission of catch statistics

The Executive Secretary reported on the current situation with regard to the submission of catch statistics. He noted that several overdue reports, from various Contracting Parties, are still outstanding. He also advised that the NAFO Scientific Council has expressed concern regarding the overdue reports. The Executive Secretary emphasized the importance of timely submission of catch statistics.

The Chairman requested suggestions on how to improve the timeliness of catch statistics reporting.

The Canadian representative suggested that Heads of Delegation for the Fisheries Commission should be made aware of the current situation. **It was agreed that each Contracting Party will ensure that their respective Heads of Delegation are advised of the problem.**

(c) Operation of surveillance and inspection; and (d) Reports with respect to the pilot project on observers and satellite tracking

The Executive Secretary presented a report on the activities of the NAFO Secretariat with regard to surveillance and inspection operations and communication between the Secretariat and all involved parties.

The Executive Secretary noted that there are concerns regarding the delays in submitting reports about the disposition of apparent infringements. He reminded Contracting Parties that the due dates for submission of these reports to the NAFO Secretariat are February 1 and September 1 each year.

The European Union and Canadian representatives questioned whether the Executive Secretary had received their reports regarding 1996 apparent infringements. The Executive Secretary confirmed that these reports had been received.

The Canadian representative presented a report on 1996 surveillance activities and inspections in the Regulatory Area (STACTIC Working Paper 97/7).

The European Union representative presented a report on 1996 inspections, catch record discrepancies and apparent infringements (STACTIC Working Paper 97/10).

The Japanese representative referred to the working paper submitted by the NAFO Secretariat (Working Paper 97/4) and questioned the apparent high frequency of inspections on Japanese vessels in 1996. He requested an equitable distribution of inspections. The EU representative also questioned why the number of inspections of Japanese vessels was so high. Later on he voiced concern about both the distribution of inspections conducted by Canadian inspectors as well as the lack of reports of at-sea inspections of Canadian vessels conducted by Canadian inspectors.

The Canadian representative stated that, since Canadian vessels are boarded in the Regulatory Area under the authority of Canadian law, the inspectors complete Canadian inspection reports rather than NAFO reports. These inspection reports are not forwarded to the NAFO Secretariat.

The Canadian representative raised concerns regarding the methodology used to develop the table on the distribution of inspections in 1996 (Working Paper 97/4). The main concern expressed was that the table considers the number of fishing vessels rather than fishing effort, which the Canadian representative stated was the requirement under the Conservation and Enforcement Measures and would allow for a more accurate description of the distribution of inspections. He referred to Part IV.2(ii) of the Conservation and Enforcement Measures, which outlines the criteria to be used to ensure objectivity in the distribution of inspections. The European Union representative requested the Executive Secretary to prepare a new table on the distribution of inspections based on fishing activity and catches, as per Part IV.2(ii) of the Conservation and Enforcement Measures.

Representatives from Norway, Denmark, Canada, Latvia, the United States, Japan, Estonia, the European Union and Iceland presented reports respecting the implementation of the Pilot Projects in 1996 and 1997 (Annexes 4-14).

During the discussions it was revealed that in many instances the costs associated with implementation of the systems are paid by government funds of the respective flag states, or even other states in some cases, and that such costs are not reimbursed by the respective fishing industries.

The Norwegian representative asked if there was any information on the implementation of the Pilot Project by Contracting Parties not present at the meeting. No such information was provided.

(e) Establish criteria for review of the pilot project

The Chairman referred Contracting Party representatives to Part VI.C.1 of the Conservation and Enforcement Measures, which describes some of the criteria to be considered in evaluating the Pilot Project (i.e. cost/benefit in terms of compliance and the volume of data received for fisheries management). He then requested comments from Contracting Party representatives regarding other criteria which could be considered.

The Norwegian representative noted that the satellite tracking pilot project has not yet been fully implemented by all Contracting Parties and the Secretariat and therefore the benefits will be very difficult to evaluate at this time. This specifically refers to the potential for real-time reporting, pursuant to Part VI.B.1(d) and Part VI.B.1(e) of the Conservation and Enforcement Measures.

The Icelandic representative questioned whether the evaluation was to be carried out at this meeting or at the annual meeting of the Fisheries Commission in September, 1997.

The Chairman pointed out that it would be difficult to carry out the evaluation at this meeting since several Contracting Parties, that have participated in the Pilot Project, are not represented. He suggested that the purpose of this STACTIC meeting should be to develop criteria which would be submitted to the Fisheries Commission for review at the annual meeting in September, 1997.

Representatives from Iceland, Canada and the European Union agreed that this approach would be appropriate, even though it is recognized that not all elements of the pilot project have been fully implemented.

The Icelandic representative advised that Iceland and the Faroe Islands had agreed to work cooperatively in order to have a satellite tracking program implemented in the Faroe Islands.

The Chairman requested proposals from Contracting Party representatives with regard to criteria to be used to evaluate the pilot project.

The European Union representative referred to the criteria for the review of the observer program in its presentation (Annex 13, Attachment 2, page 67), i.e. the design of the program; the manner in which it is delivered; the quality, timeliness and usefulness of the information gathered; the added value of an observer scheme in comparison to other means of monitoring fisheries. He also suggested that the duties of observers should be reviewed to ensure that they are properly focused on the most important tasks. The European Union representative further suggested that STACTIC consider the possibility of improving the level of coordination between the observer programs and other elements of the control program.

The Norwegian representative expressed the view that there is not a need for full observer coverage in single species fisheries such as the 3M shrimp fishery.

The Canadian representative stated that the evaluation should not only be focused on cost considerations, and that compliance should be an important element of the review. He noted that, in the past, non-compliance contributed to the decline of stocks in the Regulatory Area. He emphasized that, along with the cost of implementing the control measures, consideration must be given to the potential cost of losing the resource if large scale non-compliance is allowed to take place.

The Icelandic representative agreed with the Norwegian position that single species fisheries should be treated separately with regard to evaluation of the effectiveness of the Pilot Project. He stated that the incentives for non-compliance must be considered when developing a control strategy for a particular fishery.

The European Union representative indicated that the European Union would not be supportive of a proposal for two separate enforcement regimes in the Regulatory Area.

The Norwegian representative stated that Norway is not suggesting a totally different regime, but rather that a lower level of observer coverage could be considered.

The Icelandic representative agreed to continue working on the development of evaluation criteria, but he emphasized the Icelandic view that the shrimp fishery is unique and should be treated as such when evaluating the effectiveness of the Pilot Project.

The European Union representative stated that while compliance trends were one of the criteria to be considered, it is not possible to attribute improved compliance only to the elements of the Pilot Project.

The Canadian representative stated that, while it may not be possible to specify the exact impact of the Pilot Project on compliance levels, there can be no doubt that the improvements were in a large part attributable to the Pilot Project initiatives.

The Icelandic representative suggested that if the observer pilot project is extended, Contracting Parties should ensure that there is an ability to compare results on observed vessels with results on vessels not carrying observers.

There was further discussion regarding the need for a different enforcement approach for single species fisheries. The European Union and Canadian representatives expressed the view that a single enforcement regime is required for the Regulatory Area and the exceptions to this rule would lead to unnecessary complications. The Icelandic and Norwegian representatives stated that there are precedents for different management approaches for different fisheries, and that the characteristics of the shrimp fishery are such that a less pervasive enforcement program could be equally effective. The Denmark representative agreed with the Canadian view that observers were the most effective means of identifying discarding problems. He further stated that such enforcement problems cannot be resolved through the use of satellite tracking or patrol vessels. The Canadian representative pointed out that the general current trend in fisheries management is in favour of a multi-species, eco-system approach. He pointed out that this approach was endorsed by the North Atlantic Fisheries Ministers at their recent meeting in Torshavn.

The Chairman indicated that, since it would not be possible to reach a consensus on this issue at this meeting, the focus for the remainder of the meeting should be on developing the evaluation criteria. He proposed that the question of the application of the criteria to different fisheries be referred to the Fisheries Commission at the annual meeting in September, 1997. This proposal was accepted.

The representative from Iceland stated that, in the absence of consensus regarding the application of the criteria to different fisheries, it is Iceland's intention to pay special attention to actual and potential problems associated with individual types of fisheries and on the real and potential contribution of different components of the Pilot Project to deal with such problems.

A small working group was then established to develop a written proposal for an evaluation framework.

The Chairman presented the draft evaluation framework to the delegates. After some discussion, the amended evaluation framework (Working Paper 97/20) was prepared. **It was agreed that the evaluation criteria would be forwarded to the Fisheries Commission for their consideration (Annex 15).**

There was some discussion about the process to be followed in carrying out evaluations. The Norwegian representative asked whether Contracting Parties should proceed with their evaluations prior to the September annual meeting, or if the evaluations should only begin following approval of the criteria by the Fisheries Commission. **STACTIC agreed that, in anticipation of a favourable review of the criteria by the Fisheries Commission, Contracting Parties would proceed with their evaluations with a view to submitting individual reports in anticipation of the September annual meeting. The Fisheries Commission will also be asked to provide direction on the issue of whether the Pilot Project would be evaluated on a multi-species or a species by species basis.**

f) Other issues

The Executive Secretary presented a proposal for modification of the NAFO Inspector/Trainees document of identity (Annex 16-Working Paper 97/5). Following a short discussion, the proposed document, with a minor amendment, was approved and recommended to the Fisheries Commission for adoption.

The STACTIC Report was reviewed and adopted by the Representatives and referred to the Fisheries Commission.

5. Adjournment

The meeting was adjourned at 1300 on 26 June 1997.

Adoption of Report

The Draft Report of STACTIC was adopted by STACTIC at the last session on 26 June 1997 and then finalized through circulation to the Heads of Delegations of the Fisheries Commission and STACTIC (GF/97-359 of 21 July 1997) and, therefore, adopted in accordance with the established procedure.

Annex 1. List of Participants

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L. I. Chepel, Executive Secretary
B. Cruikshank, Senior Secretary
M. Hansen, Greenland Home Rule (Denmark Office)

Annex 2. Agenda

1. Opening by the Chairman (D. Bevan, Canada)
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
 - f) other issues
5. Adjournment

Annex 3. Report by NAFO Secretariat on Implementation of Conservation and Enforcement Measures

a) Hail System

Pursuant to the provisions of Part III.E.2,3 of the NAFO Conservation and Enforcement Measures, the NAFO Secretariat performed the following functions:

- received hails via telex or fax from Contracting Parties and verified all hail reports and their sequential numbering;
- compiled reports from different Contracting Parties/vessels and transmitted via telex or fax the hails received to Contracting Parties with an inspection presence in the Regulatory Area;
- developed the NAFO database for communication purposes, which includes the following hard/software:
 - PC 386, 8 megs of RAM; 125 megs of hard drive
 - SVGA monitor, Dos 5.0; windowns 3.1 and PROMCOM+
 - X-25 connection, 2400 baud
 - Data base of MS ACCESS 7.0

This technology has enabled the Secretariat to communicate hail messages between the Secretariat-Ottawa-Brussels, the Contracting Parties with inspection presence, on a regular basis via the X.25 standard ASC II files.

Costs and volume of hail reports 1994-1997 has been the following:

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u> (5 months)
Transmissions* (from NAFO)	525	786	808	184
Costs of transmissions (\$Cdn)	5,774.00	7,113.80	7,639.09	1600.00

*Note: Each transmission from NAFO Secretariat consists of several compiled reports of Contracting Parties forwarded to the NAFO Secretariat during one day; time of transmission of the compiled report approximately 1600 Halifax time; this method saves substantial costs of transmission.

Comments:

The computerized hail report system as described above is suitable for the purpose and herewith recommended for incorporation by all Contracting Parties. This system would secure low costs, low labour and effective operativeness of all communication (format in Annex 1).

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.

b) Submission of catch statistics

According to Rule 4.4 of the Rules of Procedure for the Scientific Council, the statistical information should be furnished to the Scientific Council in advance of meetings and with respect of STATLANT 21A and 21B not later than on 15 May and 30 June, respectively.

The current status of this matter is presented in the table below.

<u>Contracting Party</u> <u>(Country)</u>	<u>Outstanding Statistics</u>	
	<u>STATLANT 21A</u> <u>Outstanding years</u>	<u>STATLANT 21B</u> <u>Outstanding years</u>
Cuba	1994 and 1995	1994 and 1995
Estonia	1995	1995
Faroe Islands	1995	1993, 1994 and 1995
Iceland	-	1995
Korea	1994	1994
Lithuania	1994 and 1995	1994 and 1995
USA	1994 and 1995	1993, 1994 and 1995

c) Operation of surveillance and inspection

Under the provisions of Part IV of the NAFO Conservation and Enforcement Measures, the NAFO Secretariat maintained its communication with all involved/interested parties on the major issues:

- notification of vessels/aircraft/inspectors to Contracting Parties for the Scheme of Joint International Inspection;
- notification of all fishing vessels of Contracting Parties for fishing in the NAFO Regulatory Area;
- receipt of copy of inspection reports and information on apparent infringements and their communication to appropriate authorities of Contracting Parties as required (Part IV.9.10);
- receipt of copy of surveillance reports (Part IV.11(iii));
- compilation of all inspection/surveillance reports and their dispositions at the NAFO Secretariat;

- list apparent infringements in the report(s) to the Contracting Parties until their disposition by the Flag State (FC Doc 96/3, Revised; FC Doc. 96/12).

The following Contracting Parties are listed with **undisposed apparent infringements**:

<u>Year</u>	<u>Contracting Party</u>	<u>Number of Vessels</u>
1993	European Union	8
	Iceland	2
	Lithuania	2
1994	Estonia	3
	European Union	11
	Iceland	8
	Lithuania	2
1995	Denmark (Faroe Islands)	5
	European Union	4
	Iceland	3

Apparent Infringements of 1996 (should be reported on
1 September 1996 for January-June 1996)

There were no reports presented to the NAFO Secretariat in 1996 according to Part IV.17a of the Conservation and Enforcement Measures.

The report on the objectivity in the realization and distribution of inspections between Contracting Parties (Part IV.2(iii)) is presented in the table below.

Realization and distribution of inspections (Part IV.2(iii)) between the Contracting Parties in 1996:

Contracting Parties (Countries)	No. of vessels in the NAFO Regulatory Area (NRA)	Inspections / Apparent infringements		Ratio 2,3 to 1: %		Total and Average	
		Reported by:					
	1	Canada*	EU**	Canada	EU	Inspections 2+3	ratio 6 to 1. %
		2	3	4	5	6	7
Canada	8	1/-	4/2	12/0	50/25	5/2	62/25
Denmark (DFG)	15	28/4	8/2	186/26	53/13	36/6	240/40
Estonia	6	13/-	-	233/0	0	13/-	216/0
EU	47	119/4	53/3	253/8	112/6	172/7	365/15
Iceland	39	41/3	16/13	105/10	41/33	57/16	146/41
Japan	2	10/-	1/-	500/0	50/0	11/-	550/0
Latvia	4	5/-	3/1	125/0	75/25	8/1	200/25
Lithuania	6	16/-	2/1	266/0	33/16	18/1	300/16
Norway	15	22/1	7/-	146/6	46/0	29/1	193/6
Russia	21	24/-	4/-	114/0	19/0	28/0	133/0
Total	164	279/12	98/22	170/7	60/13	377/34	230/21

* The data for Canada is provisional taken from inspection reports available at the NAFO Secretariat.

** The data for EU is taken from official EU information on inspections and apparent infringements.

Objectivity in distribution of inspections:

The data of the table above (column 7) indicate that the most frequently inspected vessels were for Japan (550%), the European Union (365%), Lithuania (300%) and Denmark (Faroe Islands 240%) and their average inspection ratio (number of inspections to the number of vessels) was above average (230%) ratio. The less frequent inspections were applicable to the vessels from Canada (62%), Cuba (100%), Russia (133%), Iceland (146%), Norway (195%), Latvia (200%) and Estonia (216%), and their average inspection ratio was below average ratio.

Comments on performance of the Measures:

There were/are several shortcomings re inspections addressed to Contracting Parties from the NAFO Secretariat (please see GF/96-505 of 11 Oct 96 and GF/97-159, 27 Mar 97) and those, in summary, are as follows:

- Re part IV.15 (Conservation and Enforcement Measures), provisional plans for participation in the scheme, the information from Contracting Parties would be required at the NAFO Secretariat by 1 November each year for next year.
- Re Part IV.16, information on inspections and apparent infringements, the reports from Contracting Parties would be required at the NAFO Secretariat by 01 March each year for the previous calendar year.
- Re Part IV.17a, disposition of apparent infringements, the information from Contracting Parties would be required by 01 February each year for the previous year.

These regulations and requirements have at all times been in arrears regarding the above-noted dates of presentation.

d) Pilot project on observers and satellite tracking

The NAFO Secretariat was performing its duties pursuant to the provisions of Part VI.A3.d and B1.d:

- The observer reports were sent/accumulated at the Secretariat and then circulated to the requesting Contracting Parties, mostly to Canada and the European Union.
- The satellite tracking messages were transmitted to the NAFO Secretariat only from one (1) Contracting Party - Norway. During 1996 there were 283 satellite reports received at the Secretariat. The reports were, in turn, transmitted by fax to two (2) Contracting Parties with inspection presence - Canada and the European union. The satellite tracking hails were filed in a separate file but unlike hail reports not computerized due to very different protocol-format.

The Working Group on satellite tracking met at the Secretariat on 2-4 April 1997 and developed the following recommendations to STACTIC and Fisheries Commission:

- according to the current NAFO Conservation and Enforcement Measures, the NAFO Secretariat is involved only in the receipt and transmission of hail reports;
- information pertaining to the geographical disposition of the fleet through satellite tracking positional information should be dealt with through direct bilateral cooperation between Contracting Parties, pursuant to Part VI Section B.1.e of the NAFO Conservation and Enforcement Measures;
- technology exists that, if acquired, could make it possible to transmit data between fishing vessels and the NAFO Secretariat and have the Secretariat retransmit to Contracting Parties with an inspection presence in the NRA and standardized formats may be the least expensive approach to achieve this;

- several Contracting Parties might be willing to enter into arrangements with the NAFO Secretariat to electronically transmit hail information;
- no consensus was reached on what new equipment and software should be provided to the NAFO Secretariat to accommodate this.

To follow-up the Working Group recommendations, the NAFO Secretariat has continued its communication with the appropriate authorities of Contracting Parties in charge of the satellite tracking with the following results:

- O. A. Davidsen from Norway requested our X.25 address to see if they would be able to send satellite tracking data directly to our computer. (They attempted to do this but were unsuccessful).
- J. P. Verborgh from the EU indicated that they were going to set-up a new mailbox in Brussels for us to retrieve information on satellite tracking. (They will inform when this is ready for testing).
- T. Blanchard informed that Canada will try to set-up a system where we can receive their hails using the X.25, similar to the process being used by the EU.

The provisional costs for incorporation of the satellite tracking system at the NAFO Secretariat could be estimated from the information of the FC Doc. 95/24, first Working Group meeting on this issue.

- The basic annual cost for hard/software would be at the level:

INMARSAT	20,000 USD
EUTELSAT	13,000 USD
ARGOS	10,000 USD

- Service charges would be in the range of 4000-5000 USD.
- Labour costs (upgrade and train one specialist) would be in the range of 3000-4000 USD.

**Annex 4. Report by Norway on Satellite Tracking
System - NAFO 1996/97**
(STACTIC Working Paper 97/1)

1.1 Equipment on board vessels

It was a decision by Norway that all of her vessels taking part in the Flemish Cap shrimp fisheries for 1996 should carry satellite tracking devices suitable for the NAFO trials.

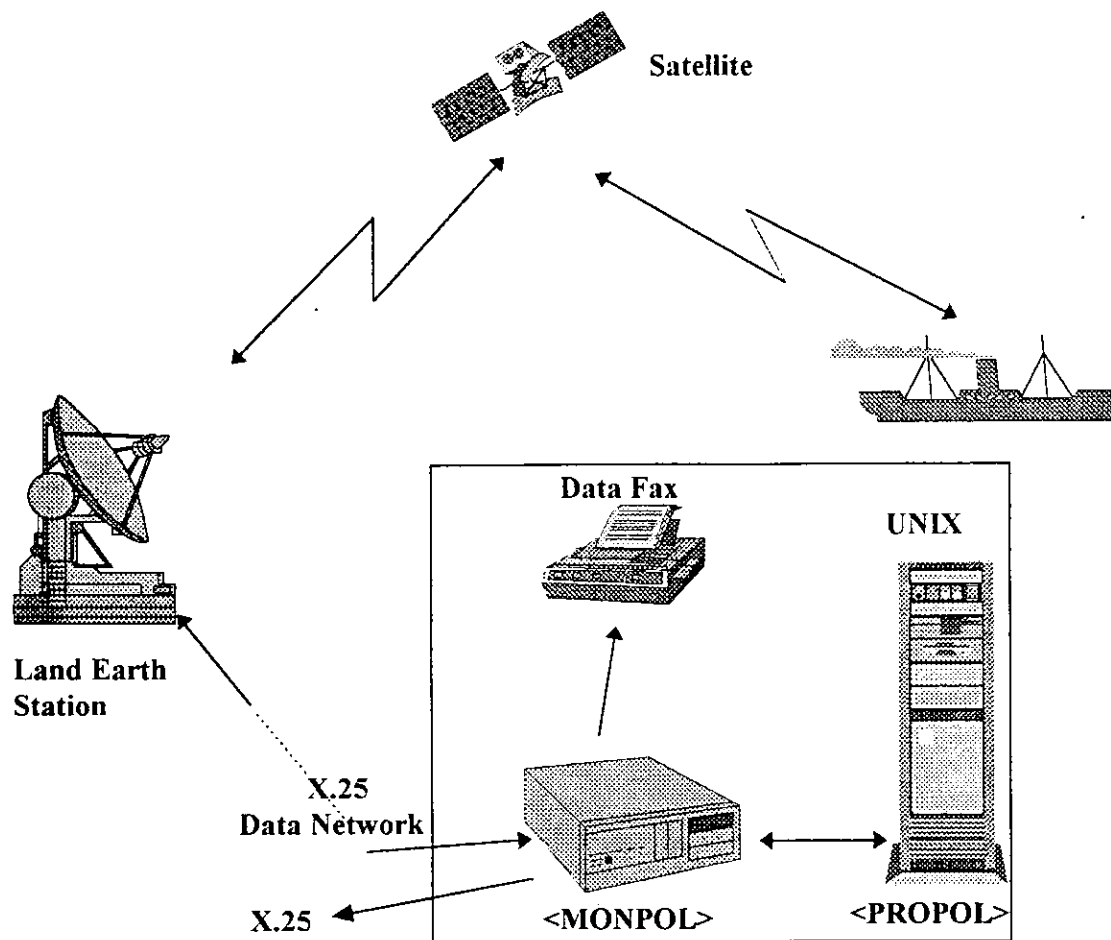
Out of 32 relevant Norwegian fishing vessels, about half were found to have Inmarsat-C equipment already installed before the start of the NAFO trials. Such equipment were, however, acquired for reasons other than tracking, and a fair amount of testing would be necessary to ascertain that tracking would work satisfactory. In the event not all those vessels chose to take part in the NAFO fisheries in 1996.

It was decided that a subsidy of NOK 20 000 (US \$3 000) should be provided by the Directorate of Fisheries for vessels buying their own tracking devices specifically to participate in the Flemish Cap shrimp fisheries. If the ship owner was not interested in buying such equipment, suitable tracking devices of the most inexpensive type would be provided by the Directorate of Fisheries at no cost to the vessel, for the duration of the trials.

During 1996, 6 ship owners took up the option to buy Inmarsat-C units specifically for the NAFO trials. Including 10 vessels which had Inmarsat-C already installed, this raised the number of Inmarsat-C units commissioned to 16. A total of 7 vessels had at any one time installed Argos units provided by the Directorate of Fisheries for tracking purposes, and 1 vessel had also installed Euteltracs equipment. One vessel first installed an Argos-GI unit, but later acquired Inmarsat-C equipment.

It was required that the tracking equipment should be operational before a vessel could sail for the NAFO area. The maximum number of Norwegian vessels active simultaneously in the NAFO area during 1996 reached 15 by mid July, as compared to a total of 23 vessels commissioned.

Be aware that the number of vessels is not equivalent to the number of satellite units. The reasons for this is that one of the vessels did carry two sets of equipment. It was anticipated that the Euteltracs system could not operate without interruptions in the Regulatory Area. As the necessary mechanism for automatic data exchange between the European and the Canadian systems had not been established by the time the vessel left for Flemish Cap, the vessel with Euteltracs equipment therefore also carried an Argo transmitter. All Hails forwarded from Norway to the Executive Secretary for this vessel were generated based on the Argos position reports.



1.2 Equipment at the Directorate of Fisheries

By the time of the 1995 NAFO Annual Meeting, the Directorate of Fisheries had already carried out a number of trials on satellite tracking of fishing vessels. An experimental system was therefore operational, whereby the Directorate of Fisheries could handle data both from Inmarsat-C and Argos on a 'real time' basis. The Directorate of Fisheries was also familiar with the Euteltracs system, although the Euteltracs position reports had to be uploaded to the Directorate of Fisheries via modem and a telephone connection, as Eutelsat could not provide a X.25 delivery service.

Basically, Argos and Euteltracs position reports have been collected by the service provider and reported to the customer (i.e. the Directorate of Fisheries) in batches. The Inmarsat-C position reports can be obtained in two ways, either as scheduled reports initialised by the vessel, or as reports initialised by request from a control centre (e.g. the Directorate of Fisheries). It is often held that the second option is the better. The second option provides what is called *Polled Data Reports*. The Inmarsat-C system allows polls for position reports to be issued to a specific vessel, or to a pre-defined group of vessels.

The system at the directorate is set up in two parts. The first part <PROPOL> runs on a UNIX computer, and issues polls for position reports. Incoming position reports are also logged by this system, which then decides whether further action, such as the issuing of a Hail Report to a third party, must be initialised. With specific intervals, for the time being every 15 minutes, the system reads an operator-defined table to find out whether polls for position reports shall be issued over the Inmarsat-C system, and decides which satellite and *Land Earth Station* (LES) should be used. <PROPOL> can handle both Argos, Euteltracs and Inmarsat-C position reports.

The second part of the system <MONPOL> takes care of all actual data communication. <MONPOL> runs on one or more PCs. Basically X.25 is the preferred communication protocol. All Inmarsat-C traffic is handled via X.25, and all Argos data reports are submitted to the Directorate of Fisheries via X.25. A format for X.25 was agreed with Euteltracs, but no data on this format was received during 1996. The actual transmission of outbound Hails from <PROPOL>, in this trial the Hails to the NAFO Executive Secretary, is also handled by the <MONPOL> system. For the 1996 NAFO trials, such Hails were submitted by facsimile.

As the <MONPOL> system reads all incoming position reports and transcribes them to a standard format before uploading to <PROPOL>, the <MONPOL> system has been equipped with a module to decide which geographical area a specific position refers to. This may be a *National Economic Zone* (NEZ), or as in the case of the NAFO trials, a statistical subdivision.

1.3 The Hailing System

NAFO/FC Doc. 95/24 made no specific recommendations as to the format and standards to be followed for the reporting of Hails. It did, however, in section 8, list Universal Time Count (UTC) and World Grid System 84 (WGS-84) as possible options. Further, it drew the attention to the EU format developed by Denmark and Spain for use in data exchange.

The Norwegian party therefore decided to use those standards as a starting point. It was, however, apparent that the EU format did not cover all the data elements necessary for a NAFO hailing systems. Two new data elements were therefore introduced:

Field Code RC(new) - Radio Call Sign
 Field Code RA(new) - Reporting Area
 Field Code XR would refer to Vessel Side Number

It was decided that the satellite devices on board the Norwegian vessels should trigger an automatic Hail message every time a vessel crosses a subdivision line, whether this be between divisions or between divisions and outside the Convention Area. Although the system was capable of generating e.g. EXIT Hails specifically, it was decided that the Hail should in all cases be MOVE, to be reported in Field Code TM.

No effort was made during 1996 to hail a crossing from the Regulatory Area into a NEZ.

As character set, the international ISO 8859.1 standard was adopted. In addition we took the liberty of reporting longitude (LO) and latitude (LA) according to the universally accepted decimal format, as this is better suited for handling by computer.

X.25 was our first choice as reporting media, with possible use of X.400 E-mail as a second best solution. As the X.25 installation at the NAFO Secretariat was not fully operational by mid February 1996, it was decided to use facsimile as reporting medium instead.

The NAFO Secretariat has acknowledged receipt of altogether 283 hails from Norway generated based on satellite tracking data for 1996.

An example of a 1996 hail message submitted by facsimile is given in Appendix 1.

2.1 Recent Developments

During the North Atlantic Fisheries Ministers Conference (NAFMC) meeting in Reykjavik in 1996, it was decided that an informal working group should report to the 3rd ministerial conference on current developments towards the application of common standards for the exchange of catch, position and activity data in the North Atlantic region, incorporating reference to work in NAFO and other relevant international organizations.

The Working Group should in particular aim at developing a standard for registration of catch and electronic data exchange that is compatible for both control and business use.

The NAFMC Working Group met in Torshavn 23-24 October, with delegates from Canada, the European Union, the Faroe Islands, Greenland, Iceland, Norway and Russia.

The Working Group inter alia decided to draw the attention of the Fisheries Ministers to the following:

A possible North Atlantic standard format for activity reporting and data interchange can be constructed by expanding the EU (Danish/Spanish) format to include other relevant data elements, for example those mentioned in the 1995 NEAFC report. If this approach is taken, efforts should be made to identify a body or organization which could accept responsibility for drafting and maintaining such a standard.

The Working Group also recommended that work on developing common standards, as proposed in the (Reykjavik) Communiqué, should continue.

At about the same time the Norwegian Directorate of Fisheries had accepted responsibility to organize the fisheries administration part of the Norwegian domestic trials on the use of satellite systems for fisheries purposes. As one of the main elements of these trials would be test automatic messaging systems, the Directorate of Fisheries decided that instead of starting off by defining a domestic format for the purpose of the trials, a better solution would be to try to adapt the recommendation of the NAFMC Working Group.

One comparatively great advantage with following this lead is apparent in the fact that a reporting scheme based on the EU (Danish/Spanish) model is not rigid, in the way that it does not assume a pre-defined array of elements to be reported. Rather, it allows elements to be added or taken away like building blocks, so as to set up messages tailored to specific needs with proper reference to the standard (re NAFO/FC Doc. 95/24, Annex 8).

The Directorate of Fisheries has consequently made an effort to define a number of data elements not included in the original EU (Danish/Spanish) proposal, enabling us to use this format as a basis for our domestic tests as well. A PC program <SATRAP> has been developed to set up messages according to this format for testing purposes, and matching data programs have been installed at the directorate to cater for the automatic handling of incoming messages on a machine readable

form. Although the Norwegian sea trials with this system is just about to start, one may hope that such trials could prove of value in setting up specifications for possible reporting schemes.

The EU Message Format as adapted to the Norwegian trials is outlined in Appendix 2.

It is the Norwegian view that to be of maximum value, a reporting scheme should be based on widely recognized standards. It should preferably operate equally well both in an E-mail environment (e.g. X.400) as well as implemented directly in a lower level protocol (e.g. X.25). In addition, the problem of authenticity is central to all automatic reporting schemes. Such problems are best resolved on an international basis.

3.1 NAFO Trials 1997

For 1997, 32 Norwegian fishing vessels may take part in the Flemish Cap shrimp fishery, limited to a total of 1,985 fishing days. As for 1996, all domestic vessels participating are obliged to carry satellite tracking equipment.

By early May two Norwegian vessels have commenced fishing at the Flemish Cap, one carrying Argos G-I and one Inmarsat-C equipment. So far a total of 15 hails from Norway have been forwarded automatically by computer during the 1997 trials. Based on experience from the 1996 trials, the reporting format has been modified to include also a Field Code SQ (new) for reporting the Sequence Number of the hail.

4.1 Points to consider

The Norwegian automatic hailing system is capable of submitting the hails either in the form of facsimile, or in a machine readable form as E-mail or via X.25. If E-mail is chosen, we would prefer the use of X.400. The NAFO Secretariat is for the time being not equipped to read X.25 messages automatically, as the present set-up within the Secretariat only supports the use of X.25 for logging into a remote computer system for manual file retrieval. An automatic hailing system can only be of limited use if the processing of the messages at the receiving end is not automated also.

For a system to generate hails automatically upon the crossing of border lines, it is necessary to have the boundaries of the relevant areas on computer readable form. The NAFO Convention Area is defined so as to enable the participants to make this transformation. To be able to hail crossings into and out of the Regulatory Area (NRA), e.g. passing to or from the NEZ's of countries where the point of crossing is inside the Convention Area, there is also a need to have the border lines delimiting the NRA available in the same way. This question will have to be addressed for an automatic hailing scheme to work for the Regulatory Area.

APPENDIX 1: EXAMPLE OF HAIL MESSAGES

TELEFAX

From: The Norwegian Directorate of Fisheries
To: NAFO Executive Secretary

Bergen, 96-07-02 06:21

Re PILOT PROJECT FOR SATELLITE TRACKING (B.I.d)

Here are one or more HAILS regarding Norwegian fishing vessels,
as reported directly by computer

```
//SR//FR/NOR//AD/NAFO//RC/XXXX//XR/YYYY//NA/ZZZZ/  
/FS/NOR//TI/044400//DA/960702//TM/MOVE//AC//RA/3L/  
/LA/47.731//LO/-046.528//SP/110//CO/273//ER//
```

```
//SR//FR/NOR//AD/NAFO//RC/xxxx//XR/yyyy//NA/zzzz/  
/FS/NOR//TI/044400//DA/960702//TM/MOVE//AC//RA/3M/  
/LA/48.859//LO/-042.040//SP/87//CO/274//ER//
```

This is a copy of a real facsimile sent to the NAFO Executive Secretary. For reasons of anonymity, RC, XR and NA are given as XXXX, YYYY, ZZZZ and xxxx, yyyy, zzzz respectively for the two vessels.

APPENDIX 2: The EU Message Format as adapted to Norwegian trials**Draft Version 0.94E - March 1997**

Field Code	Name	Type	Contents
SR	Start of Record	-	
FR	From	CHAR*5	ISO-3/NAFO/NEAFC
AD	Addressee	CHAR*5	ISO-3/NAFO/NEAFC
IR	Internal Register to	CHAR*12	(EU)
XR	External Register to	CHAR*12	Side Number
NA	Vessel Name	CHAR*30	ISO 8859.1
FS	Flag State	CHAR*3	ISO-3
DA	Date	NUM*6	YYMMDD
TI	Time	NUM*6	HHMMSS(UTC)
LA	Latitude (degrees)	SNUM*8	±99.9999 (WGS-84)
LO	Longitude (degrees)	SNUM*9	±999.9999 (WGS-84)
SP	Speed	NUM*3	Knots*10
CO	Course	NUM*3	360°scale
TM	Type of Message	CHAR*4	Codes
AC	Activity	CHAR*3	Codes
ER	End of Record	-	
TS	Trailer Start	CHAR*80	ISO 8859.1
TE	Trailer End	-	
AU	Authenticity Code	HEX*8	Hexadecimal
AG	Agreement	CHAR*4	
SQ	Msg. Sequence No	NUM*3	
TN	Tour Number	NUM*3	
CP	Control Point	CHAR*10	ISO 8859.1
RA	Reporting Area	CHAR*6	ICES/NAFO codes
RC	Radio Call Sign	CHAR*8	
FT	Forward To	CHAR*5	ISO-3/NAFO/NEAFC
TT	Transfer To	CHAR*8	Radio Call
TF	Transfer From	CHAR*8	Radio Call
PO	Port Name	CHAR*20	ISO 8859.1
MA	Master name	CHAR*30	ISO 8859.1
NZ	National Zone	CHAR*3	ISO-3
PL	Platform Number	NUM*9	
PQ	Position Quality	CHAR*1	ARGOS code
CA	Catch Items	CHAR*3 NUM*7	FAO-Codes, 10 pairs
HO	Items in Hold	CHAR*3 NUM*7	----"----
KG	Other Items	CHAR*3 NUM*7	----"----
CG	Count Groups	CHAR*3 NUM*7	----"----
RS	Return Status	CHAR*3	Codes
RE	Return Error Number	NUM*3	Lookup Table
MS	Text String	CHAR*32	ISO 8859.1
DF	Days Fished	NUM*5	
GG	Global Area Grid no	NUM*2	FAO Global Area Grid

GE	Gear	CHAR*3	FAO-Code
VO	Vessel Owner	CHAR*60	ISO 8859.1
VL	Vessel Length	NUM*3	Overall length, meters
VT	Vessel Gross Tonnage	NUM*4	GT 1969 Convention

TYPES OF MESSAGE:

INITIALISATION	MOVE
ENTRY	TRANSFER
EXIT	PORTCALL
CATCH	CONTROL
POSITION	NOTIFICATION

Abbreviation to the first four characters is encouraged.

TYPES OF ACTIVITY:

FIS	= Fishing
NOF	= Not Fishing
PRO	= Production
STM	= Steaming
HAR	= In Harbour

CONTROL POINT:

Typical values from Phonetic Alphabet: ALFA, BRAVO, CHARLIE etc.

RETURN STATUS:

ACK	= Acknowledged
NAK	-.Not Acknowledged

FAO GLOBAL AREA GRID:

21	= NAFO Area
27	= NEAFC Area

etc. - Should be specified where misunderstandings are otherwise possible.

SPECIES/QUANTITY COMBINATIONS;

CA (Catch), HO (In Hold), KG (Species Distribution) .

Ex: //CA/COD 123 HAD 2345 SAI 56789 HER 98765/

A maximum of 10 pairs of Species and Quantity; where Species are given as FAO code, and Quantities are Round Fresh Weight in kilos. The individual data elements are separated by space.

Only the Field Codes varies between the types of entries.

COUNT-GROUP SPECIFICATION:

Ex: //CG/PRA 13246 GRI 123 GR4 362 GR8 5312 GR6 14/

A maximum of 10 pairs of identifiers and values, where one pair (preferably the first) identifies Species and Total Quantity, and the following 9 or fewer pairs the Group(s) and the Value(s). The individual data elements are separated by space.

EXAMPLES:*Return Message without error specification:*

The Norwegian fishing administration NOR returns information to a vessel with Radio Call ABCD that her ENTRY message with sequence number 13, date 961203 and timestamp 12:55 has been ACKnowledged:

//SR//FR/NOR//RC/ABCD//TM/ENTR//RS/ACK//SQ/13//DA/961203//TI/125500//ER//

Return Message with an error specification:

The Norwegian fishing administration NOR returns information to a vessel with Radio Call ABCD that her CATCH message with sequence number 2, date 961203 and timestamp 12:45 has not been acknowledged. The error number is 713 (text found in look-up table):

//SR//FR/NOR//RC/ABCD//TM/CATC//RS/NAK//RE/713//SQ/2//DA/961203//TI/124500//ER//

USER-ASSIGNED ISO-3 CODES

(Ref. ISO 3166; 1993 E/F, Par. 7.3)

XXX International Waters
 XAA Adjacent Area NOR-RUS
 XBS International Waters Barents Sea
 XNS International Waters Norwegian Sea
 XEU European Union (Waters)
 XSV Svalbard (Fishery Protection Zone)
 XJM Jan Mayen (Fishery Zone)

PREDEFINED ERROR MESSAGES

999	System Error at Other End
800	Your Message has Bad Parity
801	Your Password is Unknown
802	(not used)
803	Your message is Unreadable
804	Unknown Identifier in Message
805	No Message in Your Transmission
890	Pending, Waiting for Duplicate
899	System Error at Other End
700	No Interpretation Possible
701	OK, but No Initialisation
702	OK, but No Entry Message
703	OK, but No Exit Message
704	No Catch Message
705	OK, but Last Message is Missing
706	OK, but Some Messages Missing
707	Message OK, but Other Error
708	Your Message Already Received
710	Unknown Radiocall
711	Unknown Agreement
712	Unknown Area Code
713	Unknown Species
714	Unknown Adm.ISO-3 Code
715	Unknown Checkpoint
716	Unknown Harbour
720	Too many Vessels Active
721	Too many Fishing Days
730	Invalid Area/Agreement combination
790	Data Base Error
799	Contact Receiving Authority

Messages 990-998 are user defined to distinguish between various forms of System Errors.

Annex 5. Report by Norway on NAFO Pilot Observer Scheme (STACTIC Working Paper 97/2)

The introduction of a 100% observer-coverage in NRA in 1996, was carried out without any major problems. To accomplish this, two factors were important: 1. the good cooperation between Norway (The Directorate of Fisheries) and the Canadian fishery authorities (The Department of Fisheries and Oceans (DFO), NFLD), and 2. the use of the Canadian observer company Seawatch.

DFO agreed to transport observers between St. John's and NRA, and this was most helpful in the process of the deployment of observers to Norwegian vessels. Whenever possible, observers were transported on other Norwegian fishing vessels delivering shrimp in Harbour Grace.

The Directorate of Fisheries, DFO and Seawatch have worked out operational guidelines to ensure deployment. The main elements in these guidelines are:

- The fishing vessel notifies the Directorate of Fisheries and Seawatch a minimum of 7 days prior to entering the NRA, and supplies information about the vessel and time of arrival.
- Seawatch contacts DFO to arrange transport.
- Seawatch confirms deployment arrangement with the fishing vessel, and provides name, telephone number and departure time of the DFO patrol vessel.
- DFO transports observers and establishes contact with the fishing vessel to arrange position and time for rendezvous.

The deployment process has been monitored closely by the Directorate of Fisheries, and everything was carried out to the satisfaction of the Norwegian authorities.

By using Canadian observers, the cost pr. observer day is lower than by using Norwegian observers, due to lower wages and the location of the observer company. The administrative costs are also lower, mainly because the bidding process and the accrediting of the observer company is done by DFO.

Seawatch is engaged by and paid by the Directorate of Fisheries. However, the fishing vessels are to cover the costs, and each vessel is invoiced by the Directorate of Fisheries according to the amount of days in 3M. They pay the sea day rate for each day the vessel has been in 3M. 12% is added to this, to cover transportation between St. John's or Harbour Grace and NRA. In this way all the costs are distributed on the vessels according to the activity in 3M.

The observer cost pr. sea day was in 1996 CAD 337.61 and pr. land day (stand by) CAD 116.38.

Even if Norway has tried to limit the costs as much as possible, the costs are still considerable for each vessel, and a cost/benefit evaluation will have to be done at the end of the pilot observer scheme.

Norway has experienced that the observers are professional and impartial, and this gives the observer scheme an credibility which is wanted by all parties.

In 1996 15 Norwegian vessels have participated in the shrimp fishery in 3M. Of the total amount of 2206 days, these vessels have been in 3M 1550 days.

Annex 6. Report by Denmark (Greenland) on Implementation of Conservation and Enforcement Measures

(STACTIC Working Paper 97/3)

Introduction

This working document is prepared to describe Greenland involvement in the implementation of Conservation and Enforcement Measures. This paper will therefore in accordance with the agenda, deal with the following issues: A. Hail System B. Submission of catch statistics C. Operation of Surveillance and Inspection D. Report on the pilot project on observers and (satellite tracking).

A. Hail System

In 1996 six Greenland vessels conducted shrimp fishery on Flemish Cap in the period from 28 May to 30 September. A total of 152 days (from ENTRY message to EXIT message) was spent in the Regulatory Area. The hail reports have been forwarded to the NAFO Executive Secretary by e-mail/Internet. This has proved to be fast and reliable. However, in order to avoid any failures some hail reports have been forwarded by fax as well. Also in order to secure that compliance with the hail system message format is being upheld. Greenland Fisheries Licence Authority has established an ongoing dialogue with the relevant fishing organizations, in order to ensure best possible compliance with the NAFO Conservation and Enforcement Measures.

B. Submission of catch statistics

Greenland has on a monthly basis reported provisional catch figures to the NAFO Executive Secretary. These reports have been based on weekly catch telex messages/reports from the vessels during their operations in the area and from the logbook at the end of the trip.

C. Operation of Surveillance and Inspection

Greenland does not conduct surveillance and inspection in the Regulatory Area.

D. Report on the pilot project on observers and (satellite tracking)

Greenland is currently only engaged in the shrimp fishery in area 3M. This fishery has been conducted by 6 vessels and the total number of fishing days in 1996 have been some 152 days although Greenland has been allocated more than 501 fishing days in the Regulatory Area.

Since Greenland did not exceed the minimum number of 300 days per year in the Regulatory Area (as laid down in Part VI - Pilot Project for Observers and Satellite Tracking of the NAFO Conservation and Enforcement Measures) Greenland applied only the Observer Scheme. Observers have been deployed to all our vessels in the Regulatory Area [as well as all our shrimp vessels in our own waters]. Observers are deployed and are working according to the pilot project. Observer reports from the Regulatory Area are forwarded to the NAFO Headquarters. However, in the future, the observers reports will now be available in English.

Apparent infringements have been detected in two cases on our vessels. An educational model has been produced in order to keep our observers up to date about any developments in conservation and enforcement regulations, national as well as international.

Greenland Fisheries Licence Control Authority are, in cooperation with Greenland Institute of Natural Resources and scientific communities, working to develop a functional method, by which the observers should collect and process samples from the catches and by-catches on a set-by-set basis in the Regulatory Area according to the Pilot Project and as requested by the Scientific Council.

Outline of Observer Expenses for Greenland. 1996.

(Estimated Cost)

50 observers/year

Items	Expenses	Expenses	Expenses
	DNK	ECU	US\$
Wages	12,500,000	1,689,189	2,236,136
Daily allowance	1,544,000	208,649	276,208
Travelling-expenses	1,436,000	194,054	256,887
Holiday-travelling	450,000	60,811	80,501
Uniforms/clothing*	318,000	42,973	56,887
Training and education**	1,142,500	154,392	204,383
TOTAL (50 observers)	17,390,500	2,350,068	3,111,002
Annual expenses pr.year/obs.:	347,810	47,001	62,220
Cost per day/observer	952	129	170

* Uniforms and other clothing does not cover specialized equipment and certain personal equipment and safety equipment.

** Training in 1996 only reflects the supplementary courses and training for some of the observers.

1 ECU = 7,40 DNK

1 US\$ = 5,59 DNK

In 1996 - 6 vessels spent 152 days in the NRA (Shrimp Flemish Cap).

	Expenses	Expenses	Expenses
	DNK	ECU	US\$
Total/obs/NRA 1996:	144,841	19,573	25,911

**Annex 7. Report by Canada on Pilot Project Observer and
Satellite Tracking Technology**
(STACTIC Working Paper 97/8-Revised)

1.0 Introduction

At the 17th Annual Meeting, Contracting Parties agreed to a two-year pilot project for Observer Coverage and Satellite Tracking Technology beginning in January 1996 (Canada and the EU actually began projects in May of 1995) and continuing to December 1997. Coverage levels under these pilot projects are 100% for observers and 35% for satellite tracking technology.

Other significant enhancements to the NAFO Conservation and Enforcement Measures adopted in 1995 included a 100% dockside monitoring program (DMP) and immediate follow-up to major apparent infringements.

2.0 Observer Programs Roles

The two-year pilot project for Observer Coverage and Satellite Tracking Technology is designed primarily to improve compliance by masters with the NAFO Conservation and Enforcement Measures.

Observer responsibilities include:

- Monitoring vessel compliance with relevant Conservation and Enforcement Measures, in particular,
 - recording and reporting on the fishing activities of vessels and verifying the position of vessels when engaged in fishing;
 - observing and estimating catches with a view to identifying catch composition and monitoring discards, by-catches and the taking of undersized fish;
 - recording the gear type, mesh size, and attachments employed by the vessel;
 - verifying entries in the logbooks (species composition/quantities, round/processed weight, and hail reports).
- Collecting catch effort data on a set-by-set basis, including location (latitude/longitude), depth, time of net on the bottom, catch composition and discards;
- Conducting scientific work (for example, collecting samples) as requested by the Fisheries Commission based on the advice of the Scientific Council;

- **Within 30 days** following completion of an assignment on a vessel, providing a report to the Contracting Party of the vessel and to the Executive Secretary, who shall make the report, available to any Contracting Party that requests it. Copies of reports sent to other Contracting Parties shall not include location of catch in latitude and longitude as required under 3 b), but will include daily totals of catch by species and division.
- In the case where an observer is deployed on a vessel equipped with satellite tracking technology the observer shall monitor the functioning of, and report upon any interference with, the system. In order to better distinguish fishing operations from steaming and to contribute to an *a posteriori* calibration of the signals registered by the receiving station, the observer shall maintain detailed reports on the daily activity of the vessel.
- When an apparent infringement of the Conservation and Enforcement Measures is identified by an observer, the observer shall, **within 24 hours**, report it to a NAFO inspection vessel using an established code, which shall report it to the Executive Secretary.

3.0 Pilot Project Administration

Contracting Parties shall take all necessary measures to ensure that observers are able to carry out their duties. Subject to any other arrangements between the relevant Contracting Parties, the salary of an observer shall be covered by the sending Contracting Party.

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.

Subject to any other arrangements between Contracting Parties, each Contracting Party shall pay all costs associated with the satellite tracking system.

4.0 Pilot Project Application

- Each Contracting Party shall require all its vessels fishing in the Regulatory Area to accept observers on the basis of the following:
 - each Contracting Party shall have the primary responsibility to obtain, for placement on its vessels, independent and impartial observers;
 - in cases where a Contracting Party has not placed an observer on a vessel, any other Contracting Party may, subject to the consent of the Contracting Party of the vessel, place an observer on board until that Contracting Party provides a replacement in accordance with paragraph a);
 - no vessel shall be required to carry more than one observer pursuant to this Pilot Project at any time.

- Each Contracting Party shall provide to the Executive Secretary a list of the observers they will be placing on vessels in the Regulatory Area.
- Each Contracting Party whose vessels fish, or plan to fish, a minimum of 300 days per year in the Regulatory Area, shall:
 - require 35% of its vessels fishing in the Regulatory Area to be equipped with an autonomous system able to transmit automatically satellite signals to a land-based receiving station permitting a continuous tracking of the position of the vessel by the Contracting Party of the vessel;
 - endeavour to test several systems of satellite tracking;
 - install at least one receiving station associated with their satellite tracking system;
 - transmit to the Executive Secretary, on a real time basis, messages of movement between NAFO divisions (as per the requirements of the Hail System outlined in Part III.E of these Measures) for its vessels equipped with satellite devices. The Executive Secretary shall, in turn, transmit such information to Contracting Parties with an inspection vessel or aircraft in the Convention Area;
 - cooperate with other Contracting Parties which have a NAFO inspection vessel or aircraft in the Convention Area, in order to exchange information on a real-time basis on the geographical distribution of fishing vessels equipped with satellite devices and, on specific request, information related to the identification of a vessel.

5.0 Pilot Project Analysis

- Each Contracting Party shall prepare a report on the results of the Pilot Project from the perspective of efficiency and effectiveness, including:
 - overall effectiveness of the Project in improving compliance with the Conservation and Enforcement Measures;
 - the effectiveness of the different components of the Project;
 - costs associated with observers and satellite tracking;
 - a summary of observers' reports, specifying type and number of observed infractions and important events;
 - estimations of fishing effort from observers as compared to initial estimation by satellite monitoring;

- analysis of the efficiency in terms of cost/benefit, the latter being expressed in terms of compliance with the Conservation and Enforcement Measures and volume of data received for fisheries management.
- The reports shall be submitted to the Executive Secretary in time for their consideration at the September 1997 Annual Meeting of NAFO and, based on these reports, the Parties agree to establish a permanent scheme that will ensure that the degree of control and enforcement in the Regulatory Area provided by the Project, as indicated above, is maintained.

6.0 Canadian Observer Program Review

The observer program provides an effective means to determine vessel compliance with regulatory requirements. Observers also provide a reporting mechanism that ensures emerging problems to be identified and dealt with in a prompt manner.

In 1996 and 1997, no apparent infringements were reported by observers on Canadian vessels.

Total Canadian fishing days in the NAFO Regulatory Area during the January 1, 1996 to April 30, 1997 period was 291 days. This total was comprised of 248 days in the 3M shrimp fishery and 43 days for all groundfish fisheries. Observer coverage for all fisheries was maintained at 100% (Appendix 1).

Biological sampling followed the standard program for fisheries conducted inside Canadian Fisheries Waters. Observers deployed on Canadian vessels are required to conduct sampling on the main species sought by the vessel, and on major by-catch species. A sample consists of an average of 200 fish, which are measured and sexed.

Deployment costs for 1996-1997 (to April 30) period was \$62,000 for the shrimp fishery and \$11,000 for the groundfish fishery, exclusive of program administration costs estimated as \$30,000. Cost per observer day was approximately \$250.

In 1996, a Canadian company was contracted by Norway to provide observers on Norwegian vessels fishing shrimp in Division 3M. During 1996 and 1997 (April 30), Canadian observers have been deployed on Baltic State, Icelandic and Russian vessels fishing shrimp in Division 3M. Unless otherwise directed by the Contracting Party, all observer reports/information for these deployments are transmitted directly from the Canadian contractor to the Contracting Party.

An observer program provides a continuous presence on board fishing vessels. The observer program is seen as a cost effective response to enforcement issues particularly the use of mesh obstruction devices, misreporting of species and the capture of juvenile or prohibited species. These apparent infringements cannot be dealt with as effectively or completely by air/sea surveillance or satellite tracking technology. The observer program is also a valuable source of biological sampling data.

7.0 Canadian Satellite Tracking Program Review

Currently, satellite tracking technology can provide the following information:

- Vessel location and identification: a GPS position, as well as vessel name and nationality, is being provided to the NAFO Secretariat.
- Hail information: vessels notify the NAFO Secretariat of zone entries, exits and movements between divisions. As part of the hail, catch information may be provided.

The value of this information is limited when dealing with non-compliance related such as misreporting and the use of mesh obstruction devices.

In 1996, nine (9) Canadian vessels spent 194 days in the NAFO Regulatory Area. Under the Pilot Project for Observer Coverage and Satellite Tracking Technology, Contracting Parties with 300 or more of effort in the NAFO Regulatory Area are required to install satellite tracking devices on 35% of its vessels.

Canada had less than 300 days of effort in the NAFO Regulatory Area, however, satellite tracking systems were installed on 3 vessels which were anticipated to fish in the NAFO Regulatory Area. These vessels chose instead to pursue fisheries in Canadian Fishery Waters. As a result, none of the Canadian vessels that fished in the NAFO Regulatory Area in 1996 carried satellite tracking technology.

In 1997 (to 30 April) Canadian vessels have fished in the NAFO Regulatory Area for approximately 84 days. Satellite tracking systems have been installed on two shrimp vessels with more installations planned. The systems are working well and providing positional records as required.

In May of 1995, Canada established a contract with a Canadian supplier to provide 15 satellite tracking units on an annual basis. All inclusive costs (leasing/transmissions) is \$150,000.

Appendix 1

The following table lists the sea days by month/fishery for 1996-1997:

Year	Month	Fishery	Observed Days
1996	February	Halibut	13
	February	Shrimp	3
	March	Shrimp	21
	April	Shrimp	98
	May	Shrimp	28
	May	Hake/GHL	8
	June	Shrimp	14
	June	Hake/GHL	4
	September	Hake/GHL	5
1997	February	Halibut	9
	March	Shrimp	16
	April	Shrimp	68
	April	Halibut	4
TOTAL			291

Annex 8. Report by Latvia
(STACTIC Working Paper 97/12)

The Latvian vessels do not fish for redfish and cod in the NAFO area because of unsettled issue on a separate quota for the above-mentioned species. Five middle size trawlers which could fish for shrimp in the NAFO Regulatory Area are flying the Latvian flag. Three of them have the satellite monitoring equipment adjusted by the company "Argos". The received equipment has been mounted in the Marine Environmental Board.

In 1996 four Latvian vessels fishing for shrimp were deployed with Canadian observers. In the near future, the reports received from the observers will be sent to the NAFO Secretariat. Since 1997 all the vessels fishing in the NAFO waters have Latvian observers.

**Annex 9. Report by the United States of America on the NAFO Pilot
Project for Observers and Satellite Tracking**
(STACTIC Working Paper 97/13)

1. INTRODUCTION

In order to improve compliance with the Conservation and Enforcement Measures for their vessels fishing in the Regulatory Area, the Northwest Atlantic Fisheries Organization (NAFO) Contracting Parties agreed to implement during the period from January 1, 1996 to December 31, 1997 a NAFO Pilot Project for Observers and Satellite tracking. This project provides for properly trained and qualified observers on all vessels fishing in the NAFO Regulatory Area, and satellite tracking devices on 35 percent of their respective vessels fishing the Regulatory Area. To date, no U.S. vessels have fished in the NAFO Regulatory Area for NAFO stocks during the period for the Pilot Project, although U.S. fishers have indicated an intention to do so in the future. Therefore, the following paper will address strictly U.S. domestic developments paralleling implementation of the NAFO Pilot Project.

2. OVERALL EFFECTIVENESS

Based on reporting from other Contracting Parties, the 100 percent observer program has significantly increased compliance with Conservation and Enforcement Measures, with particular regard to proper gear. Given this development and the trial 90 mm net mesh size for 3M Redfish, this project should be fully implemented, with some additional conditions. Likewise, the satellite-based vessel monitoring system (VMS) has shown its usefulness and should be fully implemented onto all vessels fishing in the NAFO Regulatory Area. The VMS should be further developed to include minimum standards and with procedures to exchange the information electronically with the Secretariat and with inspection vessels.

3. OBSERVERS

In 1996 the U.S. implemented an observer program under the New England Multi-Species and Sea Scallop Fisheries Management Plans. The program is funded by Congress through the National Marine Fisheries Service and is administered by the Northeast Fisheries Science Center, Woods Hole, Massachusetts. It is estimated that it cost approximately US\$2,000 to train an observer. Currently, there are approximately 30-35 observers deployed on vessels in the regulated fisheries off New England. Observers accounted for over 1,500 days at sea in 1996. They have increased compliance and provided value by-catch data reporting.

The Observer program is expensive. In view of this fact, the United States recommends that the program continue for all fishing vessels operating in NAFO Divisions where stocks are regulated. This will increase the opportunity for experimental fishing in other divisions, but not increase the financial obligations to the fishing vessels operating in these experimental fisheries.

4. VESSEL MONITORING SYSTEMS

The United States has also implemented a VMS program under the New England Multi-Species and Sea Scallop Fisheries Management Plans. The VMS is used to track days-at-sea and monitor compliance with closed areas. Additionally, there are valuable enforcement and management implications associated with VMS. Up to 450 vessels are expected to participate in the program when it is fully implemented.

VMS is a conservation and enforcement measure which requires an initial capital outlay. Individual shipboard units cost between US\$3,500 and US\$6,000. Installation and maintenance require an additional US\$500 annually. However, individual position reports cost US\$0.08 per transmission. Base stations are also a significant financial outlay. A Unix base station costs US\$50,000, while a PC based hardware can cost US\$20,000 with US\$25,000 in additional software. These base stations access the vendor/downlink station via an X.25 line; these lines cost approximately US\$15,000 annually.

The U.S. domestic VMS program has the following minimum performance criteria:

- a. The VMS shall be tamperproof, i.e., shall not permit the input of false positions; furthermore, if a system uses satellites to determine position, satellite selection should be automatic to provide an optimum fix and should not be capable of being manually overridden by any person aboard a fishing vessel or by the vessel owner.
- b. The VMS shall be fully automatic and operational at all time, regardless of weather and environmental conditions.
- c. The VMS shall be capable of tracking vessels in all U.S. waters in the Atlantic Ocean from the shoreline of each coastal state to a line 215 nautical miles offshore and shall provide position accuracy to within 400 meters (1,300 feet).
- d. The VMS shall be capable of transmitting and storing information including vessel identification, date, time, and latitude/longitude.
- e. The VMS shall provide accurate hourly position transmissions every day of the year. In addition, the VMS shall allow polling of individual vessels and any set of vessels at any time and receive position reports in real-time. For the purposes of this specification, "real time" shall constitute data that reflects a delay of 15 minutes or less between the displayed information and the vessel's actual position.
- f. The VMS shall be capable of providing network message communications between the vessel and shore. The VMS shall allow NMFS to initiate communications or data transfer at any time.
- g. The VMS vendor shall be capable of transmitting position data to a NMFS-designated computer system via a modem at a minimum speed of 9600 baud. Transmission shall be in ASCII text in a file format acceptable to NMFS.
- h. The VMS shall be capable of providing vessel position histories for a minimum of one year and providing transmission to NMFS of specified portions of archived data in response to NMFS requests and in a variety of media (e.g., tape, Floppy, etc.).

Operating requirements include that all required VMS units must transmit a signal indicating the vessel's accurate position at least every hour, 24 hours a day, throughout the year.

If a VMS unit fails to transmit an hourly signal of a vessel's position, the vessel shall be deemed to have incurred a "Day at Sea", or a fraction thereof, for as long as the unit fails to transmit a signal, unless a preponderance of evidence shows that the failure to transmit was due to an unavoidable malfunction or disruption of the transmission that occurred while the vessel was declared out of the scallop fishery or Northeast multispecies fishery, or was not at sea.

5. ANALYSIS OF EFFICIENCIES AND RECOMMENDATIONS

Observers provide a real time means of monitoring compliance with NAFO Conservation and Enforcement Measures. Although their use constitutes a significant capital outlay, they provide the most effective means of monitoring compliance with fishery resources management measures, especially stocks which are fully utilized or over utilized. Therefore, the United States recommends that the NAFO Observer Pilot Project be instituted as a provision of the NAFO Conservation and Enforcement Measures for all fishing vessels operating in NAFO Divisions where stocks are regulated.

Vessel monitoring systems provide a means for utilizing developing technologies to "work smarter not harder". During times of shrinking budgets for monitoring and surveillance assets, VMS provides the most economical means of monitoring the position and activity of Contracting Party vessels. Air and surface assets will still be required to monitor the fishing activity of Non-Contracting Parties and to support the at-sea inspection program. VMS, however, may also provide a means, if properly developed, to conduct near-real-time management of the stocks through the development of standardized catch reporting. Therefore, the United States would support a proposal for use of VMS on all Contracting Party fishing vessels operating in the Regulatory Area and the development of minimum standards and specifications similar to those which were developed by the Parties to the Convention for the Conservation and Management of Pollock Resources in the Central Bering Sea and which are in development by the Parties to the International Convention for the Conservation of Atlantic Tunas.

Annex 10. Report by Denmark (Faroe Islands) on Implementation of Conservation and Enforcement Measures

(STACTIC Working Paper 97/15)

Introduction

This paper describes in few words the Faroe Islands involvement in the implementation of Conservation and Enforcement Measures in NAFO Regulatory Area.

Hail System

The rules for the hail system in the NAFO Regulatory Area are stated in the licences for the Faroese vessels operating in the NAFO Regulatory Area. The vessels send the hail reports by telex or by fax to the Inspection-and Rescue Service who forward them to the NAFO Executive Secretary by fax.

Catch reports

According to the licenses issued by the Fisheries Department all vessels every Monday have to transmit the catch report for the previous week to the Inspection-and Rescue Service. The messages are sent by telex or by fax. The vessels use Inmarsat A for their communication. The Inspection- and Rescue Service report the catches to the Department of Fisheries who forward them to the NAFO Executive Secretary on a monthly basis.

Observer scheme

All Faroese vessels operating in the NAFO Regulatory Area shall have an observer onboard. The observers are authorized by the Department of Fisheries and are employed by the Inspection- and Rescue Service. The Inspection- and Rescue Service is responsible to see that the work by the observers is in compliance with the NAFO Conservation and Enforcement Measures.

Satellite Tracking

Up to now it has not been possible for the Faroe Islands to fulfil the part of NAFO Conservation and Enforcement Measures regarding satellite tracking of 35% of the vessels operating in the NAFO Regulatory Area. Attempts are now made to start introduction of satellite tracking of some shrimp trawlers during this summer.

Operation of Surveillance and Inspection

Since 1993 it has not been possible for the Faroe Islands to send an inspection vessel to the NAFO Regulatory Area.

Annex 11. Report by Japan on Implementation of Conservation and Enforcement Measures

(STACTIC Working Paper 97/16)

1. Hail System

During 1996, the two Japanese fishing vessels listed were engaged in Greenland halibut and redfish operations in 3LMNO. The total number of hails was 59.

The hail reports were submitted from the fishing vessels to the NAFO Secretariat via the designated representative in Halifax.

The form used was as attached, however, we have no intention to utilize E-Mail/Internet since the number of vessels involved are nominal.

There has been no mistake made up till present in implementing the hail system.

2. Catch Statistics Report

We have been sending in a monthly report every month which is based upon a weekly report from a fishing vessel. Also, STATLANT 21A and STATLANT 21B are submitted as according to the NAFO agreement, and there has been no particular problem arose.

3. Operation of Surveillance and Inspection

Since there have been a very few fishing vessels engaged in fishing operations, we have not assigned any vessel for enforcement.

The aggregated number of inspections conducted over the Japanese fishing vessels during 1996 was 11, which was 550% (on an average of 231%, the highest among the Contracting Parties). No infringement was found.

Such high frequency is conspicuous deviation from the NAFO Conservation and Enforcement Measures, Part IV.2(i), which stipulates "In its inspections a Contracting Party shall aim at ensuring equal treatment between all Contracting Parties with vessels operating in the Regulatory Area through an equitable distribution of inspections." Therefore, from now on, improvement of inspection measures should be considered in order to make all Contracting Parties exposed to a similar inspection frequency.

4. Report on the Pilot Project on Observers and Satellite Tracking

During the two-year term of the pilot project, namely 1996 and 1997, two Japanese fishing vessels operated in the NRA. Since it was expected that their fishing operation would not exceed 300 days, they did not introduce the satellite tracking system and, instead, carrying an observer on board has been implemented as the pilot project. Within 30 days after the conclusion of each trip, an observer report has been submitted to the NAFO Secretariat via the designated representative.

Currently, the monitoring by an observer project conducted by Japan is implemented according to the NAFO Conservation and Enforcement Measures, Part VI.A.

Since Japan has a nominal number of fishing vessels operating, we are fully confident that, by the current monitoring by on-board observer alone, we should sufficiently be able to abide by the Conservation and Enforcement Measures required by the NAFO. Therefore, we do not think it is necessary to adopt the additional Satellite Tracking System which obviously increases our bearing of cost.

For your reference, the cost incurred by having an observer on board is as follows:

Travelling expenses	US\$	27,000 (4 times)
Salary and Food	US\$	95,000
<u>Total</u>	<u>US\$</u>	<u>122,000</u>

January 30, 1997

To: Companies involved in fishing off Canada.

Japan Deep Sea Trawlers Association

(1997 Revised Edition)

Re: Issues relevant to the NAFO Convention waters

At the NAFO Enforcement meeting held last year, there was some changes made on Entry, Move, Zone, Exit and Transshipment (Hail System) forms applicable to the NAFO convention waters. We are informing you of those new forms and how to make entries.

Although the new forms were determined at the said NAFO meeting, interpretation of the definition for individual item differs by each Contracting Party, therefore, there is a possibility of changes in the manner to make entries. However, until you are so notified by us, please carry on as according to this notice.

Also, we wish to remind you that a report to the Halifax Office of the Japan Fisheries Association from each vessel can be done by handwritten memos.

Yours truly,

(REMARKS)

1. Leave "Sequential number" blank. (JFA. Halifax will fill in)
2. On Entry/Exit Report, entry/exit report by fishing vessel to/from the Convention waters should be done more than 6 hours prior to such Entry/Exit.
3. A Move report must be submitted prior to move zones.
4. In case to use Zone report form.

When you are operating within 10 miles from the boundary between 3L and 3N, and from the boundary between 3N and 3O, if you are to operate crossing over those boundaries, report must be submitted at the time of crossing the boundary.

Also, please be reminded that you are not allowed to remain in either one zone for more than 24 hours when you are operating in the manners described above. (If you remain beyond 24 hours, it should constitute "Move".)

5. A transshipment report must be submitted at least 24 hours prior to transshipment within the Convention waters.
6. At a time to submit Move, Zone report, it is not necessary to report round weight of fish kept on board.

The content of entries in Entry/Move/Zone/Exit/Transshipment Reports

1. Name of Vessel Name of the reporting vessel
 2. Call Sign Call Sign
 3. External identification letter
and number Registration Number of the fishing vessel
reporting.
 4. The date/The time (UTC)
Geographical position The date, time, position at the time of
reporting.
 5. Indication of the message made Description of report (such as Entry/Move,
etc.).
 6. The NAFO division Entry (or Exit/Move/Zone, etc.)

 Example Entry: (→3M)
 Move: (3L → 3M)
 7. The total round weight of fish
by species on board The total round weight of fish kept on board.
- (Remarks)
- @ Species should be indicated by Code which is consisted by 3 alphabetical letters.
 - @ Unit is in kilograms (=kg). Also, any fractions should be rounded to the closest number to 100 kg.
8. The Name of the master The name of the master of the vessel
reporting.
 9. Target species The targeted species.

NAFO HAIL REPORT (ENTRY)

A	NAME OF VESSEL	
B	CALL SIGN	
C	EXTERNAL IDENTIFICATION LETTER AND NUMBER	
D	THE DATE	
	THE TIME (UTC)	
	GEOGRAPHICAL POSITION	LAT _____ N LONG _____ W
E	INDICATION OF THE MESSAGE CODE	ENTRY
F	THE NAFO DIVISION	→
G	THE TOTAL ROUND WEIGHT OF FISH BY SPECIES ON BOARD (ROUND TO THE NEAREST 100Kg)	
		TOTAL
H	THE NAME OF THE MASTER	
I	TARGET SPECIES	

SEQUENTIAL NO: JPA - 97 -

NAFO HAIL REPORT (MOVE)

A	NAME OF VESSEL	
B	CALL SIGN	
C	EXTERNAL IDENTIFICATION LETTER AND NUMBER	
D	THE DATE	
	THE TIME (UTC)	
	GEOGRAPHICAL POSITION	LAT _____ N LONG _____ W
E	INDICATION OF THE MESSAGE CODE	MOVE
F	THE NAFO DIVISION	→
G	THE NAME OF THE MASTER	
H	TARGET SPECIES	

NAFO HAIL REPORT (ZONE)

A	NAME OF VESSEL	
B	CALL SIGN	
C	EXTERNAL IDENTIFICATION LETTER AND NUMBER	
D	THE DATE	
	THE TIME (UTC)	
	GEOGRAPHICAL POSITION	LAT _____ N LONG _____ W
E	INDICATION OF THE MESSAGE CODE	ZONE
F	THE NAFO DIVISION	→
G	THE NAME OF THE MASTER	
H	TARGET SPECIES	

SEQUENTIAL NO: JPA - 97 -

NAFO HAIL REPORT (EXIT)

A	NAME OF VESSEL	
B	CALL SIGN	
C	EXTERNAL IDENTIFICATION LETTER AND NUMBER	
D	THE DATE	
	THE TIME (UTC)	
	GEOGRAPHICAL POSITION	LAT _____ N LONG _____ W
E	INDICATION OF THE MESSAGE CODE	EXIT
F	THE NAFO DIVISION	→
G	THE TOTAL ROUND WEIGHT OF FISH BY SPECIES ON BOARD (ROUND TO THE NEAREST 100Kg)	
		TOTAL
H	THE NAME OF THE MASTER	

NAFO HAIL REPORT (TRANSHIPMENT)

A	NAME OF VESSEL		
B	CALL SIGN		
C	EXTERNAL IDENTIFICATION LETTER AND NUMBER		
D	THE DATE		
	THE TIME (UTC)		
	GEOGRAPHICAL POSITION	LAT _____ N	
E	INDICATION OF THE MESSAGE CODE		TRANSFER
F	THE TOTAL ROUND WEIGHT OF FISH BY SPECIES ON BOARD (ROUND TO THE NEAREST 100Kg)		
			TOTAL
G	THE NAME OF THE MASTER		

Annex 12. Report by Estonia on NAFO Pilot Project for Observers and Satellite Tracking

(STACTIC Working Paper 97/17)

Observers

Since the beginning of 1996 all Estonian vessels fishing in the NRA have accepted observers on board in accordance to the NAFO requirements. As some financial difficulties related to implementation of 100% observer coverage were risen, Canadian Department of Fisheries and Oceans offered its help to start the project.

Whereas Estonia had no observers trained to work in the NAFO Regulatory Area, it was agreed that Canadian observers will be placed on board of the Estonian fishing vessels.

In the beginning of 1996 three persons from Estonia participated in the Canadian International Observers Training Course and were trained to work in the NRA. From the August 1996 two of them have worked in the Division 3M on board of the Estonian shrimp vessels.

In the second part of 1997 training course for NAFO observers is to be organized with the view of covering all Estonian vessels fishing in the NAFO area with Estonian observers.

Following data are to be collected by observers:

- catch and effort data on a set-by-set basis including start and end position, time and depth of the set, information on the catch, bycatch and discards;
- data about gear used (type, mesh size, etc.);
- data about vessel;
- production analysis.

Verifying that vessels activities meet NAFO requirements is also a part of observer's obligations.

Catch and effort data are saved in the computer database and can be used for the managing of the area.

Satellite Tracking

In 1996 there were five Estonian vessels fishing in the NAFO Regulatory Area. As at least 35% satellite tracking device coverage on board of vessels is required by Conservation and Enforcement Measures, 3 Estonian vessels were equipped with such a device.

After consultations with different companies the Argos system was preferred and installed with support from European Union.

Main reasons for selecting this system were easiness to use, compactness and relatively low cost.

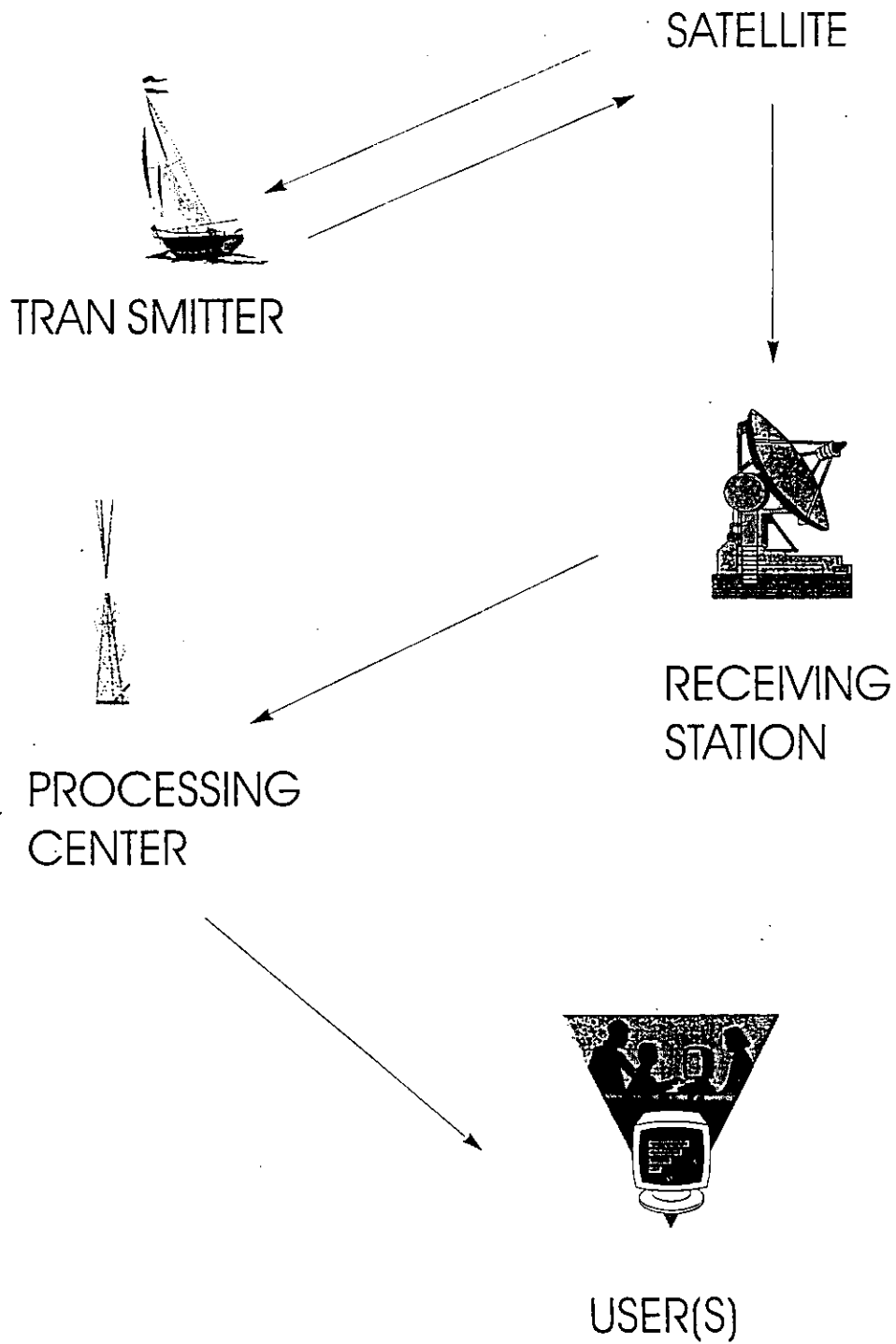
The Argos satellite-based location and data collection system segments in general are shown in Attachment.

Vessel position and identification information is transmitted at one hour interval to the Receiving Station in France, processed in Toulouse and forwarded to the user's PC located in Estonian State Sea Inspection.

Data are received through the X.25 network. Other networks can also be used (X.400, telephone, internet, etc.).

Additional data (catch, effort, etc. up to 256 bits) can be sent from vessels by using special keypad.

PC P90 (16 MB RAM, 820 MB HD) and 17" screen are used to run special software which calculates vessels speed and heading on the basis of the information received. Possibility to show all information about the vessels and drawing their routes on the map makes it extremely easy to observe vessels activities on the real time basis.



Annex 13. Report by the European Union on Implementation of the Conservation and Enforcement Measures

(STACTIC Working Paper 97/18)

A. Hail System

On the basis of inspections conducted by the European Union on vessels from Contracting Parties (including the EU) compliance with the requirements pertaining the NAFO Hail system remains satisfactory. In the limited number of cases where there were inconsistencies between hailed positions and observed positions at sea, these can be attributed to delays in the transmission process ashore rather than to the failure of masters of fishing vessels to hail their positions in a timely manner.

The new provisions of the hail system (communication of target species) adopted in 1996 by the Fisheries Commission have been implemented by the European Union and are being observed by its fishing vessels.

B. Submission of Catch Statistics

In accordance with NAFO rules, Contracting Parties shall submit catch statistics with 30 days following the end of each calendar month. The European Union has complied with these requirements in 1996. However in the first quarter of 1997 some delays were experienced. These were due to technical problems in the Commissions database and have been rectified.

Submission of weekly catch figure for Greenland Halibut has proceeded normally since the introduction of this requirement and no delays have been experienced to date.

C. Operation of surveillance and inspection

The European Union deployed an inspection vessel to the NAFO Area for a period of approximately ten months in 1996¹. The inspection vessel recommenced control duties in early January 1997 and will continue to operate in the Area throughout the year.

In 1996, 171 inspections were conducted on European Union vessels. Approximately two thirds (119) of the inspections were conducted by NAFO inspectors deployed by Canada². Four citations for apparent infringements were issued to E.U. vessels. During 1996, EU Inspectors issued 19 citations to non EU vessels (Icelandic 13; Canadian 2 and 1 on Faroese, Lithuanian, Latvian, Greenlandic vessels) and 3 to EU vessels. In 1997, 20 inspections were carried out by NAFO inspectors deployed by Canada during the period January-February. Inspectors from the European Community conducted 15 inspections on EU vessels in the period January to May 1997. Two apparent infringement were issued so far in 1997 for EU vessels.

¹ Annual costs for chartering the vessel are 1.400.000 ECU.

² See Attachment 1.

With respect to the implementation of the observer scheme which is an element in the surveillance scheme, the European Union deployed observers on all its vessels in 1996-1997 (100% coverage of fishing days).

In 1996, 7.678 observer days were required and the costs generated amounted to 1.748.680 ECU in order to cover 5.833 fishing days generated by 48 vessels..

In the period January to May 1997 a further 1700 observer days were required and generated costs amounting to 357.000 ECU.

Port inspections have been carried out on all European Union vessels returning from the NAFO Area in 1996-1997.

D. Review of Disposition of Apparent Infringements

The follow-up to reported apparent infringements continues through the legal systems of the Member States.

The outcome of cases further to the ones reported by the European Union to the NAFO Executive Secretariat in March 1997 is attached.

With regard to the four cases mentioned under 1995, these were reported by Canada to the European Union as inspections without apparent infringements/under declarations of catches. The inspection report forms were furthermore without any evidence of misreporting.

Therefore, there are no cases to answer as legal follow-up action are impossible and the cases have thus been filed.

With regard to the last mentioned case of 1993 the under declaration in the logbook is well below the authorized tolerance under EU law for recording catches at sea.

The disposition of the outstanding cases will be reported to the Executive Secretariat in accordance with the NAFO Conservation and Enforcement Measures, Part IV, point 17 a (I) when the outcome of the cases is received from the competent authorities of the European Union.

OUTSTANDING DISPOSITION OF APPARENT INFRINGEMENTS

VESSEL	DATE OF INSP. 1993	BY	DISPOSITION
Ana Maria Gandon	03.11.93	CAN	Outstanding
Moradina	03.11.93	CAN	Outstanding
Punta Reboleira	04.11.93	CAN	Outstanding
José Antonio Nores	19.04.93	EU	Outstanding
Garoya Segundo	08.11.93	EU	Convicted and fined
Puente Sabaris	08.11.93	CAN	Outstanding
Playa de Mourisca	06.4.96	CAN	No record of inspection on this date.
Rio Orxas	10.06.93	CAN	No case to answer. 13% u/decl.
1994			
Nuevo Virgen de la Barca	21.01.94	CAN	Convicted and fined
Esperanza Menduina	22.01.94	CAN	Outstanding
Playa de Menduina	02.02.94	CAN	Outstanding
Villa de Bueu	13.03.94	CAN	Outstanding
Santa Mafalda	17.08.94	CAN	No case to answer
Fragana	29.10.94	CAN	Acquitted
Ria de Pontevedra	10.03.94	EU	Outstanding
Mayi Quatro	22.03.94	EU	Outstanding
Jose Antonio Nores	09.04.94	EU	Outstanding
Area Cova	17.08.94	EU	Convicted and fined
1995			
José Antonio Nores	25.02.95	CAN	No case to answer
Patricia Nores	25.02.95	CAN	No case to answer
Pedra Rubia	27.02.95	CAN	No case to answer
Puente Sabaris	03.03.95	CAN	No case to answer

E. I. Pilot Project on Observers 1996-1997

Pursuant to the Fisheries Commission decision of September 1995, the European Union deployed observers on all its fishing vessels engaged in fishing activities in the NAFO Regulatory Area.

Following the adoption of Community legislation in December 1995 and the selection of a private company to supply observers, deployment commenced on 1 January 1996.

Observers were normally deployed either from the home ports of the fishing vessels or via the Community inspection vessel operating in NAFO Regulatory Area.

The placement of observers on board has been facilitated by the positive attitude demonstrated by the masters of fishing vessels who have readily accepted the presence of observers on board. During the implementation of the pilot project the observers have been able to discharge their responsibilities in a free and independent manner.

The tasks and duties of the observers are fixed by Community Legislation and are in accordance with Part VI of the NAFO Conservation and Enforcement Measures. Observers maintain a daily log¹ of vessel activity, compile a summary report at the end of the observation period and the data derived from the daily log is entered on a data base maintained by the Company providing the observers. The daily log consists of a record of each haul.

To date, the pilot scheme has operated in a satisfactory manner but has generated substantial costs to the European Union during the period 1 January 1996 to 31 May 1997 (2.105.680 ECU) when 9.378 observer days were required.

¹ A new format for the daily log has been adopted in order to make it more computer usable.

Header

VESSEL EXTERNAL IDENTIFICATION OBSERVER'S NAME

Serial N° Fishing Div. Date and time (UTC) Haul N° Fishing time

Gear

Type Mesh size mm N° hooks N° gill nets Panel length m

Attachments to nets Attachments mesh size mm

Position shoot

Latitude Longitude Division Depth

Hail report transmission

Latitude Longitude Time Division

Code Via Time sent

Observation level

Haul observed (Fully, Almost fully, Partially, Not at all) Production Line observed (Fully, Almost fully, Partially, Not at all)

FISH		Observer					Observer Accumulated Totals		Skipper			Skipper Accumulated Totals	
Species	Preservation	Catch live weight (kg)	Conversion factor	Production weight (kg)	Undersized (kg)	Discards (kg)	Live weight (kg)	Process weight (kg)	Catch live weight (kg)	Conversion factor	Process weight (kg)	Live weight (kg)	Process weight (kg)

Remarks:

Date Signature _____

E. II. Criteria to Review the Pilot Project on Observers

The Observer Scheme was adopted by the Fisheries Commission on the premise that it would bring about improvements in the compliance levels of fishing vessels engaged in fishing activities in NAFO.

1. Any perceived improvement in compliance levels should take account of a number of factors, such as:
 - the reduction in fishing effort (vessel fishing days) and the trend towards targeting non quota species,
 - variations in catch rates of quota species caught whether or not in a directed fishery or as bycatches and quota catch prohibitions,
 - the variation in the range of conservation measures applying to the different fleets operating in NAFO,
 - the variety of derogations under NAFO rules and unique non discard prohibitions, etc.

2. Against this background it is to be noted that in the period preceding the introduction of the Observer Scheme, TAC's and Quotas for the key ground fish species had to be reduced drastically. The steep reduction of fishing possibilities has put major pressures on enforcement and required additional measures. In recent years the situation has stabilised and the relationship between fishing effort and fishing possibilities has improved. On the contrary, as regards the shrimp fishery which commenced as a free fishery, further stabilisation is still required. The current level of fishing effort is not sustainable.

Against this background an evaluation of an observer scheme should be based on the overall conservation and enforcement strategy. Such evaluation was never carried out before the introduction of the current pilot project.

The NAFO Conservation and Enforcement Measures aim at controlling fishing mortality by overall catch limitations as well as catches of immature fish and where appropriate bycatches of non targeted fish. Any fishing activity results in fishing mortality on target stocks as well as non target stocks, individuals of which are caught in the same fishing operation. The risk that fishing activities will exceed allowable fishing mortality depends on several variables such as:

- state of the stock and quota levels,
- level of bycatches of non targeted species in the same fishing operation,
- level of juvenile catches,
- gear selectivity,
- fishing capacity,
- fishing effort.

The enforcement measures and in particular, the Scheme of Joint International Inspection and Surveillance should ensure compliance with the conservation measures. Taking into account the perception that traditional means of control were not capable of ensuring full compliance, the pilot project should provide transparency in this respect.

3. An observer scheme allows the collection of information on the gear used, the level of catches by species, juvenile catches, discards as well as the area where the vessel carries out its fishing operations. This information makes it possible to assess the accuracy of data recorded by the master of the vessel. In this way an observer scheme is complementary to other means of enforcement such as the recording by the master, hail reports, inspection at sea and inspection in the port of landing (Attachment 2).

An evaluation of the observer scheme should address firstly the conception of the scheme as such and the execution of the observance requirements by the observer. Against this background, it should also be evaluated whether the information collected by the observers meets the requirements of inspectors and the scientific community and is provided within the shortest possible delay.

Secondly, the evaluation should address what constitutes the added value of an observer scheme in comparison to other means of monitoring fisheries (costs/benefits).

4. At present, the observer has a broad range of monitoring tasks and these have been added to by the Scientific Council in 1996. It appears in practice that observers can not perform all tasks which they are required to do. In the evaluation of the pilot project, consideration should be given to assessing the range of tasks under two headings : compliance and scientific work. With respect to the former, observers duties should be rationalised and better focused in order to make the system more cost-effective overall. For example, observers should thoroughly monitor a certain percentage of hauls, review conversion factors used on board and mesh size measurement in order to improve the quality of the data collected. Concerning possible scientific tasks consideration could be given to requesting observers to provide data/information on catch per unit effort (CPUE) and age structure/profile of certain species. Against this background, provision should be made for ensuring the quality of the data collected by observers. Indeed, scientists must be able to rely on the data provided. The acquisition of this type of information could offer substantial benefits to fishery managers.
5. The benefits derived from the implementation of the observer scheme should be identified in some detail in order to have a comprehensive overview of its global contribution to fisheries management generally. In that context a review should also be undertaken to determine whether information obtained from the scheme is accessible to and utilised by fisheries managers. This review has not yet been carried out.
6. With respect to costs, a review should be undertaken to determine total costs. The latter should be compared with the costs of more conventional means (inspection vessels) and new control technologies.

7. In any cost effectiveness evaluation consideration should also be given to the administrative burdens generated by the scheme. The pilot project (EU) has created a range of new administrative tasks which require a considerable amount of work:

- review of observer reports (final report/daily log)
- transmission of information to national authorities, NAFO Secretariat, scientific institutions, enforcement authorities
- monitoring the performance of observers (daily communication with observers in situ)
- creation of database, inputting of observer data, etc.

8. An observer scheme does not reduce expenditure on traditional means of inspection.

On the contrary surveillance vessels spend more time following up on queries made by observers and must continue inspection in order to ascertain the quality of the work of the observers.

9. Finally, a review should be undertaken to determine the role of the NAFO Secretariat. Currently, Contracting Parties should transmit copies of the observer reports to the NAFO Secretariat which thus contains substantial quantities of information and data. These cannot be exploited in their current format (on paper) due to the lack of harmonisation in the observer reports.

If transmitted in harmonised electronic format, NAFO would dispose of a very valuable data base on fishing activities.

F. I. Vessel Monitoring System

The European Union produced two reports at the last STACTIC Meeting detailing the Community policy on the satellite monitoring of fishing vessels and a technical report evaluating the NAFO Pilot Project. It is thus not proposed to include a further report at this stage but rather to furnish some additional details on progress with VMS in the context of the NAFO Pilot Project since April 1997 and to identify some elements which may be utilised in the cost benefit analysis of the satellite tracking project.

Progress since April 1997

The European Commission has continued to work on the technical solution to transfer data received from the Member States to the NAFO Secretariat's mail box. There was an initial delay in the beginning of April because of the establishment of a new File Transfer Gateway (FTRG) mail store and the need to forward the appropriate access password to the NAFO Secretariat. Since then, some of the initial technical difficulties have been overcome and there has been substantial progress as is evident from the placing of over 350 records in the NAFO mail store. An example of the messages transferred to date is as follows:

1997/970003/255/XINZO/EDOF/VI-59970/18061997/0129/4820N/4630W/MOVE/3M

As several of the messages are test messages the European Commission is in the process of exchanging information with the Member States to ensure the messages transmitted to the NAFO Secretariat are the same as the messages received from Member States.

The European Commission has recently been informed by the NAFO Secretariat that it has been unable to access their mail store and the full value of the information exchanged has not yet been realised or evaluated. The European Commission continues to assist the NAFO Secretariat in resolving this problem and intends to continue to test and improve the technology with respect to data exchange. In this regard it is anticipated that the system will be improved and fine tuned in due course. Questions, such as guarantees with respect to data confidentiality and automatic electronic checks and whether all files sent have been really received by NAFO, need to be further examined and reviewed.

F. II. Evaluation of Satellite Tracking Pilot Project

Satellite tracking of fishing vessels can make a distinct contribution to better compliance and enforcement in NAFO. Satellite tracking of fishing vessels allows the collection of information on the fishing area and fishing time as well as ports visited. Indeed, even when a vessel operates in a remote area it is still tracked. Based on information concerning fishing depth and vessel speed, certain conclusions can be made about the fishing operations. This information also makes it possible to assess the accuracy of the data recorded by the Master. Therefore, satellite tracking complements traditional means of monitoring in the same way as an observer scheme (see Attachment 2).

However, the number of areas on which information is supplied may be less but the accuracy of the data is high and is available to the authorities in real time.

Satellite information may also be useful to scientists as it provides very precise data on fishing effort. Such information together with data collected by scientific observers could considerably enhance stock assessment.

Satellite information if available in real time may reduce expenditure for surveillance and in particular the use of aircraft. Furthermore, surveillance vessels could more effectively target fleet concentrations. In terms of enforcement, real time information on vessel positions and movements can greatly assist inspection vessels in the NAFO Area which are currently dependant on hail reports. These reports can be imprecise and their transmission can be subject to delays both of which undermine their overall value. Satellite tracking can also enhance catch reporting generally and the problem of misreporting of fishing areas, etc.

As reported at the April meeting of STACTIC, implementation of the current pilot project has, in many cases, been delayed. This effectively reduces the possibility of conducting a rigorous costs benefit analysis of the current pilot project. Consequently, it is not proposed to provide specific cost benefit criteria in this report but rather to highlight certain issues which may have an impact on any evaluation :

- costs of VMS
- personnel requirements for Contracting Parties and NAFO Secretariat
- utilisation rates of data derived from VMS
- synergy with conventional means of surveillance.

Attachment 1
(Annex 13)**Inspections of Community fishing vessels in the NAFO Regulatory Area in 1996.**

<u>Vessel</u>	<u>Reg. No.</u>	<u>By CAN</u>	<u>By EU</u>	<u>Division</u>
Ana Maria Gandon	VI-5-9334	01.02.96		3 M/L
Ancora d'Ouro	GI-4-1989	29.01.96		3 L
		21.11.96		3 N
		03.12.96*		3 N
			29.02.96	3 M
Arcay	VI-5-10011	26.02.96		3 N
			28.01.96	3 M
Area Cova	VI-5-9287	29.01.96		3 L
		15.02.96		3 L
		10.04.96		3 L
Beiramar Tres	VI-5-9674	30.09.96		3 L
		24.12.96		3 L
Dorneda	CO-3-3854	11.11.96		3 M
Esperanza Menduina	VI-5-9954	20.09.96		3 N
		07.10.97		3 N
		26.10.96		3 L
		23.11.96		3 L
Feixe	VI-5-9825		11.09.96	3 L
Freiremar Uno	VI-5-9936	03.05.96		3 L
			30.03.96	3 M
		18.06.96	13.07.96	3 L
		17.08.96*	18.08.96*	3 L
Garoya Segundo	VI-5-10090	25.02.96		3 L
		21.03.96		3 L
		09.05.96	06.06.96	3 M
		19.06.96		3 L
			10.09.96	3 L
		30.09.96		3 L
Hermanos Gandon IV	VI-5-9967	05.08.96		3 N
		07.10.96		3 N
		03.11.96		3 L
		15.11.96		3 N
Jose Antonia Nores	VI-5-10075	15.07.96		3 N
			29.09.96	3 L
		07.10.96		3 L
		26.10.96		3 L
Leirachan	VI-5-9905	12.10.96		3 L
		09.11.96		3 L
Leon Marco	AT-4-1500	17.05.96	08.03.96	3 L
		08.06.96		3 M
		18.06.96		3 M
Leon Marco Cinco	AT-4-1501	17.05.96	08.03.96	3 L
		08.06.96	20.04.96	3 M

<u>Vessel</u>	<u>Reg. No.</u>	<u>By CAN</u>	<u>By EU</u>	<u>Division</u>	
Maria Eugenia G	VI-5-9714	30.01.96	14.03.96	3 M	
		16.04.96		3 M	
Moradina	VI-5-9750	15.02.96		3 L	
		03.05.96		3 L	
		23.10.96		3 N	
		06.11.96		3 N	
		21.11.96		3 N	
Nuevo Virgen de la Barca	VI-5-9972	04.06.96	18.06.96	3 M	
		07.07.96	25.07.96	3 M	
Nuevo Virgen de Lodairo	VI-5-9973	04.06.96	18.06.96	3 M	
		07.07.96		3 M	
Patricia Nores	VI-5-9842	15.07.96	06.07.96	3 N	
		06.08.96		3 N	
Pescaberbes Dos	VI-5-9994	08.07.96		3 L	
		18.09.96		3 N	
		30.09.96		3 L	
		13.10.96		3 L	
		27.10.96		28.10.96	3 L
		09.12.96			3 L
Pedra Rubia	VI-5-9728	13.05.96	19.04.96	3 L	
		29.06.96		3 M	
Playa de Cativa	GI-4-2179		26.07.96	3 L	
			16.08.96	3 N	
		18.09.96		3 N/O	
Playa de Menduina	VI-5-9446	25.10.96		3 N	
		22.11.96		3 N	
		26.01.96		3 O	
		02.02.96		3 N	
		16.05.96		3 O	
		12.06.96	17.05.96	3 N	
Playa de Rodas	GI-4-2186	22.06.96	02.06.96	3 N	
		24.07.96		3 N	
		02.10.96		3 M	
		14.10.96		3 L	
		09.11.96		3 L	
Playa de Sartaxens	VI-5-9915		29.01.96	3 M	
			14.03.96	3 M	
Puente Pereiras IV	VI-2-2336	05.04.96	29.01.96	3 L	
		17.04.96	13.03.96	3 L	
Puente Sabaris	GI-4-2127	26.02.96		3 N	
			28.01.96	3 M	
			20.03.96	3 L	
Punta Robaleira	VI-5-9696	22.01.96		3 O	
			14.03.96	3 L	
Ria de Pontevedra	VI-5-9451	21.02.96	28.01.96	3 M	
		18.04.96	21.03.96	3 L	
		23.10.96		3 N	
		06.11.96		3 N	

<u>Vessel</u>	<u>Reg. No.</u>	<u>By CAN</u>	<u>By EU</u>	<u>Division</u>
Villa de Bueu	VI-5-10026	23.02.96		3 L
Xinzo	VI-5-9970	23.06.96		3 N
		08.07.96		3 M/L
		17.09.96	3 N	
		02.10.96		3 N
Adelia Maria	A-2318-N	01.09.96	08.08.96	3 L
		30.10.96		3 L
Antonia Cacao	FF-18-N	06.04.96		3 O
			23.04.96	3 M
		15.05.96		3 O
Brites	A-2130-N	23.07.96		3 O
		22.08.96		3 M
		03.10.96		3 L
		27.10.96		3 N
Calvao	A-2701-N	17.06.96	10.04.96	3 L
		07.08.96		3 O
		15.11.96*		3 N
Cidade de Amarante	A-3349-N		31.10.96	3 L
		24.11.96		3 M
Coimbra	A-2204-N	21.10.96	27.10.96	3 L
		14.11.96		3 M
Jose Cacao	FF-14-N	13.06.96		3 O
		04.07.96		3 O
			06.08.96	3 M
			07.09.96	3 M
Lutador	A-3337-N	03.05.96	05.03.96	3 L
Pascoal Atlantico	A-3323-N	23.07.96	11.07.96	3 O
		19.09.96		3 N
		14.11.96		3 M
Praia de Santa Cruz	V-12-N		29.02.96	3 L
		08.04.96		3 N
		25.04.96		3 N
			09.10.96	3 M
		26.10.96		3 N
Santa Cristina	A-1827-N	16.03.96		3 M
		07.04.96		3 N
		07.09.96		3 N
Santa Mafalda	A-1940-N	20.01.96		3 M
		03.02.96		3 M
		25.02.96		3 L
			17.04.96	3 N
			24.04.96*	3 M
			21.06.96	3 N
		05.07.96		3 O
		31.07.96		3 O
		03.10.96		3 L
		15.11.96		3 M

<u>Vessel</u>	<u>Reg. No.</u>	<u>By CAN</u>	<u>By EU</u>	<u>Division</u>
Solsticio	A-3170-N		15.03.96	3 M
		09.04.96		3 L
		03.05.96		3 L
			04.05.96	3 M
		19.06.96		3 L
			05.08.96	3 O
			30.09.96	3 L
			13.11.96	3 L
Arctic Corsair	H-320			
Southella	H-240		18.06.96	3 M
Cuxhaven	NC-106			
Total	48 vessels	119 insp.	52 insp.	

* Citation issued.

This table should be read in connection with table "EU vessels' presence in the NRA - 1996" in order to compare the dates of inspections with the periods of time of presence by the individual EU - registered vessels.

Inspections by EU Inspectors of Other Contracting Parties Vessels - 1996

<u>Contracting Party</u>	<u>Vessel</u>	<u>Reg. No.</u>	<u>Date</u>
Canada	Fame	134993	04.04.96
	Atlantic Enterprise	101597	11.04.96
	Aquiq	17694	21.04.96
	Genny and Doug	100646	29.07.96*
Denmark (Faroe Islands)	Ocean Castle	FD-242	04.03.96 08.09.96*
	Huilstenni	FD-60	21.04.96
	Gilston	KG-33	02.05.96
	Solberg	TN-245	01.10.96
	Palli Hja Mariannu	KG-691	03.11.96
Japan	Shinkai Maru	TK1-928	26.09.96
Russia	Kronshstadt	MB-036501	03.96
	Orlan	MI-1665	03.05.96
	Lyublino	KI-8106	26.06.96
	Shilale	KM-062320	08.96
Norway	Ståltind I	N-45-H	21.04.96
	Hekktind	N-35-H	25.05.96
	Myrefisk II	N-120-Ø	28.05.96
	Spitsbergen	N-2-H	14.07.96 30.10.96
	Ingar Iversen	M-3-SM	14.07.96
	Remoytraal	FD-220-BD	16.07.96
Lithuania	Vertikalas	LI-8147	03.05.96 22.07.96*
Latvia	Baltijas Petnieks	LP-8096	12.04.96
	Odincova	LZ-8341	16.07.96*
	Salatsgriva	LZ-8119	28.08.96
Denmark (Greenland)	Nicoline C	GR-6-31119	06.96
	Polar Raaja	GR-6-17308	09.96*
Iceland	Holmadrangur	ST-70	03.03.96
	Kan	BA-101	12.04.96 20.06.96*
		Sunna	SI-67

<u>Contracting Party</u>	<u>Vessel</u>	<u>Reg. No.</u>	<u>Date</u>
Iceland (cont'd)	Helga Bjorg	HU-7	20.04.96
	Hvannaberg	BF-72	29.05.96
	Snæfell	SH-740	16.06.96*
			01.11.96
	Kolbeinsey	ThH-10	20.06.96*
	Jofur	AS-172	24.06.96*
	Klara Sveinsdottir	SU-50	21.08.96*
	Heidrun	IS-4	09.09.96*
	Erik	BA-204	03.11.96

* One or more citations issued.

ELEMENTS OF EVALUATION

	Satellite tracking		Observer scheme		Traditional means of control (*)	
	data	quality	data	quality	data	quality
Fishing location	yes	+++	yes	+/-	yes	+/-
Fishing activities:						
N° of operation	yes	+/-	yes	+++	yes	+/-
Time in the area	yes	+++	yes	+++	yes	+
Fishing time	yes	+/-	yes	+++	yes	+
Gear used	no		yes	+++	yes	+++
Catches retained on board						
By species	no		yes	++	yes	+/-
By live weight	no		yes	+	yes	+/-
Discards						
Juveniles	no		yes	+/-	partial	+/-
By-catches	no		yes	+	partial	+/-
Processing						
By species	no		yes	++	yes	0
By presentation	no		yes	++	yes	0
By production weight	no		yes	+/-	yes	+/-
Landing/transhipment						
Port/Location	yes	+++	partial	++/-	yes	+++
Quantities landed or retained on board	no		no		yes	+++

*High reliability (+++);**Reliable (++);**Low reliability (+);**Variable reliability +/-**No reliability 0*

- (*) Traditional means: Fishing and processing logbook, landing/transhipment declaration, sightings and inspections at sea (either by vessel or aircraft), hail-system and communication of catches, single meshsize, inspection ashore, etc.

**Annex 14. Report by Iceland on NAFO Pilot Project for Observers
and Satellite Tracking**
(STACTIC Working Paper 97/19)

A) Observers

All the Icelandic vessels fishing in the NRA have been deployed with observers in accordance with the NAFO requirements since the beginning of 1996, except that two vessel owners responsible for the operation of three vessels resisted boarding of observers to their vessels in their first fishing trip in 1996.

There have not been difficulties of technical nature implementing the scheme apart from minor problems mainly associated with its implementation right at the beginning.

This, however, does not mean that there have been no major problems in implementing the scheme in Iceland. On the contrary there have been considerable political and legalistic difficulties associated with its implementation. This is due to the general view held in Iceland that the establishment of a scheme of 100% observer coverage and its application in a single species fishery is a useless exercise and that the placement of people onboard fishing vessels with so trivial assignments and with so much cost involved is unacceptable.

This criticism, in respect of 3M shrimp, became apparent i.a. in Parliament discussions on a draft legislation providing for reimbursement from the fishing industry of cost resulting of the implementation of the scheme. In addition to that several vessel owners have challenged their duty to reimburse the State for such cost. In Iceland several litigation now take place where this is the case.

The Directorate of Fisheries in Iceland is responsible for the operation of the observer scheme. In 1996 the Directorate employed 58 observers in connection with the implementation of the scheme. These people spent 5.964 days on duty onboard vessels in NRA. The direct variable cost of running the scheme was 95.467.000 IKR in 1996 (CAD 1.893.810). This constitutes 2.87% of the f.o.b. value of the catch. Cost per day is therefore IKR 16.007 (CAD 318). In order to meet this cost vessel owners are required to pay 15.000 IKR for every fishing day in NRA. At the beginning the cost of the scheme had to be borne by the government budget. This was so until the summer of 1996 that the legislation authorizing a reimbursement from those engaged in the fishery passed in the Parliament.

The training of the observers is undertaken by the Directorate of Fisheries in Iceland in cooperation with the Marine Research Institute (MRI). The observers are specially authorized to carry out their duties in accordance with the provisions of Part VI.A.3 of the Conservation and Enforcement Measures of NAFO. In 1996 special emphasis was put on collecting samples in the shrimp fishery. Observers were taught to measure shrimp to the nearest 0.5 mm and to place individual shrimps into one of 9 sexual categories. This was a complicated task and was carried out on samples from every 2 of 3 hauls. Most of the observers, about 70% of them, carried this task out in an accurate manner. The rest did not seem to do this properly and their data could not be used. The amount of data collected by the observers was vast and it appears to be clear that fewer samples would have given the same result. The MRI analyzed all the samples and used it for various scientific purposes as can be seen in papers presented on earlier occasions to the Scientific Committee of NAFO.

The pilot project requires observer coverage far in excess of what is normally required and it has not been shown that such a coverage is necessary, particularly not in the shrimp fishery where shrimp is the only target species and a sorting grid is used. In that particular fishery there appear to be no incentives for not using the sorting grid since there is only inconvenience associated with the by-catch that might increase. In that context, and in general, it seems to have had a detrimental effect for the possibility of evaluating the scheme that there were no vessels allowed to be without observers on board. This makes impossible any comparison in respect of i.a. catch composition and compliance with NAFO rules in general between vessels with no observers onboard and those carrying observers.

When evaluating the observer scheme it is necessary to put things into a historical context. The obligation of deploying observers onboard every vessel derives from a solution of a specific dispute, regarding specific fisheries that is inherently different from many other types of fisheries in the NRA, such as the 3M shrimp fishery. In addition this was a dispute to which Iceland was not a party. Iceland was willing to contribute to a solution that included 100% observer coverage on the premises of a Canadian statement that no cost would have to arise thereof. Some months later a text of a STACTIC report reflecting this was amended unilaterally by the Executive Secretary of NAFO on a request from Canada.

Special attention need to be paid to the fact that state subsidies to fishing industry in some countries is invented through the implementation of the observer scheme and thus a competitive distorting element. It is not that States are subsidizing the activities of their own fleets but also activities of the fleets of other State. This is an unacceptable byproduct of the implementation of the scheme.

There are much more cost effective methods that can be used, such as the use of satellite tracking accompanied with more frequent submittal of catch reports from the vessels. Iceland is willing to make use of such cost effective means of control.

B) Satellite Tracking

At the Meeting of STACTIC Working Group on satellite tracking program in April this year Iceland submitted a thorough paper containing Iceland's National Report on Satellite Tracking Program and its implementation in 1996. To avoid duplication it seems, at this time, to be appropriate only to refer to that report in its entirety but at the same time to draw the attention to the following details of the Report: The Icelandic Coast Guard was appointed to run the system on daily basis. A maximum of 14 vessels were tracked at the same time by the system. The vessels were tracked via Inmarsat C, previously onboard these vessels. Thus vessel owners paid the cost associated with the equipment onboard that its necessary to locate vessels and send and receive reports. The cost deriving from the implementation of the project was paid by the Government. This cost amounted to IKR 10.000.000 (around CAD 200.000). Cost for each position, including speed and heading was 0.10 GBP. This means that the cost per vessel is less than 200 IKR (4 CAD per day) for hourly transmittals. Fleet Tracking System was set up by an individual company in Iceland. The system started operating in February 1996.

Annex 15. Evaluation Criteria Framework (STACTIC Working Paper 97/20-2nd Rev.)

EVALUATION CRITERIA FRAMEWORK

	PILOT PROJECT COMPLIANCE MEASURES				CONTROL	
	Satellite tracking		Observer scheme		Traditional means of control (*)	
MANAGEMENT MEASURES	Relevance	Efficacy/ Efficiency	Relevance	Efficacy/ Efficiency	Relevance	Efficacy/ Efficiency
Fishing location	yes		yes		yes	
Fishing activities:						
N° of operation	yes		yes		yes	
Time in the area	yes		yes		yes	
Fishing time	yes		yes		yes	
Gear used	no		yes		yes	
Catches retained on board						
By species	no		yes		yes	
By live weight	no		yes		yes	
Discards						
Juveniles	no		yes		partial	
By-catches	no		yes		partial	
High-grading	no		yes		partial	
Processing						
By species	no		yes		yes	
By presentation	no		yes		yes	
By production weight	no		yes		yes	
Landing/transhipment						
Port/Location	yes		partial		yes	
Quantities landed or retained on board	no		no		yes	

(*) Traditional means: fishing and processing logbook, landing/transhipment declaration, sightings and inspections at sea (either by vessel or aircraft), hail-system and communication of catches, single mesh size, inspection ashore, etc.

INDICATORS OF RESULTS	
COMPLIANCE** BEFORE PILOT PROJECT IMPLEMENTATION	COMPLIANCE** AFTER PILOT PROJECT IMPLEMENTATION
% OF OBSERVER REPORTS NOT INDICATING A CHANGE IN COMPLIANCE BY MASTER	% OF OBSERVER REPORTS INDICATING A CHANGE IN THE COMPLIANCE BY THE MASTER

COSTS***		
Observer cost/sea day	Satellite Tracking capital costs and operating costs	Comparison cost of traditional enforcement measures

BENEFITS
Analysis of the efficiency in terms of cost/benefit, the latter being expressed in terms of compliance with the Conservation and Enforcement Measures and volume of data received for fisheries management and scientific stock assessment.

**Compliance

When conducting the evaluation for indicators of results, with respect to compliance, any perceived improvement in compliance levels should take account of a number of factors, such as:

- the reduction in fishing effort (vessel fishing days) and the trend towards targeting non-quota species,
- variations in catch rates of quota species caught whether or not in a directed fishery or as bycatches and quota catch prohibitions,
- the variation in the range of conservation measures applying to the different fleets operating in NAFO,
- the variety of derogations under NAFO rules and unique non discard prohibitions, etc.

The contribution of the different components of the Project to any apparent changes in compliance should also be considered.

***Costs

- When conducting the evaluation with respect to costs, full costs should be calculated including all overheads. Total observer costs are to be incorporated into the estimation of observer sea day cost. With respect to satellite tracking, capital costs are to be calculated separately from operating costs. Alternative means of control should be calculated as a comparison to the costs of this pilot project (ship time etc.). Calculations of costs are to be converted to Canadian dollars for comparison purposes.

Annex 16. Modification of Inspector's/Trainee Document of Identity

Pursuant to the provisions of para 1.(iv), Part IV of the NAFO Conservation and Enforcement Measures (FC Doc. 96/1), the Executive Secretary would issue a document of identity as described in Annex I of Part IV.


This document would be produced on a simple cardboard-type paper with unimpressive black and white features.

Considering the very important task by the NAFO inspectors, we believe that this is the right time to modify the inspector's/trainee's document to one with more authoritative international features. This is to some extent an important issue as NAFO becomes more and more involved in boardings on the vessels of non-Contracting Parties. The proposed format/feature of the document is attached.

The front side of the document will feature a glossy surface (laminated), which could protect the document in sea conditions. The cardboard will be 1/2 times thicker than the present. The cost implication would be estimated in the range of \$200-300 Cdn annually.

Front

Northwest Atlantic Fisheries
Organization



Identity Card
Inspector

Photograph



→ red

→ blue

→ red

→ blue

Back

 FISHERIES COMMISSION 

The bearer of this document

is an **inspector** duly appointed under the terms of the Scheme of Joint International Inspection and Surveillance of the Fisheries Commission of the Northwest Atlantic Fisheries Organization, and has authority to act under the provisions of the NAFO Conservation and Enforcement Measures.

Signature (Executive Secretary)

NAFO Member:

No.

→ blue

→ yellow

SECTION VI

(pages 203 to 274)

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PART I

Report of the General Council Meeting

(GC Doc. 97/9)

19th Annual Meeting, 15-19 September 1997

St. John's, Newfoundland, Canada

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

- 1.1 The meeting was opened by the Chairman of the General Council, A. V. Rodin (Russia) at 1020 on 16 September 1997.
- 1.2 Representatives of the following fifteen (15) Contracting Parties were present: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, European Union, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Korea, Latvia, Lithuania, Norway, Poland, Russia and the United States of America (Annex 1).
- 1.3 The meeting appointed the Executive Secretary as Rapporteur.
- 1.4 The Chairman welcomed the Delegates and briefly summarized the objectives and goals of the Organization at the current meeting and in the near future. In particular, he stressed that the membership of NAFO has increased and new members of NAFO, France and the United States are actively involved in the NAFO affairs. The Chairman noted that a number of NAFO proposals and papers have been introduced and implemented in the Organization's business. Especially, he pointed out the issue of scientific research activities in the NAFO Convention Area, which is very important to the whole NAFO activity as this activity and NAFO decisions are based on the scientific advice by the Scientific Council. To his opinion, the Scientific Council of NAFO has a high level of respect worldwide, and the most important task for NAFO is to develop comprehensive scientific studies of correlations between stocks and environmental conditions, which would indicate the stocks dynamic and their recovery.

The Chairman expressed his optimistic opinion on improvements of stocks in the near future and prospects of increased opportunities for the Contracting Parties.

In his conclusion, he appealed to the Delegates to consider and elaborate a strategy for the future and conduct the NAFO meeting in a positive and constructive atmosphere.
- 1.5 The Provisional Agenda was **adopted** without amendment (Annex 2).

The Chairman asked the Delegations and the Chairmen of NAFO bodies to follow and adhere to the provisional timetable with the objective to finalize the Standing Committees' reports on Thursday, September 18. This was **agreed** by the Meeting.
- 1.6 The Representative of Canada made an opening statement and cordially welcomed all delegates to Canada and the historical city of St. John's during the continuing special celebration of the 500th year of discovery of North America by John Cabot (24 June 1497). He emphasized on Canada's objective for sustainable fisheries in the Northwest

Atlantic and appealed to all Contracting Parties to follow the NAFO Convention objective and share the responsibility to conserve the resources in the NAFO Convention and Regulatory Area (Annex 3).

- 1.7 The Representative of the European Union in his opening statement stressed that NAFO's continued challenge was effective conservation through co-operation of all NAFO Members. Furthermore, he emphasized increasingly important environmental requirements and, in this context, the need to bring about an equilibrium which takes due consideration of the fisheries sector and its interests (Annex 4).
- 1.8 The Representative of the United States addressed the Meeting emphasizing the objectives of the Organization with regard to the important issues of the control of non-Contracting Parties (in the NAFO Regulatory Area) and noting benefits of increasing the openness and transparency of NAFO deliberations. He urged the Contracting Parties to support the efforts by the Scientific Council on precautionary approach to fisheries management (Annex 5).
- 1.9 The Representative of the Republic of Korea introduced its opening statement noting Korea's international efforts to establish responsible fishing regimes. He expressed concerns about the decline of fish stocks in the NAFO Regulatory Area in spite of the NAFO efforts for conservation and management, and questioned the current quota allocation system (Annex 6).
- 1.10 The Representative of France (in respect of St. Pierre et Miquelon) in his opening statement brought the attention of the Meeting to the historical connection of the French islands of St. Pierre and Miquelon with fishing and sea for the last five centuries. He stated that France will play an active role in NAFO activities and will be committed towards NAFO objectives and rules developed collectively within the Organization pursuant to international law (Annex 7).
- 1.11 The Representative of Iceland briefly introduced the position of his country to joining the other nations towards the way of constructive management decisions based on scientific advice. He stressed that the NAFO aim must be sustainable utilization in both biological and economical sense (Annex 8).
- 1.12 The Representative of Denmark (in respect of the Faroe Islands and Greenland, further will be noted as F & G) presented its opening statement noting the 500 years of John Cabot's landfall and deep history of the North America discovery by the Vikings. He emphasized on traditional participation by the Faroe Islands in Flemish Cap fishery and pledged to continue full cooperation with NAFO in effective conservation and management measures in the NAFO Regulatory Area (Annex 9).
- 1.13 Two international organizations - ICES (observer-H.-P. Cornus) and NAMMCO (observer-A. Halldorsson) were accepted by the General Council to participate in the capacity of observers at the current meeting. The USA Representative welcomed this decision and noted that the issue to admitting observers on a larger scale will be addressed by the US delegation during this meeting.

The NAMMCO observer addressed the Meeting with a short statement pointing out on the fact of mutual observership between NAFO and NAMMCO, where the Norwegian delegate represents NAFO, and informed on the upcoming conference sponsored by NAMMCO in St. John's in November 1997. This note/information was later circulated to the pigeon holes by the NAFO Secretariat.

- 1.14 The Publicity, item 5, was decided along the lines of the previous years, e.g. to continue the NAFO practice of "no express information" for media until final decisions were taken by NAFO. The meeting's Press Release was worked out by the Executive Secretary together with the Chairmen of the General Council, Fisheries Commission and Scientific Council and issued at the closing session on 19 September (Annex 10).

2. Supervision and Coordination of the Organizational, Administrative and Other Internal Affairs (items 6-10 of the Agenda)

- 2.1 Under item 6 of the Agenda, "Review of Membership", the Chairman ruled that no changes are recorded to the membership of the General Council - 17 Contracting Parties, and the Fisheries Commission - 15 Contracting Parties. The Chairman informed that two Contracting Parties (Bulgaria and Romania) have not been participating in the NAFO business and have not paid their contribution dues for many years: Romania from 1983 and Bulgaria, from 1992, and their debts to NAFO have accrued, respectively, to \$233,019.10 Cdn and \$81,278.43 Cdn.

He proposed to consider the membership of the two Contracting Parties, which do not perform their duties and obligations under the provisions of the NAFO Convention and, therefore, these Contracting Parties should be subject of review for exclusion from the NAFO membership.

- 2.2 Under item 7, the Chairman introduced his draft proposal for the amendment of the Rules of Procedure and explained that this would be a first step to develop a legal mechanism at the General Council level for this purpose (bearing in mind the two Contracting Parties - Bulgaria and Romania).
- 2.3 The Representative of Canada supported the principal intent of the proposal and brought the attention of the meeting to the legal implications of the proposal, which should be carefully examined consistently with the provisions of the NAFO Convention, which does not provide for exclusions from NAFO.

After brief discussions summarized by the Chairman, this item was referred to STACFAD.

At the closing session of the General Council, the Chairman of STACFAD, J. Quintal-McGrath (Canada), presented the STACFAD deliberations and recommendations to the General Council. The STACFAD recommendation was to adopt a Resolution (Resolution 97/1) calling all Contracting Parties to communicate with the two Contracting Parties and assess the situation through 1998. The Resolution was **adopted** by the General Council. (Annex 6, Part II and GC Doc. 97/7)

- 2.4 Under item 8, "Transparency in the NAFO decision-making process (participation of inter-governmental and non-governmental organizations), the Chairman briefly summarized the status of this issue, which was discussed during the 1996 Annual Meeting and referred to the current meeting, and he opened the floor for discussion.
- 2.5 The Representative of the United States introduced the item (the USA proposal from 1996 Annual Meeting) with reference to new FAO and UN Agreements stressing that the papers presented by the USA Delegation at the current Meeting (GC W.P. 97/1 and 97/2) form a strong basis for developing NAFO Rules of Procedure to address this important issue. He

proposed the Working Group formed at the last meeting to continue its work and elaborate draft rules of procedure during this Annual Meeting.

The Representatives of Korea, Canada, European Union, Denmark (F & G), Iceland, France, Estonia and Russia supported, in principle, the USA proposal and noted several important elements to consider under this issue. In particular, Canada suggested several requirements to introduce in the future NAFO Rules, which should be followed by observers: access to documents and meeting proceedings, limited participation in debates, payment for observership, code of conduct and non-disruption of NAFO proceedings, etc. The EU Representative insisted on a definite controlled way of observer participation and thought that time was very limited for the W.G. discussions during the current meeting. The Representatives of Denmark and Iceland were concerned with a recent negative practice of some NGOs (non-governmental organizations) participation and disruption of meetings of international organizations. In general, the majority of delegates agreed that the Working Group should try to arrange discussions during this meeting.

- 2.6 The Chairman summarized the discussions with emphasis that regardless of the existing transparency of NAFO, new steps should be undertaken in line with the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks of 1995 (hereafter referred to as the "UN Agreement") as this Agreement was signed by the Contracting Parties. He proposed to call the Working Group under the chairmanship of Dr. D. Swanson (USA) with the task to review some documents already prepared during this year and then continue its work intersessionally, if required, to prepare a set of documents for the 20th Annual Meeting. He stressed that NAFO shall prepare its own set of rules, and the invited observers shall follow these rules.
- 2.7 The Representative of the United States proposed to present an interim report of the Working Group during this meeting, and the Representatives of Iceland and the European Union proposed to work-out clear terms of reference for the Working Group.

The Chairman decided and asked the Contracting Parties to delegate their representatives to the Working Group, at 0900, 17 September, with the task to elaborate the terms of reference.

The Report of the Working Group during this meeting was presented by the Chairman, D. Swanson (USA), at the closing session of the General Council (Annex 11).

The Representative of the United States asked to consider in this context its revised GC Working Paper 97/4 as a possible draft rules of procedure for observer participation at NAFO Meetings. The General Council **asked** the USA delegation to prepare its paper to the next W.G. meeting and **decided** to call intersessional Working Group meeting in May 1998 (in USA).

- 2.8 Item 9, "Administrative Report", was referred to STACFAD and presented in Part II of this document under STACFAD deliberations. The report was **adopted** by the General Council.
- 2.9 Under item 10, "Election of Chairman and Vice-Chairman", the General Council referred the item to the closing session, which **re-elected** A. V. Rodin (Russia) as the Chairman for the next term of two years, 1998-1999 and R. Dominguez (Cuba) as the Vice-Chairman, for the same term.

3. Coordination of External Relations (items 11-12 of the Agenda)

- 3.1 Under item 11, "Communication with the United Nations (Resolutions 51/35 and 51/36)", the meeting **endorsed** the UN Resolutions and noted the Executive Secretary's communication to the UN on this subject.
- 3.2 To the item 12, "NAFO Observership at NAMMCO", the Meeting **noted** the Report by Norway (GC Doc. 97/5). There were no further comments on this report.

4. Fishing Activities in the Regulatory Area Adverse to the Objectives of the NAFO Convention (items 13-16 of the Agenda)

- 4.1 Under item 13, "Consideration of Non-Contracting Parties activities in the NAFO Regulatory Area and agreement on the task of STACFAC at the current meeting", the Chairman of STACFAC briefed the General Council on two (2) intersessional STACFAC Meetings (February and May 1997) and especially emphasized on advance work towards developing a "NAFO Scheme to Promote Compliance by Non-Contracting Party Vessels with the Conservation and Enforcement Measures Established by NAFO" (GC Doc. 97/1 and 97/2). To his opinion, good progress was made, and during this Annual Meeting, STACFAC will try to finalize the Scheme on a consensual basis. The Chairman of STACFAC requested, through the General Council, the Scientific Council to provide advice on whether it was possible to catch non-regulated species without by-catches of regulated species. Upon this request, which was supported by Canada and Denmark (F & G), the Scientific Council provided an advice (Part III, Annex 3). The General Council **encouraged** STACFAC and its Chairman to continue their work and report back at the closing session.
- 4.2 The item 14, "STACFAC Report", was presented to the Meeting by the STACFAC Chairman, Jean-Pierre Plé (USA) emphasizing the following basic information and recommendations to the General Council (Part III of this Report):
- a) There was a decrease of Non-Contracting Party vessels in the NRA in 1997 (by preliminary information) with estimated total catch of 1000 tons (550t cod, 400t redfish, 50t flounder) by four (4) vessels registered in Sierra Leone.
 - b) The NAFO diplomatic demarches have been delivered by Canada to the Governments of Honduras and Panama, and by USA, to the Governments of Belize and Sierra Leone. No replies have been received to-date from those countries.
 - c) STACFAC recommended the following actions and measures to the General Council:
 - a demarche, in the form of a letter signed by the President of NAFO, be made to the flag-States from which NCP vessels fished in the NRA in 1997, namely Sierra Leone, in an effort to discourage vessels from that country from fishing in the NRA (Part III, Annex 5);
 - demarches, in the form of letters signed by the President of NAFO, be made to the flag-States from which NCP vessels fished in the NRA in 1996, namely Belize, Honduras and Panama, in an effort to discourage vessels from these countries from resuming fishing in the NRA (Part III, Annexes 6-8);
 - to adopt the Scheme attached (Part III, Annex 4);

STACFAC shall undertake the work referred to in paragraph 16 of the above-mentioned Scheme; and

the NAFO Secretariat should explore means whereby NAFO and the North-East Atlantic Fisheries Commission (NEAFC) can exchange information on the fishing/fish processing/transshipment activities of Non-Contracting Party vessels.

4.3 The General Council **adopted** the STACFAC Report and its recommendations.

The Representative of Canada noted for the record that this Scheme is complimentary to the right of any Contracting Party to take additional measures directed at Non-Contracting Party vessels consistent with the purpose of this Scheme.

The Representative of the European Union welcomed the Scheme which would set the scene for other regional fisheries organizations, whilst being fully consistent with relevant international law.

The Chairman and Contracting Parties extended their congratulations to the Committee and its Chairman for the successful accomplishment with the Scheme. The **unanimous consensus** was that the Scheme should be broadly publicized around the world.

4.4 Item 15, "Report of the Working Group on Dispute Settlement Procedures (DSP)", was presented by the Chairman of the Working Group, Dr. D. Mjaaland (Norway). He summarized main findings of the Working Group (April 1997, GC Doc. 97/3) noting that the Working Group has fulfilled its mandate according to the task from the General Council. He underlined the main positions discussed at the W.G. meeting based on two ideas: one, by Canada, to incorporate a Protocol to the NAFO Convention targeted to use of the objection procedure, and the second, by the European Union, proposing to apply, by way of an amendment of the NAFO Convention, the procedures available under Part XV of UNCLOS". The Chairman of the Working Group stressed that the Working Group could not conclude on the question of desirability of DSP or a type of DSP for NAFO and it would be particularly important to hear the information from Contracting Parties not present at the Working Group.

The Working Group recommended to the General Council the following:

that the General Council authorizes the Working Group to continue its work and to convene a meeting shortly after the end of the NAFO Annual Meeting. In this regard, matters for particular attention include the issue of the desirability of a NAFO DSP, further consideration of the approaches in the Canadian and EU papers, including a possible combination of the two approaches and the competence of any panel which could be established under such approaches, including the type of "disputes" to be covered and the applicable law.

4.5 The Representative of the Republic of Korea noted its working paper (GC W.P. 97/5) explaining the Korean official position on the DSP findings and underlined its disagreement with the Canadian notion that current objection procedures under the NAFO Convention have been abused and on limiting the rights of member States to present objections under the NAFO Convention. He supported the EU position.

- 4.6 The Representative of the United States strongly supported the idea of dispute settlement mechanism relevant to the provisions of the UN Agreement on Straddling and Highly Migratory Fish Stocks and recommended the Working Group to continue this issue to developing the procedures specifically applied to the NAFO needs.
- 4.7 The Representative of the European Union explained that the EU Delegation would like to further review this matter and determine if the dispute settlement mechanism is required in NAFO proceedings. He agreed with the idea of the Working Group to continue deliberations, to elaborate a mechanism applicable to all Contracting Parties to cover disputes of any kind pursuant and relevant to the provisions of UNCLOS and any other relevant UN Agreement.
- 4.8 The Representative of Canada noted that all work of the Working Group and exchange of views at this meeting were both useful. Canada believed that NAFO would benefit if the dispute settlement mechanism is introduced in NAFO proceedings to operate in a quick and timely fashion (on objections), which may lead to better conservation of fish stocks. He agreed to take special note of the Contracting Parties concerns re sovereignty issues, and promised to work closely with all interested Parties on this matter to achieve further progress in the dispute settlement procedure.
- 4.9 The Representative of Norway confirmed his delegation's positive view on the idea of the DSP and its merit, and stressed the need to carefully consider and incorporate basic elements to the DSP mechanism from the relevant UN Agreement on Straddling and Highly Migratory Fish Stocks and continue the DSP Working Group deliberations.
- 4.10 The Delegate of the European Union (F. Wieland) gave a short overview of the issue of dispute settlement item at the closing session of the General Council. Drawing upon Annex 5 of the Report of the Working Group (GC Doc. 97/3), he emphasized that the use of rights under the NAFO Convention cannot be construed as giving rise to a dispute and that, therefore, a dispute settlement mechanism relating only to objections was incongruous. He also stressed that the provisions for dispute settlement under the recent UN Agreement would not cover disputes arising in connection with non-straddling fish stocks. Under these circumstances, one possible way forward could consist of an agreement of the NAFO Contracting Parties to apply, *mutatis mutandis*, the provisions of part XV of UNCLOS as the basic framework. Within this, one could envisage a pre-trial process through an ad-hoc expert panel in order to resolve disputes expeditiously. However, such a panel should in no case supplant the basic framework. An amendment of the NAFO Convention would be required. The General Council could, however, be empowered to specify details concerning the rules of procedure. To decide disputes, the applicable law should be the relevant provisions of the NAFO Convention, UNCLOS and, as appropriate, the UN Agreement, as well as generally accepted standards for the conservation of fisheries resources and other rules of international law.
- 4.11 As the result of the following discussions, the General Council **agreed** to continue intersessionally the DSP deliberations in a Working Group. The Working Group will meet at the NAFO Headquarters in April (17th week), Dartmouth, N.S., Canada. The meeting **asked** the EU delegation to prepare their working paper well in advance of the meeting and circulate the paper to all Contracting Parties through the NAFO Secretariat, and **requested** all Contracting Parties to present their contributions to this matter, as appropriate, but well in advance of the W.G. Meeting.

Mr. Stein Owe from Norway was **elected** Chairman of the Working Group.

4.12 Under item 16 "Consideration of the use by Contracting Parties in the Regulatory Area of non-flag state vessel charters to fish national shares", the Representative of Canada raised a concern on a chartering of Contracting Party vessels to fish their quotas which occurred for the first time during this year in the NAFO Regulatory Area and explained the following: There was a communication from Canada to Contracting Parties on this issue (in March 1997) and some other members spoke out, Norway and Japan. He stressed that entire NAFO Conservation and Enforcement scheme is founded on a flag-State responsibility and the same assumption is in the International Law. Therefore, such a chartering would create a "compliance vacuum" unless the Contracting Parties concerned can enforce the compliance of the vessel under charter. The NAFO groundfish quotas do not belong to anybody and are subject to the Fisheries Commission decision(s) to allocate shared resource, and the Contracting Party which chooses not to fish its quotas and transfer them shall seek the approval of the Fisheries Commission, which has traditionally been done by a mail vote or at the Annual Meeting(s). He proposed to develop a policy to deal with this issue and to develop specific ground rules for non-flag States charters establishing for this purpose a Working Group with the mandate to determine under which circumstances the charter should occur and to identify all conditions and procedures required in such a case. Those procedures should be further presented to the General Council for adoption as required.

4.13 The ensuing discussions brought active responses from the Representatives of the European Union, USA, Estonia, Norway, Denmark (F & G), Iceland, France and Japan supporting in principle the Canadian position. There was a general understanding that the charterer should be responsible for the vessel re NAFO Conservation and Enforcement Measures, and concrete procedures should be developed by NAFO. The delegates raised the question of the Non-Contracting Party possible involvement in this transaction on a commercial basis. The Representative of Iceland asked to give thought to registration (or registration of vessels). The Representative of France (St. Pierre et Miquelon) proposed to provide a background on the chartering and prepare a Working paper for a Working Group consideration. He informed that France, considering this issue and in full cooperation with the NAFO Conservation Enforcement Measures, has suspended its previous decision to deploy a charter vessel to fish its allocation in the NAFO Regulatory Area. The Representative of the European Union proposed to call the Working Group intersessionally in 1998 and to agree on a principle that no charter arrangements should be made by the Contracting Parties during the work of the Working Group and until the procedures are developed and accepted by the General Council.

This EU proposal was **supported** by all Contracting Parties.

4.14 The Chairman of the General Council summarized the discussions that the Working Group on chartering will meet some time during 1998 and asked the meeting to consider the nomination of a Chairman of the Working Group. There were no further comments on this issue.

At the closing sessions of the General Council and Fisheries Commission on 19 September, the **decision** was to call the Working Group in Brussels, Belgium during 10th week (2-6 March) of 1998 and nominate Mr. H. Koster (EU) the Chairman of the Working Group. The Representative of France (St. Pierre et Miquelon) introduced its paper for consideration at the Working Group (GC Working Paper 97/9 - Annex 12).

In light of the large number of intersessional meetings being planned, the Representative of the United States proposed that the meetings on chartering vessels and on NAFO quota allocation practices be run concurrently at the same location. He called attention to the U.S. working paper on quota allocation practices (FC W.P. 97/14), which had been introduced under item 15 of the Fisheries Commission agenda.

The general consensus was to consider the two issues in parallel meetings. The Council unanimously ruled that **no charter arrangements shall be made by Contracting Parties until the accomplishment of the Working Group task and its endorsement by the General Council.**

5. Finance (items 17-18 of the Agenda)

- 5.1 The items 17 and 18 and item 8 "Administrative Report", were referred to STACFAD for discussion and then presentation to the General Council for decision.
- 5.2 The Chairperson of STACFAD, J. Quintal-McGrath (Canada), reported the following information and recommendations to the General Council:
- a) Auditors Report transmitted to the Contracting Parties in March 1997 and Administrative Report (GC Doc. 97/4) at the current meeting were recommended for adoption;
 - b) The participation of the NAFO Secretariat in the Pension Society was approved by STACFAD and this was recommended for approval by the General Council;
 - c) The most essential budgetary items of the STACFAD Report were agreed as follows:
 - the budget for 1998 to be adopted in the amount of \$1,047,000 Cdn;
 - the Accumulated Surplus Account be maintained at a level of not less than \$75,000 Cdn;
 - the outstanding contributions owing from Bulgaria (1997) and Romania (1997) be deducted from the Accumulated Surplus Account in the amount of \$31,469.43 Cdn.
 - d) The estimated cost of projected satellite tracking equipment at the NAFO Secretariat was suggested in the range of \$30,000-40,000 Cdn (not in the budget);
 - e) The issue of Bulgaria and Romania non-payment of the NAFO contributions was discussed at STACFAD and presented under item 7 of the General Council Agenda;
 - f) The dates of the next Annual Meetings were recommended as follows:

1998	-	Scientific Council	-	09-18 September
	-	General Council	-	14-18 September
	-	Fisheries Commission	-	14-18 September

1999	-	Scientific Council	-	08-17 September
	-	General Council	-	13-17 September
	-	Fisheries Commission	-	13-17 September
2000	-	Scientific Council	-	13-22 September
	-	General Council	-	18-22 September
	-	Fisheries Commission	-	18-22 September

The location of the Annual Meeting for 1998 is scheduled for Lisbon, Portugal. The location of the Annual Meetings for 1999 and 2000 will be in the Halifax Regional Municipality area if no invitations to host the Annual Meetings are extended by Contracting Parties and accepted by the Organization.

STACFAD elected F. Kingston, of the European Union, for the position of Chairperson and J. McGruder, of the United States, for the position of Vice-Chairperson.

- 5.3 The Chairman of the General Council invited the Contracting Parties' comments on the Report. The Representative of Norway proposed to increase the NAFO budget 1997 in the amount of \$30,000 Cdn to cover the expected costs of the satellite tracking equipment at the NAFO Headquarters. The General Council **agreed** to increase the recommended provisional budget 1998 (1,047,000 Cdn) by an additional 30,000.00 Cdn for NAFO satellite tracking equipment and the total budget 1998 was **adopted** in the amount of 1,077,000 Cdn.

The STACFAD Report was **adopted** as a whole by the General Council.

6. Closing Procedures (items 19-22 of the Agenda)

- 6.1 Item 19, "Time and Place of the Next Annual Meeting", was covered by the STACFAD report.
- 6.2 There were no other matters to discuss under item 20 "Other business".
- 6.3 The Press Release was prepared by the Executive Secretary and distributed to all Contracting Parties (Annex 10).
- 6.4 The 19th Annual Meeting of NAFO was adjourned at 1300 hrs on 19 September 1997.

Adoption of Report

The Report of the General Council including proceedings of its Committees – STACFAD and STACFAC – 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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Annex 2. Agenda

I. Opening Procedure

1. Opening by Chairman, A. V. Rodin (Russia)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Admission of Observers
5. Publicity

II. Supervision and Coordination of the Organizational, Administrative and Other Internal Affairs

6. Review of Membership
 - a) General Council
 - b) Fisheries Commission
7. Amendment of the Rules of Procedure for the General Council
8. Transparency in the NAFO decision-making process (participation of inter-governmental and non-governmental organizations)
9. Administrative Report
10. Election of Chairman and Vice-Chairman

III. Coordination of External Relations

11. Communication with the United Nations (Resolutions 51/35 and 51/36)
12. NAFO Observership at NAMMCO

IV. Fishing Activities in the Regulatory Area Adverse to the Objectives of the NAFO Convention

13. Consideration of Non-Contracting Parties activities in the NAFO Regulatory Area and agreement on the task of STACFAC at the current meeting
14. Report of STACFAC at the Annual Meeting and decisions on actions
15. Report of the Working Group on Dispute Settlement Procedures (DSP)
16. Consideration of the use by Contracting Parties in the Regulatory Area of non-flag State vessel charters to fish national shares

V. Finance

17. Report of STACFAD at the Annual Meeting
18. Adoption of the Budget and STACFAD recommendations for 1998

VI. Closing Procedure

19. Time and Place of Next Annual Meeting
20. Other Business
21. Press Release
22. Adjournment

Annex 3. Opening Statement by the Representative of Canada

Mr. Chairman, distinguished Representatives, it is a pleasure for Canada to host this year's NAFO Annual Meeting. On behalf of the Canadian Delegation, I extend to each of you a warm welcome to St. John's, Newfoundland. As you know, this year marks an historic occasion for the Province. This year commemorates the 500th anniversary of the landing of John Cabot in Newfoundland. I hope that delegates will have the opportunity to enjoy Newfoundland hospitality during your stay here.

It is especially fitting that NAFO is meeting here in 1997. John Cabot not only discovered this island, but he also witnessed the abundant wealth of the sea - the fish resources on which the economy, and culture of this province has been founded for centuries. That past abundance is a reminder of the challenge which faces us - the conservation and rebuilding of these once plentiful stocks of the Northwest Atlantic.

The assessments and the recommendations of the Scientific Council underline the need for continuing restraint and vigilance in surveillance and enforcement of the NAFO conservation measures to ensure spawning stocks and juvenile fish are protected.

Canada's objective is sustainable fisheries for all traditional users in the northwest Atlantic. We are seeking a glimmer of hope for a modest recovery of the 3LNO yellowtail flounder stock. However for most of the NAFO stocks currently under moratoria, it is clearly not yet time to benefit from the restraint or to relax the restrictions we have practised over the past several years. We may also need to consider modifying or extending some conservation measures or introducing new ones.

Two years ago NAFO adopted new Conservation and Enforcement Measures which were hailed as "the toughest measures of any international fisheries management organization in the world". NAFO's adoption of these measures was a milestone on the road towards enhanced international cooperation to ensure that high seas fishing activities are conducted in a rational, sustainable and responsible manner.

These new measures have provided NAFO with an effective enforcement regime. While there were some initial start-up difficulties, they have been effective. The number of infringements is sharply down as a direct consequence of the observer program. We have witnessed a marked increase in compliance with NAFO rules. A comprehensive NAFO enforcement regime is essential to the viability and sustainability of NAFO stocks.

We need to build on the achievements of recent years to sustain the progress which has been made. The implementation of these measures has laid the groundwork for the recovery and rebuilding of not only Greenland halibut but also some flatfish currently under NAFO moratoria. I believe that this is of fundamental importance and benefit to all NAFO Parties, who, like Canada, wish to see renewed fishing possibilities in the NAFO Regulatory Area.

I am also encouraged by the new international agreements that have been signed or adopted in recent years. The United Nations Agreement on Straddling and Highly Migratory Fish Stocks, the FAO Compliance Agreement, the FAO Code of Conduct for Responsible Fishing and Kyoto Declaration and Plan of Action constitute important gains for sustainable and responsible fisheries.

Canada applauds those governments that have already ratified the UN Fish Agreement. We expect legislation to bring Canadian laws into line with the Agreement to be re-introduced in Parliament shortly, which will enable Canada to ratify this Agreement. We encourage all NAFO members who have not already done so to ratify the Agreement with a view to expediting its early entry into force.

I would also acknowledge the work of the Scientific Council which has proposed an action plan for the development of a framework on the precautionary approach to fisheries management in the NAFO Regulatory Area. The action plan represents a positive first step in introducing this management approach to NAFO stocks.

A comprehensive NAFO enforcement regime is essential to the viability and sustainability of NAFO stocks. We need to build on the achievements of recent years to sustain the progress to date in controlling overfishing.

As Contracting Parties to the NAFO Convention, we all share the responsibility to conserve the resources in the NAFO Regulatory Area. We must ensure our focus remains on our primary objective. Our obligations to conservation and protection are comprehensive. They are not limited to only one or two stocks and the interests of our fishermen.

The right to benefit from the effective management of fish stocks must be balanced with the obligation to ensure required scientific work is undertaken and all fisheries controlled.

As the new head of the Canadian delegation, I have much to learn about this distinguished organization. I look forward to engaging with all Contracting Parties in a constructive and positive dialogue to achieve NAFO's objectives. Thank-you.

Annex 4. Opening Statement by the Representative of the European Union

Mr. Chairman, distinguished Delegates, Ladies and Gentlemen,

It is with great pleasure that I take part for the first time in the work of the bodies of the Northwest Atlantic Fisheries Organization and that I can meet Delegates from all the Contracting Parties, whose experience in the management of the fisheries resources of this important region of the world will obviously be as stimulating as valuable for me.

While traveling over here, I read very much about the travels and adventures of John Cabot, or Giovanni Caboto as I prefer to call him by his Italian origins. I was particularly impressed by his reports of the discovery of waters literally swarming with fish off the coast of Newfoundland. Instinctively I thought that in view of the present parlous state of the fish stocks in these very same waters, we should all put our efforts together to restore the status quo ante.

I understand, however, that all matters related to fisheries form a highly complex area of policy and, I might add, a very interesting and exciting one. In this context, I note with satisfaction that NAFO has undergone an astounding development over the last two years from a forum for confrontation to a forum which gives real meaning to enhanced co-operation in the conservation and management of the relevant fisheries resources.

Our main challenge continues to be effective conservation through co-operation of all NAFO members. It cannot be stressed enough that there is no alternative to multilateral co-operation. This implies interaction on an equal footing. Furthermore, co-operation can never be a one-way street. It is rather an emanation of the principle of the "*do ut des*" - I give so that you give. All this taken together and coupled with the general principle of having due regard to the rights and obligations of others offers the best guarantee for the prevention of disputes.

Effective conservation requires measures which aim at ensuring the long-term sustainability of the fisheries resources. In this regard, the recent UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks as well as the FAO Code of Conduct for responsible fisheries may provide useful inspiration. Yet, NAFO will have to perform its tasks autonomously with due regard to the peculiarities of the Northwest Atlantic region. It is my feeling that, in the wake of the Rio Summit of 1992, the general interest focused largely on the particular problem of straddling fish stocks. This created the false impression that other fish stocks were of minor importance. The fact that NAFO has to deal not only with straddling fish stocks but also with fish stocks which occur exclusively in high seas areas puts this organization in a privileged position from which it should be able to bring about the most appropriate and attractive solutions for all the fish stocks concerned.

In this context, I should stress that within the Community, environmental requirements are a necessary component of the Community's other policies. This integrated approach has been recently reinforced by the Amsterdam Treaty. It implies the need to bring about an equilibrium which takes due consideration of the specific features of the fisheries sector and its interests. It is also with this very approach that my Delegation is determined to tackle up-coming external fisheries issues and, as a consequence, the issues which will be dealt with this week.

An existing imbalance between fleet capacity and available fishing possibilities has often been described as one of the main obstacles to the sustainable utilization of fisheries resources. In this regard, the Community has recently adopted its fourth Multi Annual Guidance Program which, for the period 1997 to 2001, puts heavy overall strings on fishing effort in its two constituent elements of activity and fleet capacity. In addition to that, it is worth mentioning that it has been agreed within the Community to widely introduce satellite tracking as from July 1998 as a tool for controlling fishing effort and ensuring compliance with applicable conservation and management measures.

With all this in mind, my delegation and I are looking forward to working closely with you, Mr. Chairman, and all other Delegations in a responsible, constructive and open-minded way to secure a favorable outcome to this important meeting.

Thank you Mister Chairman

Annex 5. Opening Statement by the Representative of the United States of America

Mr. Chairman, Distinguished Delegates, Ladies and Gentlemen,

The United States is very pleased to take part in this Nineteenth Annual Meeting of NAFO. We believe that international cooperation in fisheries management is at an important juncture with the new opportunities presented by the U.N. Agreement on Straddling and Highly Migratory Fish Stocks, The FAO Code of Conduct for Responsible Fisheries and a new spirit of urgency in the need to address our common management problems using a precautionary approach. It is our hope that NAFO will be in the forefront of international fishery management and we seek to further the organization's efforts as far as possible.

The United States is very pleased with the progress NAFO has started to make with regard to the important issues of the control of non-contracting parties, the use of observers and satellite tracking devices. This meeting is an opportunity to solidify this progress by adopting permanent measures for enhancing our enforcement and monitoring capabilities.

We also strongly believe that this organization can only benefit by increasing the openness and transparency of our deliberations, in line with the UN Agreement. Further, we strongly support the efforts of the Scientific Council in developing a framework for implementing an overall precautionary approach to fisheries management. The United States wants to see the concept of precautionary management become a reality as soon as possible, and will be working within the Fisheries Commission to achieve this. We must ensure that Total Allowable Catch levels are set consistent with the advice of the Science Council and that when there is uncertainty in the status of resources NAFO takes a conservative approach in the Regulatory Area.

Finally, the United States will work within the Fisheries Commission to begin the process of revising the NAFO process for allocating fishing quotas in the Regulatory Area. We believe that we must look forward in management and allocation, while taking due account of historical fishing practices, to strengthen our cooperation and mutual interests in utilizing the resources of the Northwest Atlantic. Mr Chairman, I look to working with you and all the delegations at this important meeting of our organization.

Annex 6. Opening Statement by the Representative of the Republic of Korea

Mr. Chairman, Distinguished Delegates, Ladies and Gentlemen,

It is a great honour for me to participate in the 19th NAFO Annual Meeting. On behalf of the Korean delegation, I would like to thank the secretariat of NAFO for organizing and preparing this meeting. My thanks also goes to the Government of Canada for hosting this Conference here in St. John's.

Being a responsible fishing nation, the Republic of Korea has been actively participating in the international efforts to establish responsible fishing regimes. It has been cooperating with other countries in the conservation and management of fisheries resources.

In this context, Korea will continue to cooperate with member countries of NAFO for conservation and management of fishery resources.

As distinguished delegations from Canada, EU, United States already pointed out, there are several problems related to the conservation of living resources in NAFO Regulatory Area.

I would like to point out one problem. As you are aware, in spite of member countries' efforts for the conservation and management of fishery resources in the NAFO Regulatory Area, many fish stocks have been on the decline. One of the major areas of concern is the current quota allocation system. I would like to mention here that this system is not without its problems.

I think that the current quota allocation formula devised by NAFO in the end of 1990s is somewhat outdated. In the meantime, there have been some changes in this field and the composition of NAFO is quite different from that of its early days.

I think that the current quota allocation system is no longer applicable to the present reality. I suggest that the system be carefully reviewed and modified.

As the United States already pointed out, "NAFO does not have a process to make allocations to Contracting Parties that recently joined, yet it continues to allocate fishing rights to states that no longer fish in the Regulatory Area and do not meet their obligations of membership." In order to enhance the conservation and management of NAFO stocks, member countries should cooperate with each other, and non-member countries should be permitted to join the NAFO.

To accomplish this end, a quota should be allocated fairly on a basis such as historical fishing activity and efforts for conservation and management among member countries. Moreover, incentives for quota allocation should be provided to non-member countries so that they may join NAFO for the conservation of fish stocks.

This delegation hopes that all NAFO member countries will cooperate very closely so that the promotion of effective conservation and utilization of fishery resources may be fully ensured in the NAFO Regulatory Area.

In particular, I hope that fishing quotas will be allocated in the most satisfactory manner possible in the future. Thank-you.

Annex 7. Opening Statement by the Representative of France on behalf of St. Pierre & Miquelon

This is the second annual meeting of NAFO that France on behalf of St. Pierre & Miquelon has attended. It is indeed an honour for this small group of French islands to be part of this prestigious gathering of the major fishing nations of the world.

For the last five centuries, the history and economic prosperity of the French islands of St. Pierre & Miquelon have been closely linked to the fishery and in particular to the cod fishery.

The fishery has always been the reason for being, the very soul of the French Isles. Since 1992, however, St. Pierre & Miquelon, much like the Atlantic Provinces of Canada has been faced with difficult social and economic times due to the cod fishery moratorium within the 200 mile limit subsequent to the decline of the resource.

But the inhabitants and the local authorities know full well that the economic future of St. Pierre & Miquelon remains inextricably linked to the sea, to the exploitation of its resources and to maritime activities in general.

Therefore, the French delegation on behalf of St. Pierre & Miquelon feels a deep sense of commitment towards NAFO and wishes to play an active role in NAFO meetings and undertakings.

Hence our participation in the meetings that were held in Halifax and Brussels this year.

The French delegation on behalf of St. Pierre & Miquelon will strive to make a positive contribution and maintain a spirit of conciliation. We are concerned with compliance to rules that are developed collectively within the Organization pursuant to international law. We are also concerned with conservation measures. We are also committed to following the recommendations of the Scientific Council.

But we are also here to defend our legitimate rights and our economic interests as a coastal state. Therefore, we will not agree to any reduction in the quotas and fishing rights granted to France in 1997. Furthermore, we will request increased quotas for specific commercial species if the TAC is raised over the course of the next year. For instance, we will be requesting an economically viable quota for the yellowtail.

It is sometimes not economically feasible to make use of a given quota. As a case in point, France on behalf of St. Pierre & Miquelon had intended to exercise its fishing rights with respect to shrimp stocks in sector 3M by chartering a Contracting Party vessel.

Although NAFO regulations do not prohibit the chartering of Contracting Party vessels to carry out fishing activities, they are unclear. France on behalf of St. Pierre & Miquelon was planning on fishing shrimp in sector 3M, but has decided to postpone this activity pending clarification of NAFO rules on this subject. To this end, we suggest that the matter be taken up by one of the bodies of the Organization or that a working group be created to determine the rules that would apply to the chartering of Contracting Party vessels.

We need to develop rules that will allow the Party allocating quotas to monitor fishing practices and empower it to levy appropriate sanctions against any non compliant vessel pursuant to relevant regulations (e.g. flag agreement, code of conduct, etc.)

We believe it is up to the organization to develop these rules. Except in the case of a transfer to another flag, the rules governing charters will need to be carefully defined through presumably lengthy negotiations.

On behalf of the members of the French delegation on behalf of St. Pierre & Miquelon, I wish to thank the chair and chief delegates for this opportunity to speak.

Annex 8. Opening Statement by the Representative of Iceland

Iceland joins the other nations in wishing for a productive annual meeting, that can in its endeavors lead the way towards constructive management decisions, that are effective in reducing the fisheries if that is necessary based on scientific advise. Iceland has a strong interest in contributing to the strengthening of the scientific basis, which is in our view a prerequisite for the successful function of this organization.

The aim must be for a utilization sustainable in both biological and economical sense. It is of paramount importance that these two objectives go hand in hand if we are to eliminate wasteful practices.

In ensuring that those decisions are adhered to, the relevant control measures, in turn, have to have the same respect for the economic viability of the fisheries as the management systems themselves.

If not, we will not lay the foundation for responsible fisheries, but will instead give way to continuing government subsidies, fueling overexploitation.

Annex 9. Opening Statement by the Representative of Denmark (in respect of the Faroe Islands and Greenland)

Mr. Chairman, it is a very great pleasure for me and my delegation to participate in this 19th Annual NAFO Meeting in St. John's, Newfoundland.

The people of Newfoundland and the people of the Faroe Islands and Greenland have a great interest in fisheries and the life at sea. I also would like to congratulate Newfoundland with the celebration of the 500 years landfall by John Cabot but I will not forget the Vikings coming to this country and the Irish monk St. Brendan coming in the 6th century from Ireland via the Faroe Islands, Iceland and Greenland to this country. As islanders or rimsters we are proud of the voyages made by these first peoples in the North Atlantic.

In this century the fishermen from the Faroe Islands have been fishing historically in the area of the Flemish Cap with longliners and today by shrimp trawlers.

This fishery plays a major role in the relationship between the people in this country and the fishermen from my country. And as a result of our historical activities in the NAFO Regulatory Area and investments made by commercial companies and authorities in Canada, this year a new quay equipped with cold storage and sorting for international business has been established in a port in Newfoundland. Between the industry this harbour is called the Faroese harbour west, where Faroese vessels and other foreign vessels are provided services, dockside monitoring, observers hired, and transshipment also with possibility for processing. All this is also of economical benefit for the people of Newfoundland.

For the Faroese shrimp vessels there is no transshipment at sea and therefore the landings are in this country.

Mr. Chairman, everyone here is aware of the importance the Contracting Parties attached with the adopted management measures agreed on at former annual meetings. However, some of us do not like to establish a moratorium as a harvesting strategy. This meeting is also an opportunity for the Fisheries Commission to demonstrate that NAFO is able to adopt effective conservation and management measures related to all species which we are responsible to regulate.

As fishing nations with historical background and as totally depended upon the resources at sea, we also 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. From 1994 to 1996, the fishery inside the 200 mile zone in Faroese waters was regulated by a quota system which might have resulted in discard problems and misreport of catches. However, the Home Government advised by the scientists and in close co-operation with the fishermen in June 1996 introduced an effort limitation with transferable fishing days. This system seems to be in conformity with a responsible harvesting strategy laid down by the Home Government and with the transferability to economical benefit to the fisheries which we are totally dependent on.

Mr. Chairman, with these remarks my delegation is ready to participate in the discussions coming up in this meeting and ready to support acceptable solutions taken in NAFO.

Annex 10. Press Release

1. The Nineteenth Annual Meeting of the Northwest Atlantic Fisheries Organization (NAFO) was held in St. John's, Newfoundland, Canada during 15-19 September 1997, under the chairmanship of Alexander Rodin (Russia), President of NAFO. The NAFO constituent bodies - General Council, Fisheries Commission and Scientific Council convened their sessions at the Hotel Newfoundland.
2. There was the attendance of 200 participants from fifteen Contracting Parties - Canada, Cuba, Denmark (in respect of Faroe Islands and Greenland), Estonia, European Union, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Republic of Korea, Latvia, Lithuania, Norway, Poland, Russia and United States of America.
3. During the year 1997, before the Annual Meeting, the following NAFO meetings had been organized: Standing Committee on Fishing Activity of non-Contracting Parties in the Regulatory Area, STACFAC, (NAFO Headquarters, February 1997); STACTIC Working Group on Satellite Tracking (NAFO Headquarters, April 1997); General Council Working Group on Dispute Settlement Procedures (NAFO Headquarters, April 1997); Standing Committee STACFAC (Brussels, Belgium, May 1997); Standing Committee STACTIC (Copenhagen, Denmark, June 1997); Regular Scientific Council Meeting (Dartmouth, Canada, June 1997); Scientific Council Symposium on Capture Fisheries (St. John's, Newfoundland, September 1997). The reports and documents from the above-noted meetings were utilized for the preparation and discussions at the Annual Meeting.
4. The Scientific Council, under the chairmanship of W. R. Bowering (Canada), reviewed and assessed the state of 25 fish stocks in the NAFO Regulatory and Convention Areas. The scientific advice and recommendations for the management, conservation and utilization of the fishery resources were forwarded to the Fisheries Commission with the special emphasis that: all cod stocks remaining at low abundance should be under moratoria in 1998, as well as the flatfish stocks of 3LNO American plaice and Witch flounder in 3L. Yellowtail flounder in Div. 3LNO, which was under moratorium from 1995 to 1997, was recommended to open for fishing with a TAC in 1998 of 4000 tons, to be fished under especially strict controls to prevent by-catches of other vulnerable stocks.

The redfish stock in Flemish Cap (3M) was stable with indication of some increase in deep waters. Other redfishes were considered to be of low biomass level and a precautionary approach was recommended, with no directed fishery.

The Greenland halibut stock was assessed with above average recruitment and a cautious approach was proposed to assist an encouraging continuing recovery.

The Scientific Council adopted an Action Plan to develop a precautionary approach to management of NAFO stocks. This Action Plan was endorsed by the Fisheries Commission.

5. The Fisheries Commission, under the chairmanship of H. Koster (EU), considered the Scientific Council recommendations and agreed on joint international measures and actions for the conservation and utilization of the fishery resources in the Regulatory Area.

The Commission agreed on the continuation (from 1995) of the moratoria in 1998 on the following stocks: Cod in Divisions 3L and 3NO, Redfish in Div. 3LN, American plaice in Divisions 3M and 3LNO, Witch in Div. 3NO and 3L and Capelin in 3NO. Fishery was reopened on Yellowtail flounder in Div. 3LNO. The Quota Table for 1998 was adopted (see attached).

New conservation and enforcement measures were agreed as follows:

- Concerning shrimp fishery on Flemish Cap in Division 3M, there was agreement that the existing effort allocation Scheme in the shrimp fishery is to continue, and the fishing days should not be transferable between Contracting Parties. There will be no directed shrimp fishery in 3LNO.
 - to extend the Pilot Project for Observer and Satellite Tracking System for 1998; at the 20th Annual Meeting, the Fisheries Commission will decide on permanent improvements to the NAFO Conservation and Enforcement Measures. The NAFO Secretariat will be equipped with updated hardware and software to handle the satellite tracking information.
6. The General Council, under the chairmanship of A. Rodin (Russia), deliberated several outstanding issues regarding internal and external NAFO policy and resolved the following:
- For improving transparency in NAFO proceedings and decisions, the agreement was to continue the work in a Working Group to develop recommendations to the General Council.
 - On dispute settlement procedures, the Council agreed that the Working Group should continue its work and report to the next Annual Meeting, 1998.
 - With regards to non-Contracting Party fishing activity in the NAFO Regulatory Area, the General Council adopted the "Scheme to Promote Compliance by Non-Contracting Party Vessels with the Conservation and Enforcement Measures Established by NAFO". The Scheme would be directed at Non-Contracting Party vessels engaged in fishing activities in the NAFO Regulatory Area. The Scheme presumes that a Non-Contracting Party vessel which has been sighted engaging in fishing activities in the NAFO Regulatory Area is undermining the NAFO Conservation and Enforcement Measures. If such sighted vessels enter the ports of Contracting Parties, they must be inspected. No landings or transshipments will be permitted in Contracting Party ports unless such vessels can establish that certain species on board were not caught in the NAFO Regulatory Area, and for certain other species that the vessel applied the NAFO Conservation and Enforcement Measures. Contracting Parties must report the results of inspections to NAFO and all Contracting Parties.
 - The President of NAFO, A. Rodin (Russia), signed diplomatic demarches to the flag-States whose vessels fished in the NAFO Regulatory Area in 1996-1997, namely Belize, Honduras, Panama and Sierra Leone.

- To improve control of the fisheries by the Contracting Parties, the General Council resolved to prohibit any charter vessel arrangements until a comprehensive set of rules is developed by NAFO.

7. This was an election year and the following NAFO officers took their offices for the two year period 1998-1999:

Chairman of the General Council	- A. Rodin (Russia)
Vice-Chairman of the General Council	- R. Dominguez (Cuba)
Chairman of the Fisheries Commission	- P. Gullestad (Norway)
Vice-Chairman of the Fisheries Commission	- D. Swanson (USA)
Chairman of the Scientific Council	- H.-P. Cornus (EU)
Vice-Chairman of the Scientific Council	- W. B. Brodie (Canada)
Chairman of the Standing Committee on Finance and Administration (STACFAD)	- G. F Kingston (EU)
Vice-Chairman of STACFAD	- J. L. McGruder (USA)
Chairman of the Standing Committee on International Control (STACTIC)	- D. Bevan (Canada)
Chairman of the Standing Committee on Fishery Science (STACFIS)	- R. Mayo (USA)
Chairman of the Standing Committee on Research Coordination (STACREC)	- V. Shibanov (Russia)

NAFO General Council
19 September 1997

NAFO Secretariat
St. John's, Newfoundland

QUOTA TABLE. Total allowable catches (TACs) and quotas (metric tons) for 1998 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												Subareas 3+4			
	Redfish		American plaice		Yellowtail		Witch		Capelin		Greenland halibut			Squid (Illex) ²		
	Div. 3M	Div. 3NO*	Div. 3LN*	Div. 3M*	Div. 3LNO*	Div. 3LNO*	Div. 3LNO*	Div. 3NO*	Div. 3NO*	Div. 3LNO*	Div. 3LNO*	Div. 3LNO*	Div. 3LNO*	Div. 3LNO*	Subareas 3+4	
1. Canada	16	0	650	0	0	0	3900 ³	0	0	0	3 000	-	-	N.S. ⁴	2 250	
2. Cuba	74	-	2 275	0	-	-	-	-	-	-	-	-	-	-	-	-
3. Denmark (Faroe Islands and Greenland)	447	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-
4. European Union	997	0	4 030	0	0	0	80 ⁵	-	-	0	11 070	-	-	N.S. ⁴	-	
5. France (St. Pierre and Miquelon)	-	-	90	-	-	-	-	-	-	-	-	-	-	-	2 000	
6. Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7. Japan	-	-	520	-	-	-	-	-	-	0	2 050	-	-	2 250	2 000	
8. Korea	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	
9. Norway	185	-	-	-	-	-	-	-	-	0	-	-	-	-	-	
10. Poland	77	-	-	-	-	-	-	-	-	0	-	-	-	1 000	-	
11. Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12. Latvia	196 ¹	0	18 005 ¹	0	0	-	-	0	0	-	-	-	-	5 000 ¹	-	
13. Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14. Russia	-	-	-	-	-	-	-	-	-	-	2 550	-	-	-	-	
15. United States of America	-	-	90	-	-	-	-	-	-	-	-	-	-	2 000	-	
16. Others	8	0	160	0	0	0	20 ⁶	0	0	-	1 330 ⁶	-	-	3 500	-	
Total Allowable Catch	2 000	*	20 000 ⁷	*	*	*	4 000 ⁸	*	*	*	20 000	*	*	150,000 ⁹		

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 1998 and no more than 80% (1064 t) may be fished before 1 October 1998.

⁷ 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 percent 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.

⁸ 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.

⁹ The provisions of Part I, Section A.4b) of NAFO Conservation and Enforcement Measures shall apply (FC Doc. 96/1).

* No directed fishing - The provisions of Part I, Section A.4b) of NAFO Conservation and Enforcement Measures shall apply.

Annex 11. Report of the Working Group on Transparency

1. Opening of the Meeting

The Chairman, D. Swanson (United States) opened the meeting at 9:15. Representatives from the following Contracting Parties were present: Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union, France (on behalf of St. Pierre et Miquelon), Iceland, Japan, Norway, the Russian Federation, and the United States. (Appendix 1)

2. Appointment of Rapporteur

Mr. P. Moran (United States) was appointed Rapporteur.

3. Discussion of the Working Group

After considerable discussion of draft terms of reference tabled by the Chairman, the Representative of Norway tabled a draft document outlining possible terms of reference for the Working Group. Delegates discussed this document and offered comments and revisions. The following consensual text was drafted by the Working Group:

TERMS OF REFERENCE FOR THE WORKING GROUP ON TRANSPARENCY

The Working Group shall assess all relevant implications of:

access to and distribution of information on the work and decisions of NAFO in light of the Organization's relations with relevant interest groups and the general public; and

the terms and conditions and other relevant criteria for participation in meetings of NAFO bodies as observers or otherwise, as appropriate, with respect to:

-IGO's

-NGO's

in light of the need of NAFO to function effectively when executing its business.

The Working Group shall submit its report, including possible recommendations to the General Council.

4. Report to the General Council

The Working Group on Transparency **recommends** that the General Council decide how and when further work on transparency should be conducted.

5. Adjournment

The meeting was adjourned at 11:15.

Appendix 1. List of Participants

<u>Name</u>	<u>Contracting Party</u>
E. Mundell	Canada
E. Lemche	Denmark (in respect of Faroe Islands and Greenland)
M. H. Pedersen	Denmark (in respect of Faroe Islands and Greenland)
P. Curran	European Union
G. F. Kingston	European Union
P. Lurton	France (in respect of St. Pierre et Miquelon)
A. Halldorsson	Iceland
J. Sigurjonsson	Iceland
A. Jonsson	Iceland
A. Umezawa	Japan
D. Stai	Norway
V. Solodovnik	Russian Federation
L. Speer	USA
K. Rodrigues	USA
D. Swanson	USA
P. Moran	USA

**Annex 12. Points for Consideration on the Matter of Chartering
of Vessels Between Contracting Parties
(GC Working Paper 97/9)**

Paper presented by France on behalf of St. Pierre & Miquelon

France on behalf of St. Pierre & Miquelon is pleased to see that it has emerged from the discussions of the General Council members that the chartering of Contracting Party vessels by another Contracting Party is not prohibited under the present rules and that there is a common will to control this type of operation.

Therefore, France on behalf of St. Pierre & Miquelon is pleased that the General Council has endorsed the principle that a working group be created to examine the conditions that would apply to such charter operations. The working group would be mandated to develop appropriate rules recognized by all parties.

Eager to contribute to this process, France on behalf of St. Pierre & Miquelon submits the following points for your consideration.

The Contracting Party to whom the quota has been allocated and who charters the vessel must do everything in its power to ensure compliance with all NAFO conservation and enforcement measures. The charterer of the vessel must be made fully accountable pursuant to the applicable legislation.

It is also recommended, in the interest of compliance with established rules of law, that both Parties concerned, namely the Contracting Party having jurisdiction over the charterer and the Contracting Party having jurisdiction over the shipowner, to agree on the applicable regulations through the exchange of diplomatic notes.

It must be underscored that the chartering of a vessel belonging to another Contracting Party is not the same as a quota transfer. In the case of a charter operation, the fishery is carried out for the benefit of the Contracting Party to whom the quota has been allocated for that particular fishery.

France on behalf of St. Pierre & Miquelon hopes that these submissions will contribute to the rationalization of charter operations.

**Annex 13. List of Decisions and Actions by
the General Council
(19th Annual Meeting, 15-19 September 1997)**

Substantive issue (propositions/motions)	Decision/Action (GC Doc. 97/9, Part I; item)
1. Participation in NAFO by two Contracting Parties – Bulgaria and Romania	Item 2.3; Resolution 97/1; Annex 6, Part II. All Contracting Parties shall contact the Bulgarian and Romanian authorities and report back at the 20 th Annual Meeting, 1998.
2. Transparency in the NAFO decision-making process (Participation of Inter-governmental and Non-Governmental Organizations)	Agreed to call intersessional W.G. meeting in USA, May 1998, Chairman, Mr. D. Swanson (USA); item 2.7
3. Election of Chairman and Vice-Chairman	Reelected A. Rodin, Russia, Chairman for next two years 1998-1999, and R. Dominguez, Cuba, Vice-Chairman for 1998-1999; item 2.9
4. UN Resolutions 51/35 and 51/36 December 1996 re the UN Agreement on straddling and highly migratory fish stocks; and on large-scale pelagic driftnet fishing	Endorsed; item 3.1
5. Report of STACFAC to the Meeting: -New diplomatic demarches to Belize, Honduras, Panama, Sierra Leone -Scheme to Promote Compliance by Non-CPs with NAFO Measures (GC Doc. 97/6)	Adopted; item 4.3 Agreed; item 4.2c) Adopted; item 4.2c)
6. Dispute Settlement Procedures (DSP) in NAFO Proceedings	Agreed to continue the DSP deliberations intersessionally in a Working Group, which shall meet in April 1998, Dartmouth, N.S., Canada; Chairman Mr. Stein Owe (Norway); item 4.11
7. Chartering the non-flag State vessels to fish national quota shares	Agreed to consider this issue in a W.G. to be called in Brussels, March 98; the Chairman H. Koster (EU). (Note: this W.G. will coincide with the STACTIC W.G. on quota allocation practices); item 4.14 Agreed that no charter arrangements shall be made by Contracting Parties until the accomplishment of the Working Group task and its endorsement by the General Council.
8. Report of STACFAD to the Meeting: - Auditors Report - Accumulated Surplus Account - Bulgaria's and Romania's collectible debt for 1997	Adopted; item 5 Adopted Agreed to maintain on the level not less than \$75,000 Cdn Agreed: \$31,469.43 Cdn to write-off from the Accumulated Surplus Account

9. Budget for 1997
- incl. special amount for satellite tracking

Adopted; \$1,077,00 Cdn
- \$35,000 Cdn

10. Annual NAFO Meetings, 1998-2000

Agreed on time and place of the Annual
Meetings; item 6.1 and Part II, item 12

PART II

Report of the Standing Committee on Finance and Administration (STACFAD)

Monday, September 15, 1997 (1500-1800 hours)
 Tuesday, September 16, 1997 (1600-1815 hours)
 Wednesday, September 17, 1997 (11:15-13:00 hours)
 Wednesday, September 17, 1997 (15:45-20:00 hours)
 Thursday, September 18, 1997 (09:30-12:45 hours)
 Thursday, September 18, 1997 (15:30-16:45 hours)

1. Opening

The Chairperson, J. Quintal-McGrath (Canada), opened the meeting and welcomed the participants (Annex 1). She stated that STACFAD delegates will be considering a number of consequential financial issues and will be seeking to maximize effectively the operations of NAFO while remaining fiscally responsible to each of their respective governments. It is her hope that this meeting of STACFAD would be constructive and result in responsible recommendations to the General Council.

2. Appointment of Rapporteur

F. Keating and S. Goodick of the NAFO Secretariat were appointed Rapporteurs.

3. Adoption of Agenda

The provisional agenda was adopted as circulated to the Contracting Parties (Annex 2).

4. Auditors' Report for 1996

The Auditors' Report was circulated to the STACFAD participants for their review and comments.

The Executive Secretary informed STACFAD participants that the Auditors' Report was circulated to the Heads of Delegation in early March 1997 and no comments had been received on the Report.

STACFAD recommends to the General Council that the 1996 Auditors' Report be adopted.

5. Meeting of the Pension Society

The Chairperson explained that the International Fisheries Commissions Pension Society (IFCPS) administers the pension plans and benefits of employees of seven fisheries commissions based in North America. The annual meeting was held in May 1997 in Victoria, BC.

The Executive Secretary proceeded to explain STACFAD Working Paper 97/3 summarizing the annual meeting, which was attended by the NAFO Secretariat staff F. Keating and S. Goodick. Several major items were presented including Administration and Future of the Pension Society, which follows up on the pending privatization of the Society's administrative affairs as of May 31,

1998. Ongoing efforts to finalize the administration details have been delayed as three US based commissions are considering withdrawing from the IFCPS. As a result of these intentions, a special meeting of the Pension Society has been called in Ottawa for 7-8 October 1997. Any additional costs, which may arise from the privatization, will not be known until after this special meeting.

The possible budget implications (whether short or long term) were of concern to the EU delegate who inquired as to when the costs will be applicable and should any provision be made for the 1998 budget year.

The US delegate stated that privatization will cost the IFCPS more money under whatever scenario is chosen, and that at least a portion of those costs will have to go into effect as of May 31, 1998, at which time the current administrative contract is set to expire. However, the Chairperson reminded delegates that funds were already appropriated for this purpose and the Executive Secretary informed delegates that these funds are part of a \$5,000 allowance in the Superannuation and Annuities budget for 1998.

6. Review of Cost Implications of the Hail and Satellite Tracking Systems in the Regulatory Area

STACFAD Working Paper 97/1 was distributed and reviewed by the Committee.

The Executive Secretary explained that the cost of transmitting hail reports has decreased by approximately \$4,000 after the 1996 recommendation to review the policy of transmitting hails by both fax and datapac. As a result of the application of this technology (computer/X.25 communication link), fax transmissions have been eliminated.

He also noted that the Satellite Tracking and Observer Pilot Project is still very experimental and that, even after several meetings of STACTIC, no recommendations have been presented to the Fisheries Commission regarding software, equipment or choices of a satellite system. The NAFO Secretariat has been experimenting with an X.25 connection and PAD package for the hail system for satellite communications between the Secretariat and Norway. To continue with these experiments, additional hardware/software in the range of \$3,000-\$3,500 Cdn would be required.

The representative from the EU stated it was his understanding that the associated costs would be in the range of \$5,000.

The representative for the Russian Federation requested clarification on the cost of hardware as it was noted that the Fisheries Commission has not made any recommendations towards specific satellite tracking technology, although the Secretariat has established transmissions with Norway on an experimental basis.

The Executive Secretary explained that the cost associated with this experimental communication is only a small part of what could be eventually used in the overall satellite tracking scheme. This communication is presently the most cost efficient approach, and Norway has offered their experience in this field. However, the total costs of the satellite tracking equipment at the NAFO Secretariat, estimated to be in the range of \$20,000 - \$25,000 Cdn by the STACTIC Working Group in 1995 (FC Doc. 95/24), may now more accurately be in the range of \$30,000 - \$40,000 Cdn.

7. Catch Statistics of Nominal Catches to Calculate Contribution Dues from Contracting Parties

The Executive Secretary presented STACFAD Working Paper 97/2. He noted that statistics of nominal catches, which are used to calculate contribution dues from Contracting Parties, are taken from the STATLANT 21A and 21B forms pursuant to the provisions of the NAFO Convention. He further noted that nominal catches with respect to co-operative fishing arrangements between Contracting Parties must be reported to the NAFO Secretariat for billing calculation purposes.

8. Administrative and Financial Statements for 1997 (July)

The Executive Secretary presented the Administrative Report and Financial Statements (NAFO GC Doc. 97/4). He reviewed the financial statements in detail and noted that there would be an estimated unliquidated balance of appropriations at year-end in the amount of \$14,500. In reviewing the balance sheet, it was noted that termination benefit funds have been segregated from the operating cash and deposited into a redeemable guaranteed investment certificate.

As a result of the 1996 request to review the termination benefit accounting policy, the Executive Secretary, upon advice from the NAFO auditors, confirmed that "generally accepted accounting principles" require that the termination benefit liability be fully funded. The Committee had a lengthy discussion reviewing the policy and calculation of the termination benefits.

The Chairperson informed the participants that payments have been received from Cuba (1996 contribution), Lithuania (\$2,500 partial payment) and Poland since the financial statements were prepared as of 31 July 1997. The representatives from Cuba and Lithuania stated that further payments would be forthcoming as soon as possible. The Chairperson requested that the Executive Secretary contact the representative from the Republic of Korea with reference to their outstanding contribution.

The Executive Secretary noted that attempts to contact Bulgaria and Romania by both the Chairman of the General Council and the NAFO Secretariat, with respect to outstanding contributions, have not been successful. As in prior years, the Committee deemed these contributions uncollectible and recommended that these amounts be applied against the accumulated surplus. This matter was further discussed in detail under agenda item 13, as requested by the General Council.

9. Review of the Accumulated Surplus Account

The Executive Secretary reviewed the accumulated surplus account and it was noted that the year-end balance is estimated to be \$230,366 provided that all outstanding member contributions (excluding Bulgaria/Romania) are received. As in past years, STACFAD recommends that \$75,000 be maintained as a minimum balance in this account.

The remaining estimated accumulated surplus balance (\$155,366) at the end of 1997 will be used to reduce contributions due from Contracting Parties.

10. Preliminary Budget Estimate for 1998

The Executive Secretary presented the preliminary budget estimate for 1998 (GC Working Paper 97/3 (Revised)) and noted the following:

- Salary levels included a 2% cost of living adjustment (COLA), although no COLA salary increases will be given until the Canadian Federal Government wage freeze is lifted.
- Publication levels have increased marginally by \$1,000 due to increased publication production. He was informed by the Scientific Council that a recommendation may be forthcoming to publish the Proceedings of the 1997 Symposium "What Future For Capture Fisheries", which may include hardcover and colour printing. The cost to produce this publication may be in the range of \$4,000-\$5,000.
- The Annual General Meeting account includes a budget estimate to hold the 20th Annual Meeting in Lisbon, Portugal.
- The total Preliminary Budget Estimate for 1998 is \$ 1,042,000.

The representative from the Russian Federation requested further clarification on the Salaries Account. The Chairperson noted that the Canadian Public Service Union is currently in negotiations with the Federal Government, and any COLAs approved will be applied to NAFO. The Budget for 1998 allows for a 2% increase, and if there are any retroactive pay adjustments, it will be an unbudgeted item and handled through the accumulated surplus.

Various discussions were held with regard to additional budgetary requirements for 1998.

The representative from the Russian Federation brought to the attention of STACFAD the potential of three or more inter-sessional meetings for 1998 as a result of issues being deferred from the General Council. His concern was of the potential cost implications of all of the inter-sessional meetings being held and if they should be reflected in the 1998 budget.

STACFAD recommends to the General Council, in order to control NAFO expenses, that NAFO Headquarters be considered as the venue for any possible meeting of working groups and standing committees.

STACFAD recommends that an additional \$5,000 be included in the 1998 budget to equip the Secretariat to receive satellite transmissions.

STACFAD also recommends to the General Council that the budget of \$1,047,000 be adopted (Annex 3).

NOTE: At the closing session of the General Council the decision was to increase the budget by \$30,000 Cdn (for the satellite tracking). The total budget was adopted - \$1,077,000 Cdn.

Preliminary calculations of the 1998 billing for Contracting Parties were reviewed by the Committee (Annex 4).

11. Preliminary Budget Forecast for 1999

STACFAD noted the preliminary budget forecast for 1999 would be reviewed in detail during the 20th Annual Meeting (Annex 5).

12. Time and Place of 2000 Annual Meeting

The location of the Annual Meeting for 1998 is scheduled for Lisbon, Portugal. The location of the Annual Meetings for 1999 and 2000 will be held in the Halifax Regional Municipality area if no invitations to host the Annual Meeting are extended by a Contracting Party and accepted by the Organization.

The dates of the next Annual Meetings are as follows:

1998	-	Scientific Council	-	09-18 September
	-	General Council	-	14-18 September
	-	Fisheries Commission	-	14-18 September
1999	-	Scientific Council	-	08-17 September
	-	General Council	-	13-17 September
	-	Fisheries Commission	-	13-17 September

and STACFAD recommends that the dates of the 2000 Annual Meeting be as follows:

2000	-	Scientific Council	-	13-22 September
	-	General Council	-	18-22 September
	-	Fisheries Commission	-	18-22 September

13. Other Issues

The following item was referred over from the General Council for the consideration and clarification of STACFAD.

Item 7 of the General Council Agenda, Amendment of the Rules of Procedure for the General Council

Following a discussion on the proposed change to the Rules of Procedure, STACFAD reported back to the General Council (GC Working Paper 97/8, Annex 6) on the closing session on Friday, September 19, 1997, and its findings and decisions were reviewed under item 7 of the General Council Proceedings.

14. Election of Chairperson and Vice-Chairperson

STACFAD elected F. Kingston, of the European Union, for the position of Chairperson and J. McGruder, of the United States, for the position of Vice-Chairperson.

15. Adjournment

The meeting adjourned on 18 September 1997 at 16:45 hours.

Annex 1. List of Participants

<u>Name</u>	<u>Contracting Party</u>
J. Quintal-McGrath	Canada
R. Rochon	Canada
R. Dominguez	Cuba
J. Lopez Piedra	Cuba
A. Luksepp	Estonia
H.-C. von Heydebrand	European Union
F. Kingston	European Union
A. Dodeman	France (in respect of St. Pierre et Miquelon)
A. Umezawa	Japan
A. Ukis	Latvia
A. Rusakevicius	Lithuania
R. Bogdevicius	Lithuania
D. E. Stai	Norway
J. Fota	Poland
L. Dybiec	Poland
V. Solodovnik	Russian Federation
J. McGruder	USA
L. I. Chepel	NAFO Secretariat
S. M. Goodick	NAFO Secretariat
F. D. Keating	NAFO Secretariat

Annex 2. Agenda

1. Opening by the Chairman, J. Quintal-McGrath (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Auditor's Report
5. Meeting of the Pension Society
6. Review of Cost Implications of the Hail and Satellite Tracking Systems in the Regulatory Area
7. Catch statistics of nominal catches to calculate contribution dues for Contracting Parties
8. Administrative and Financial Statements for 1997 (July)
9. Review of Accumulated Surplus Account
10. Preliminary Budget Estimate for 1998
11. Preliminary Budget Estimate for 1999
12. Time and Place of 2000(!) Annual Meeting
13. Other issues including questions from the General Council
14. Election of Chairperson and Vice-Chairperson
15. Adjournment

Annex 3. Preliminary Budget Estimate for 1998
(Canadian Dollars)

	Approved Budget for 1997	Expected Expenditures for 1997	Preliminary Budget Forecast for 1998	Preliminary Budget Estimate for 1998
1. Personal Services				
a) Salaries	\$ 614,500	\$ 602,500	\$ 626,500	\$ 620,000 ^a
b) Superannuation and Annuities	86,200	77,000	87,000	84,000
c) Additional Help	500	500	1,000	1,000
d) Group Medical and Insurance Plans	42,000	43,200	43,000	47,000 ^b
e) Termination Benefits	22,000	16,500	22,000	22,500 ^c
f) Accrued Vacation Pay	1,000	1,000	1,000	1,000
g) Termination Benefits Liability	10,000	10,000	10,000	10,000
2. Travel	11,300	11,400	20,000	26,000 ^d
3. Transportation	1,000	1,000	1,000	1,000
4. Communications	67,000	57,400	68,000	61,000
5. Publications	26,000	26,800	26,000	27,000
6. Other Contractual Service	38,000	36,000	40,000	34,000
7. Materials and Supplies	32,000	31,400	32,000	30,000
8. Equipment	5,000	5,000	5,000	5,000
9. Annual General Meeting and Scientific Council Meeting	35,000	57,300	35,000	57,500 ^e
10. Computer Services	15,000	15,000	15,000	20,000 ^f
	\$1,006,500	\$992,000	\$1,032,500	\$1,047,000

^a Collective Bargaining with the Canadian Government is in progress with respect to Cost of Living Adjustments (COLA's). The budgeted 1998 COLA's will again be withheld until an agreement is finalized.

^b Canada Pension Plan (CPP) contributions are scheduled to rise significantly over the next several years (11% increase in 1997) and also rising medical premiums account for the increase in this account.

^c This figure is for 1998 credits and conforms with NAFO Staff Rule 10.4(a).

^d Travel costs for 1998 includes the home leave to Russia for Executive Secretary and family; the Assistant Executive Secretary's attendance at the intersessional meeting of the CWP in mid-1998; two persons to meeting of Directors and Executive Secretaries of the seven International Commissions located in North America re discussion of pension scheme for employees, May 1998, La Jolla, CA, USA; and the Executive Secretary and Administrative Assistant to Lisbon Portugal for inspection and planning of the 20th Annual Meeting facilities, Spring 1998.

^e This figure includes the cost for Annual Meeting, September 1998, Lisbon, Portugal and the Scientific Council Meeting, June 1998, Halifax, NS, Canada.

^f This figure includes \$5,000 for the purchase of computer hardware/software for satellite tracking.

Annex 4. Preliminary Calculation of Billing for 1998

Preliminary calculation of billing for Contracting Parties against the proposed estimate of \$1,047,000 for the 1998 financial year (based on 17 Contracting Parties to NAFO).
(Canadian Dollars)

Budget Estimate	\$1,047,000.00
Deduct: Amount from Accumulated Surplus Account.....	<u>155,366.00</u>
Funds required to meet 1997 Administrative Budget.....	<u>\$ 891,634.00</u>

60% of funds required =	\$534,980.40
30% of funds required =	267,490.20
10% of funds required =	89,163.40

Contracting Parties	Nominal Catches for 1995	% of Total Catch in the Convention Area	% of Funds Required			Amount billed
			10%	30%	60%	
Bulgaria	-	-	-	\$15,734.72	-	\$ 15,734.72
Canada	347,293	50.81	\$50,036.72	15,734.72	\$271,823.54	337,594.98
Cuba	2,236	0.33	-	15,734.72	1,765.44	17,500.16
Denmark (Faroes and Greenland) ²	108,787	15.92	15,673.64	15,734.72	85,168.88	116,577.24
Estonia	3,242	0.47	-	15,734.72	2,514.41	18,249.13
European Union	23,228	3.40	-	15,734.72	18,189.33	33,924.05
France (St. Pierre et Miquelon)	60	0.01	8.64	15,734.72	53.50	15,796.86
Iceland	8,232	1.20	-	15,734.72	6,419.76	22,154.48
Japan	4,120	0.60	-	15,734.72	3,209.88	18,944.60
Republic of Korea	-	-	-	15,734.72	-	15,734.72
Latvia	983	0.14	-	15,734.72	748.97	16,483.69
Lithuania ³	900	0.13	-	15,734.72	695.47	16,430.19
Norway	12,013	1.77	-	15,734.72	9,469.15	25,203.87
Poland	-	-	-	15,734.71	-	15,734.71
Romania	-	-	-	15,734.71	-	15,734.71
Russian Federation	9,660	1.41	-	15,734.71	7,543.23	23,277.94
United States of America	162,722	23.81	23,444.40	15,743.71	127,378.84	166,557.95
	683,476	100.00	\$89,163.40	\$267,490.20	\$534,980.40	<u>\$891,634.00</u>
Funds required to meet 1 January - 31 December 1998 Administrative Budget						<u>\$891,634.00</u>

¹ Provisional Statistics used when calculating 1995 nominal catches due to outstanding reports from some Contracting Parties.

² Faroe Islands = 10,011 metric tons
Greenland = 98,776 metric tons

³ No statistics have been received and therefore provisional statistics are based upon their 1994 nominal catches.

Annex 5. Preliminary Budget Forecast for 1999
(Canadian Dollars)

1.	Personal Services	
	a) Salaries	\$ 632,000
	b) Superannuation and Annuities	65,000
	c) Additional Help	1,000
	d) Group Medical and Insurance Plans	48,000
	e) Termination Benefits	21,000 ^a
	f) Accrued Vacation Pay	1,000
	g) Termination Benefits Liability	10,000
2.	Travel	10,000 ^b
3.	Transportation	1,000
4.	Communications	62,000
5.	Publications	27,000
6.	Other Contractual Services	35,000
7.	Materials and Supplies	32,000
8.	Equipment	5,000
9.	Annual General Meeting and Scientific Council Meeting	37,000 ^c
10.	Computer Services	<u>15,000</u>
		<u>\$1,002,000</u>

^a This figure is for 1999 credits and conforms with NAFO Staff Rule 10.4(a).

^b This figure includes two persons to meeting of Directors and Executive Secretaries of the seven International Commissions located in North America re discussion of pension scheme for employees, May 1999; and the Assistant Executive Secretary's attendance at the 18th Session of CWP.

^c This figure includes the cost for Annual Meeting, September 1999 and the Scientific Council Meeting, June 1999, if held in the Halifax, N.S., Canada area.

**Annex 6. Report by STACFAD to the General Council Regarding
Item 7 of the General Council Agenda
(GC Working Paper 97/8)**

The General Council asked STACFAD to review the proposal for an Amendment to the Rules of Procedure of the General Council to deal with the issue of membership. It also asked STACFAD to consider the need for demarches to Bulgaria and Romania concerning their status in NAFO.

The proposed Amendment to the Rules of Procedure was as follows:

“New Rule 1.3: The General Council may decide on membership pursuant to the provisions of paragraph 9, Article XVI of the NAFO Convention and subject to Rule 3.2g of the Rules of Procedure for the General Council and Rule 4.7 of the Financial Regulations.

Amend Rule 3.2g to read: (underlined) To arrange for the appointment of the members of subsidiary bodies as required and to rule on the membership of Constituent bodies subject to the following provision: a Contracting Party which has not paid its contributions at least for five (5) consecutive years and has not participated in NAFO business during that period that Contracting Party shall cease to be a NAFO member on 31 December of the fifth year of the said period.”

In addressing the proposed Amendment, STACFAD discussed the standard practice under international law relating to expulsion of member states from international organizations. Expulsion clauses are uncommon. The NAFO Convention does not contain an expulsion clause. The sanction for non-payment by Contracting Parties is established by NAFO Article XVI.9, coupled with Rule 2.2 of the Rules of Procedure, which is the loss of voting rights and exclusion from the quorum. In the absence of an expressed constitutional power to expel, the general rule of international law is that a member cannot be expelled. STACFAD was of the view that the proposal to amend the Rules of Procedure would be unconstitutional in that it by-passes the amendment provisions of the Convention.

The option of amending the Convention was considered to be impractical by several delegates. Two other courses of action were considered to meet the objective of dealing with Bulgaria and Romania.

Recommendation 1:

That the General Council adopt the following Resolution:

Resolution Relating to the Non-participation of Bulgaria and Romania in NAFO.

The General Council

Recalling that the NAFO Convention provides that the object of the Organization shall be to contribute through consultation and co-operation to the optimum utilization, rational management and conservation of the fishery resources of the NAFO Convention Area;

Noting its concern about the long-standing non-participation of Bulgaria and Romania in NAFO, particularly the non-payment of their respective contributions;

Considering that such long-standing non-participation in NAFO and non-payment of their respective contributions disrupt the normal functioning of the Organization; and

Recalling that the Chairman of the General Council and the Executive Secretary have, on numerous occasions, written to Bulgaria and Romania expressing the Organization's concerns and asking for indications as to their intent concerning future participation in NAFO, with no response,

resolves that:

- 1) Each Contracting Party, and in particular the NAFO Convention depository state, shall communicate through the appropriate diplomatic channels with Bulgaria and Romania;
 - (a) to convey the concerns over their non-participation in NAFO and the non-payment of their contributions to NAFO; and
 - (b) to urge them either to meet their obligations under the Convention or to exercise their rights under Article XXIV thereof, the latter in effect resulting in the suspension of the debt accumulated from the non-payment of contributions.
- 2) Each Contracting Party shall report to the General Council, at its next annual meeting, on the results of its diplomatic communications effected pursuant to paragraph 1 above.

Recommendation 2:

That the General Council, pursuant to Articles III and XVI of the Convention, approve the following course of action for the 1999 and subsequent billing years:

The contributions due from each Contracting Party will be established in accordance with Article XVI.3, with requests for payment to be sent to Bulgaria and Romania accordingly. A separate calculation of contributions due will also be established based on the exclusion of Bulgaria and Romania, with consequent requests for payment to be sent to all remaining Contracting Parties. However, this procedure will be reviewed on an annual basis and could be changed based on the status of Bulgaria and/or Romania.

STACFAD considers that the practical effect of this action is that each Contracting Party's contribution under Article XVI.3(b) will be equally increased. The increased cost could be offset by the accumulated surplus.

PART III

Report of the Standing Committee on Fishing Activities of Non-Contracting Parties in the Regulatory Area (STACFAC)

1. Opening

The Meeting was called to order by the Chairman, J.-P. Plé (USA). He stated that he hoped the meeting would be productive and result in a recommendation to the General Council of a scheme dealing with Non-Contracting Party (NCP) fishing in the NAFO Regulatory Area (NRA).

The following Contracting Parties were present: Canada, Denmark (in respect of Faroe Islands and Greenland), Estonia, European Union, France (in respect of St. Pierre and Miquelon), Iceland, Japan, Norway, Poland, Russia and the USA (Annex 1).

2. Appointment of Rapporteur

P. Heller (EU) was appointed rapporteur.

3. Adoption of Agenda

The Agenda was adopted (Annex 2).

4. Review of 1997 information on activities of Non-Contracting Party vessels in the Regulatory Area

Canada presented a paper (STACFAC W.P. 97/7) on the activities of NCP vessels in the NRA from January 1 - August 31, 1997. It was stressed that the findings in the paper were preliminary. The paper indicated that four NCP vessels, all registered in Sierra Leone, were sighted in the period. Total catches were estimated at 1000 tons, of which 550 tons were cod, 400 tons were redfish and 50 tons were flounder. It was noted that there had been a decrease in the number of vessels from the same time in 1995, but that catches from these vessels still posed a significant threat to NAFO stocks.

Denmark asked whether the observed decrease in NCP presence is due to a real decrease in fishing activity or follows from reduced observation efforts. Canada stated that although the frequency of sightings may have declined, due in part to reduced need for surveillance given the diminished NCP presence in the NRA, the reliability of information collected by Canadian surveillance authorities has been maintained.

5. Review of 1997 information on landings and transshipments of fish caught by Non-Contracting Party vessels in the Regulatory Area

The EU presented a paper (STACFAC W.P. 97/11) on landings in Portuguese ports from Non-Contracting Party vessels during 1996 and 1997. The EU reported that in 1996, four vessels from Sierra Leone landed 812 tons, of which 643 tons were cod. The EU also reported that during the January-August 1997 period, two vessels from Sierra Leone, landed 570 tons, of which 440 tons were cod.

**6. Review of information on imports of species regulated by
NAFO from Non-Contracting Parties whose vessels
have fished in the Regulatory Area**

No new information was presented.

**7. Reports by Contracting Parties on diplomatic contacts with
Non-Contracting Party Governments concerning fishing
in the Regulatory Area**

In accordance with a General Council decision at the Eighteenth Annual Meeting, demarches, in the form of letters signed by the President of NAFO, were prepared to the flag-States of the Non-Contracting Party vessels which fished in the NAFO Regulatory Area in 1996, namely: Belize, Honduras, Panama and Sierra Leone. Subsequently, the USA was asked to deliver the letters, on behalf of NAFO, to the Governments of Belize and Sierra Leone; Canada was asked to do likewise to the Governments of Honduras and Panama. The USA and Canada reported that they have so far received no responses to these letters.

Japan proposed that a new letter, to be signed by the President of NAFO, should be sent to Sierra Leone. Other delegations suggested that letters reflecting that replies have not been received, should be sent to Honduras, Panama and Belize. The delegations endorsed these proposals.

**8. Finalization of the NAFO Scheme to deal with Non-Contracting
Parties fishing in the NAFO Regulatory Area**

STACFAC held an informal meeting on September 14, 1997, based on the STACFAC Report from the intersessional meeting in Brussels, May 15-16, 1997 (NAFO/GC Doc. 97/2).

During the course of the week, STACFAC conducted extensive discussions in order to finalize work on developing a scheme to deal with NCP fishing in the NRA. The Chairman presented several Working Papers based on these discussions and STACFAC agreed to submit to the General Council a proposed Scheme. The main elements of the proposed Scheme are presented below.

The proposed Scheme, *inter alia*:

- 1) targets NCP vessels;
- 2) presumes that a NCP vessel, which has been sighted engaging in fishing activities in the NRA, is undermining NAFO Conservation and Enforcement Measures;
- 3) provides that sightings of NCP vessels must be reported to the NAFO Secretariat, all NAFO Parties and the flag-State of the sighted NCP vessel;
- 4) provides that if a sighted NCP vessel enters a Contracting Party port, the vessel must be inspected and is not permitted to land or transship any fish until it has been inspected;
- 5) provides that NAFO Contracting Parties shall prohibit landings or transshipments of any fish, if the inspection shows that the vessel has species regulated by NAFO through moratoria, TACs or effort limitation, unless the vessel establishes that such fish were caught outside the NRA.

- 6) provides that NAFO Contracting Parties shall prohibit landings or transshipment of any fish, if the inspection shows that the vessel has certain other species, unless the vessel establishes that it has applied the NAFO Conservation and Enforcement Measures.
- 7) provides that reports on such port inspections shall be communicated to the NAFO Secretariat, other Contracting Parties and the flag-State;
- 8) contains an annual review clause.

A list of species referred to in point 6 above was first developed from a paper presented by Denmark (in respect of Faroe Islands and Greenland) (STACFAC W.P. 97/7, Revised), which showed estimates of catches of non-regulated fish (i.e. not subject to moratoria, TACs or effort limitation), which were fished in commercial quantities in the NRA in 1992 and 1996.

In order to clarify certain points regarding the species listed in STACFAC W.P. 97/7 (Revised), STACFAC accepted a Canadian proposal (GC W.P. 97/6) that the Chairman of STACFAC ask the Scientific Council, through the General Council, if it is possible to catch any non-regulated species in the NRA without by-catch of regulated species. If the answer to the question was affirmative, the Scientific Council was asked to identify such fisheries.

In its reply, the Scientific Council (GC W.P. 97/7) (Annex 3) expressed its opinion that in general, it would normally not be possible to conduct a directed fishing for non-regulated species in the NAFO Regulatory Area without a by-catch of some regulated species, although the size of such by-catches might vary depending on species, abundance, gear and season of the fishery. The Scientific Council also noted that it was not in a position to provide a more detailed reply.

STACFAC thereafter discussed which species should be included in the list of other species. Canada, with reference to the advice from the Scientific Council, had a preference for the prohibition of landings and transshipments of all species found in the NRA, with the possible exception of species regulated by other fisheries organizations. STACFAC decided to limit this other group of species to those referred to in point 6 above. Canada reserved its position on this issue (i.e. paragraph 10 (ii) of the proposed Scheme), but later reluctantly lifted its reservation.

The USA questioned the correctness of the 1992 figure for salmon in STACFAC W.P. 97/7 (Revised) and noted that figure did, however, seem to correspond with the USA estimate of salmon returns for that year. The USA indicated that it would continue to research the source of the 1992 figure.

Exec.Sec. Note: After the Annual Meeting the NAFO Secretariat received the USA confirmation that the salmon catch figure reported in STACFAC W.P. 97/7 represents aquacultural landings in Maine.

STACFAC also discussed whether the scheme should permit Contracting Parties to designate ports which are capable of inspecting NCP vessels. Following comments from various representatives, STACFAC agreed that this question was a matter for the internal implementation of the scheme by the Contracting Parties.

STACFAC reviewed the different configurations in which transshipments occur: various combinations involving Contracting Party and NCP vessels; transshipments inside or outside the NRA; transshipments in areas far from the NRA or in ports. All delegations agreed that

transshipments, although not now taking place in the NRA, might in the future create a problem, if not properly addressed in the proposed Scheme.

The delegations agreed that certain transshipments, whether inside or outside the NRA, would fall under the presumption that the NAFO Conservation and Enforcement Measures have been undermined, and those NCP vessels involved would be subject to an inspection upon entering a port of a Contracting Party.

Upon adoption by the General Council, the Scheme should be referred for review by the Fisheries Commission, with a view to incorporating it in the Conservation and Enforcement Measures, as appropriate.

The proposed Scheme, entitled "Scheme to Promote Compliance by Non-Contracting Party Vessels with the Conservation and Enforcement Measures Established by NAFO" is attached as Annex 4.

STACFAC recognizes that implementation of this Scheme might incur additional costs for the NAFO Secretariat, especially with respect to the acquisition of communication equipment for the purpose of the data flow required.

9. Report and Recommendations to the General Council

References were made to GC Doc. 97/1 and GC Doc. 97/2, namely, the reports from the intersessional STACFAC meetings of 4-7 February 1997 in Dartmouth, Canada, and of 15-16 May 1997 in Brussels, Belgium.

The STACFAC recommends to the General Council that:

1. a demarche, in the form of a letter signed by the President of NAFO, be made to the flag-State from which NCP vessels fished in the NRA in 1997, namely Sierra Leone, in an effort to discourage vessels from that country from fishing in the NRA (Annex 5);
2. demarches, in the form of letters signed by the President of NAFO, be made to the flag-States from which NCP vessels fished in the NRA in 1996, namely Belize, Honduras and Panama, in an effort to discourage vessels from these countries from resuming fishing in the NRA (Annexes 6, 7 and 8);
3. it adopt the Scheme attached as Annex 4;
4. STACFAC undertake the work referred to in paragraph 16 of the above-mentioned Scheme; and
5. the NAFO Secretariat should explore means whereby NAFO and the North-East Atlantic Fisheries Commission (NEAFC) can exchange information on the fishing/fish processing/transshipment activities of Non-Contracting Party vessels.

10. Other Matters

No other matters were discussed.

11. Adjournment

The formal session of STACFAC adjourned at 1200 hours, Thursday 18 September.

Annex 1. List of Participants

CANADA

Head of Delegation

A. Donohue, International Directorate, Dept. of Fisheries and Oceans, 200 Kent St., Ottawa, Ontario K1A 0E6

DENMARK (in respect of Faroe Islands and Greenland)

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Head of Delegation

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EUROPEAN UNION

Head of Delegation

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Head of Delegation

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RUSSIA

Head of Delegation

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UNITED STATES OF AMERICA

Head of Delegation

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Advisers

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Annex 2. Agenda

1. Opening by Chairman, J.-P. Plé (USA)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of 1997 information on activities of Non-Contracting Party vessels in the Regulatory Area
5. Review of 1997 information on landings and transshipments of fish caught by Non-Contracting Party vessels in the Regulatory Area
6. Review of information on imports of species regulated by NAFO from Non-Contracting Parties whose vessels have fished in the Regulatory Area
7. Reports by Contracting Parties on diplomatic contacts with Non-Contracting Party Governments concerning fishing in the Regulatory Area
8. Finalization of the NAFO Scheme to deal with Non-Contracting Parties fishing in the NAFO Regulatory Area
9. Report and Recommendations to the General Council
10. Other Matters
11. Adjournment

Annex 3. Scientific Council Response to the General Council

The Council was requested by the General Council to advise if it is "possible to catch any non-regulated species in the NAFO Regulatory Area without by-catch of regulated species? If the answer to this question is yes, the Scientific Council is asked to identify such fisheries.

To help guide the Scientific Council in this requests, the Committee notes that Annex 1 to the NAFO Convention and STACFAC Working Paper 97/7 indicates several species in the NAFO Regulatory Area which are not regulated.

Regulated species are considered here as those species managed by NAFO through moratoria, TACs or effort limitation".

With respect to the request, the Scientific Council advised that, in general, it would normally not be possible to conduct a directed fishery for non-regulated species in the NAFO Regulatory Area without a by-catch of some regulated species. The amount of by-catch will depend on species, abundance, gear and season of the fishery. The Scientific Council is not in a position to evaluate a more detailed reply.

Annex 4. Scheme to Promote Compliance by Non-Contracting Party Vessels with the Conservation and Enforcement Measures Established by NAFO

The General Council of the Northwest Atlantic Fisheries Organization (NAFO) resolves to adopt at its Nineteenth Annual Meeting a:

Scheme to Promote Compliance by Non-Contracting Party Vessels with the Conservation and Enforcement Measures Established by NAFO

In implementing this Scheme, the Contracting Parties acknowledge the rights, duties and obligations of States whose vessels fish on the high seas as expressed in the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, the 1982 United Nations Convention on the Law of the Sea, 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, the FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas and general principles of international law, particularly the duty to have due regard to established fisheries.

1. The purpose of the Scheme is to ensure the effectiveness of the Conservation and Enforcement Measures established by the organization.
2. The term "fishing activities" means fishing, fish processing operations, the transshipment of fish or fish products, and any other activity in preparation for or related to fishing in the NAFO Regulatory Area. The term "NAFO inspector" means an inspector of the fishery control services of the Contracting Parties assigned to the NAFO Scheme of Joint International Inspection and Surveillance.
3. Upon adoption of the Scheme, the NAFO Secretariat will give due publicity to the Scheme and to the NAFO Conservation and Enforcement Measures.
4. The measures contained in the Scheme are directed at Non-Contracting Party vessels engaged in fishing activities in the NAFO Regulatory Area.
5. A Non-Contracting Party vessel which has been sighted engaging in fishing activities in the NAFO Regulatory Area is presumed to be undermining the effectiveness of NAFO Conservation and Enforcement Measures. In the case of any transshipment activities involving a sighted Non-Contracting Party vessel, inside or outside the NAFO Regulatory Area, the presumption of undermining NAFO Conservation and Enforcement Measures applies to any other Non-Contracting Party vessel which has engaged in such activities with that vessel.
6. Information regarding such sightings shall be transmitted to the NAFO Secretariat. The NAFO Secretariat will then transmit this information to all NAFO Contracting Parties within one business day of receiving this information, and to the flag-State of the sighted vessel as soon as possible.
7. The NAFO Contracting Party which sighted the Non-Contracting Party vessel will attempt to inform such a vessel that it has been sighted engaging in fishing activities and is accordingly presumed to be undermining the NAFO Conservation and Enforcement Measures, and that this information will be distributed to all NAFO Contracting Parties and to the flag-State of the vessel.

8. In the event that any Non-Contracting Party vessel, which has been sighted and reported as engaged in fishing activities in the NAFO Regulatory Area, consents to be boarded by NAFO inspectors, the findings of the NAFO inspectors shall be transmitted to the NAFO Secretariat. The NAFO Secretariat will transmit this information to all NAFO Contracting Parties within one business day of receiving this information, and to the flag-State of the boarded vessel as soon as possible. The Non-Contracting Party vessel which is boarded shall be provided with a copy of the findings of the NAFO inspectors.

9. When a Non-Contracting Party vessel referred to in paragraph 5 enters a port of any NAFO Contracting Party, it shall be inspected by authorized Contracting Party officials knowledgeable in the NAFO Conservation and Enforcement Measures and this Scheme, and shall not land or transship any fish until this inspection has taken place. Such inspections shall include the vessel's documents, log books, fishing gear, catch on board and any other matter relating to the vessel's activities in the NAFO Regulatory Area.

10. Landings and transshipments of all fish from a Non-Contracting Party vessel, which has been inspected pursuant to paragraph 9, shall be prohibited in all Contracting Party ports, if such inspection reveals that the vessel has onboard:

(i). species listed in Annex A, unless the vessel establishes that the fish were caught outside the NAFO Regulatory Area; or

(ii). other species listed in Annex B, unless the vessel establishes that it has applied the NAFO Conservation and Enforcement Measures.

11. Contracting Parties shall ensure that their vessels do not receive transshipments of fish from a Non-Contracting Party vessel which has been sighted and reported as having engaged in fishing activities in the NAFO Regulatory Area.

12. Information on the results of all inspections of Non-Contracting Party vessels conducted in the ports of Contracting Parties, and any subsequent action, shall be transmitted immediately through the NAFO Secretariat to all Contracting Parties and as soon as possible to the relevant flag-State(s).

13. Each Contracting Party shall report to the Executive Secretary by 1 March each year for the previous calendar year:

(i). the number of inspections of Non-Contracting Party vessels it conducted under the Scheme in its ports, the names of the vessels inspected and their respective flag-State, the dates and ports where the inspection was conducted, and the results of such inspections; and

(ii). where fish are landed or transhipped following an inspection pursuant to the Scheme, the report shall also include the evidence presented pursuant to paragraph 10 (i) and (ii).

14. The Executive Secretary shall prepare a report by 1 April each year, for the previous calendar year, based on the periodic reports made by Contracting Parties as called for in this Scheme.

15. Nothing in this Scheme affects the exercise by NAFO Contracting Parties of their sovereignty over the ports in their territory in accordance with international law.

16. The Standing Committee on Fishing Activities of Non-Contracting Parties in the NAFO Regulatory Area (STACFAC) shall review annually the information compiled, actions taken under this scheme and the operation of the Scheme, and where necessary, recommend to the General Council new measures to enhance the observance of NAFO Conservation and Enforcement Measures by Non-Contracting Parties and new procedures to enhance the implementation of the Scheme by Contracting Parties.

Annex A

Common English Name

Scientific Name

- | | |
|--|---|
| 1. Atlantic cod | (<i>Gadus morhua</i>) |
| 2. Atlantic redfishes | (<i>Sebastes</i> sp.) |
| 3. American plaice | (<i>Hippoglossoides platessoides</i>) |
| 4. Yellowtail flounder | (<i>Limanda ferruginea</i>) |
| 5. Witch flounder | (<i>Glyptocephalus cynoglossus</i>) |
| 6. Capelin | (<i>Mallotus villosus</i>) |
| 7. Greenland halibut | (<i>Reinhardtius hippoglossoides</i>) |
| 8. Short-finned squid (<i>Illex</i>) | (<i>Illex illecebrosus</i>) |
| 9. Shrimps | (<i>Pandalus</i> sp.) |

Annex B

Common English Name	Scientific Name
1. Haddock	<i>(Melanogrammus aeglefinus)</i>
2. Silver hake	<i>(Merluccius bilinearis)</i>
3. Red hake	<i>(Urophycis chuss)</i>
4. Pollock	<i>(Pollachius virens)</i>
5. Roundnose grenadier	<i>(Macrourus rupestris)</i>
6. Atlantic herring	<i>(Clupea harengus)</i>
7. Atlantic mackerel	<i>(Scomber scombrus)</i>
8. Atlantic butterfish	<i>(Peprilus triacanthus)</i>
9. River herring (alewife)	<i>(Alosa pseudoharengus)</i>
10. Atlantic argentine	<i>(Argentina silus)</i>
11. Long-finned squid (<i>Loligo</i>)	<i>(Loligo pealei)</i>
12. Wolffishes (NS)	<i>(Anarhichas sp.)</i>
13. Skates (NS)	<i>(Raja sp.)</i>

Annex 5. Proposed letter to the Government of Sierra Leone

The Honourable
Secretary of State
Sierra Leone

Dear Mr. Minister:

Further to my letter of September 1996, I have been instructed by all members of the Northwest Atlantic Fisheries Organization (NAFO) present at its 19th Annual Meeting to raise again at the highest level their concern about the *continued fishing activity* by vessels flying your flag in the NAFO Regulatory Area.

The Contracting Parties are deeply concerned that Non-Contracting Parties permitting vessels flying their flags to fish in the NAFO Regulatory Area do not comply with their obligations to cooperate in conservation and management and that such vessels have continued to be present in the NAFO Regulatory Area fishing on resources which are at historically depleted and critical levels. The "High Sierra" and the "Porto Santo", registered in Sierra Leone, were again observed fishing in the area to the severe detriment of critical resources. In addition, the "Austral" and the "Santa Joana", also registered in Sierra Leone, were observed fishing in the area.

NAFO again urges the Government of Sierra Leone to withdraw its vessels forthwith and to take effective measures to prevent their return to the Regulatory Area. There is real urgency for the *immediate withdrawal* of these vessels given the critical state of many of the NAFO-managed fish stocks.

The Contracting Parties to NAFO have collectively and individually taken diplomatic initiatives to urge States which do not cooperate with NAFO to withdraw their vessels from the Regulatory Area. Several States have already complied.

The Contracting Parties to NAFO draw the attention of the Government of Sierra Leone to the FAO's Compliance Agreement, adopted at the November 1993 meeting of the FAO Council, and the Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, adopted at the August 1995 session of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks. These Agreements establish the general principles for the regulation of high seas fishing by flag-States and the conservation and management of straddling fish stocks and highly migratory fish stocks, and provide a suitable basis on which the Government of Sierra Leone could prevent its vessel from fishing in the NAFO Regulatory Area, undermining the conservation measures applied by NAFO Contracting Parties.

The Contracting Parties also draw attention of the Government of Sierra Leone to the Scheme to Promote Compliance by Non-Contracting Party Vessels with the Conservation and Enforcement Measures Established by NAFO, which was adopted by the Contracting Parties to NAFO at its 19th Annual Meeting, a copy of which is attached.

On behalf of the Contracting Parties to NAFO present at its 19th Annual Meeting: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, European Union, France (in respect of St. Pierre and Miquelon), Iceland, Japan, Republic of Korea, Latvia, Lithuania, Norway, Poland, the Russian Federation and the United States of America.

(DATE)

A. Rodin
President and
Chairman of General Council

Annex 6. Proposed letter to the Government of Belize

The Honourable
Minister of Foreign Affairs
Belize

Dear Mr. Minister:

I have been instructed by all members of the Northwest Atlantic Fisheries Organization (NAFO) present at its 19th Annual Meeting to express concern that they have not received a reply to my letter of September 1996, regarding fishing activity by vessels flying your flag in the NAFO Regulatory Area in previous years.

Although the NAFO Contracting Parties are encouraged that vessels registered in Belize have thus far not been observed fishing in the area during 1997, they request that you respond to my earlier letter and urge the Government of Belize to prevent the return of its vessels to the Regulatory Area.

On behalf of the Contracting Parties to NAFO present at its 19th Annual Meeting: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, European Union, France (in respect of St. Pierre and Miquelon), Iceland, Japan, Republic of Korea, Latvia, Lithuania, Norway, Poland, the Russian Federation and the United States of America.

(DATE)

A. Rodin
President and
Chairman of General Council

Annex 7. Proposed letter to the Government of Honduras

The Honourable
Minister of External Relations
Honduras

Dear Mr. Minister:

I have been instructed by all members of the Northwest Atlantic Fisheries Organization (NAFO) present at its 19th Annual Meeting to express concern that they have not received a reply to my letter of September 1996, regarding fishing activity by vessels flying your flag in the NAFO Regulatory Area in previous years.

Although the NAFO Contracting Parties are encouraged that vessels registered in Honduras have thus far not been observed fishing in the area during 1997, they request that you respond to my earlier letter and urge the Government of Honduras to prevent the return of its vessels to the Regulatory Area.

On behalf of the Contracting Parties to NAFO present at its 19th Annual Meeting: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, European Union, France (in respect of St. Pierre and Miquelon), Iceland, Japan, Republic of Korea, Latvia, Lithuania, Norway, Poland, the Russian Federation and the United States of America.

(DATE)

A. Rodin
President and
Chairman of General Council

Annex 8. Proposed letter to the Government of Panama

The Honourable
title
Panama

Dear Mr. Minister:

I have been instructed by all members of the Northwest Atlantic Fisheries Organization (NAFO) present at its 19th Annual Meeting to express concern that they have not received a reply to my letter of September 1996, regarding fishing activity by vessels *flying your flag* in the NAFO Regulatory Area in previous years.

Although the NAFO Contracting Parties are encouraged that vessels registered in Panama have thus far not been observed fishing in the area during 1997, they request that you respond to my earlier letter and urge the Government of Panama to prevent the return of its vessels to the Regulatory Area.

On behalf of the Contracting Parties to NAFO present at its 19th Annual Meeting: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, European Union, France (in respect of St. Pierre and Miquelon), Iceland, Japan, Republic of Korea, Latvia, Lithuania, Norway, Poland, the Russian Federation and the United States of America.

(DATE)

A. Rodin
President and
Chairman of General Council

SECTION VII

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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)

- 3.1 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

- 3.6 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 at-sea 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.

- 4.4 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.
- 4.8 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).

- 4.10 With respect to 2+3KLMNO Greenland halibut, the Representative of the USA requested 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 Miquelon) 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.
- 4.28 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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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. Management 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. Management 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

QUOTA TABLE. Total allowable catches (TACs) and quotas (metric tons) for 1998 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		Whitch		Capelin		Greenland halibut		Squid (Illex) ²	
	Div. 3M	Div. 3NO*	Div. 3M	Div. 3LN*	Div. 3M*	Div. 3LNO*	Div. 3LNO*	Div. 3LNO*	Div. 3NO*	Div. 3NO*	Div. 3LMO	Div. 3LMO	Subareas 3+4	Subareas 3+4		
1. Canada	16	0	650	0	0	0	3900 ³	0	0	0	3 000	0	N.S. ⁴	2 250		
2. Cuba	74	-	2 275	0	-	-	-	-	-	-	-	-	-	-		
3. Denmark (Faroe Islands and Greenland)	447	-	90	-	-	-	-	-	-	-	-	-	-	-		
4. European Union	997	0	4 030	0	0	0	80 ⁵	-	-	-	11 070	0	N.S. ⁴	-		
5. France (St. Pierre and Miquelon)	-	-	90	-	-	-	-	-	-	-	-	-	-	2 000		
6. Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
7. Japan	-	-	520	-	-	-	-	-	-	-	2 050	0	2 250	2 000		
8. Korea	-	-	90	-	-	-	-	-	-	-	-	-	-	-		
9. Norway	185	-	-	-	-	-	-	-	-	-	-	-	-	-		
10. Poland	77	-	-	-	-	-	-	-	-	-	-	-	-	1 000		
11. Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
12. Latvia	196 ¹	0	18 005 ¹	0	0	0	-	-	0	0	-	-	-	5 000 ¹		
13. Lithuania	-	-	90	-	-	-	-	-	-	-	-	-	-	2 000		
14. Russia	-	-	160	0	0	0	20 ⁶	0	0	0	1 330 ⁶	-	-	3 500		
15. United States of America	8	0	0	0	0	0	-	-	-	-	-	-	-	-		
16. Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total Allowable Catch	2 000	0	20 000 ⁷	0	0	0	4 000 ⁸	0	0	0	20 000	0	150 000 ⁹	150 000 ⁹		

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 1998 and no more than 80% (1064 t) may be fished before 1 October 1998.

⁷ 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 percent 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.

⁸ 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.

⁹ The provisions of Part I, Section A.4b) of NAFO Conservation and Enforcement Measures shall apply (FC Doc. 96/1).

* No directed fishing - The provisions of Part I, Section A.4b) of NAFO Conservation and Enforcement Measures shall apply.

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 $F_{0.1}$, F_{1997} 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 to 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 Illex 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 Illex fisheries in these regions and review the basis for considering Illex 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 biomass 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)
1. 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
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 to 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. 97/10	no directed fishery
- Cod 3M	2,000 tons
- Redfish 3M	20,000 tons; notification bi-weekly catches to the Executive Secretary
- American plaice 3M	no directed fishery
- Cod 3NO	no directed fishery
- Redfish 3LN	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
9. Schedule 1 – Quota Table, 1998; NAFO Conservation and Enforcement Measures
10. Greenland halibut quota increase
11. 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

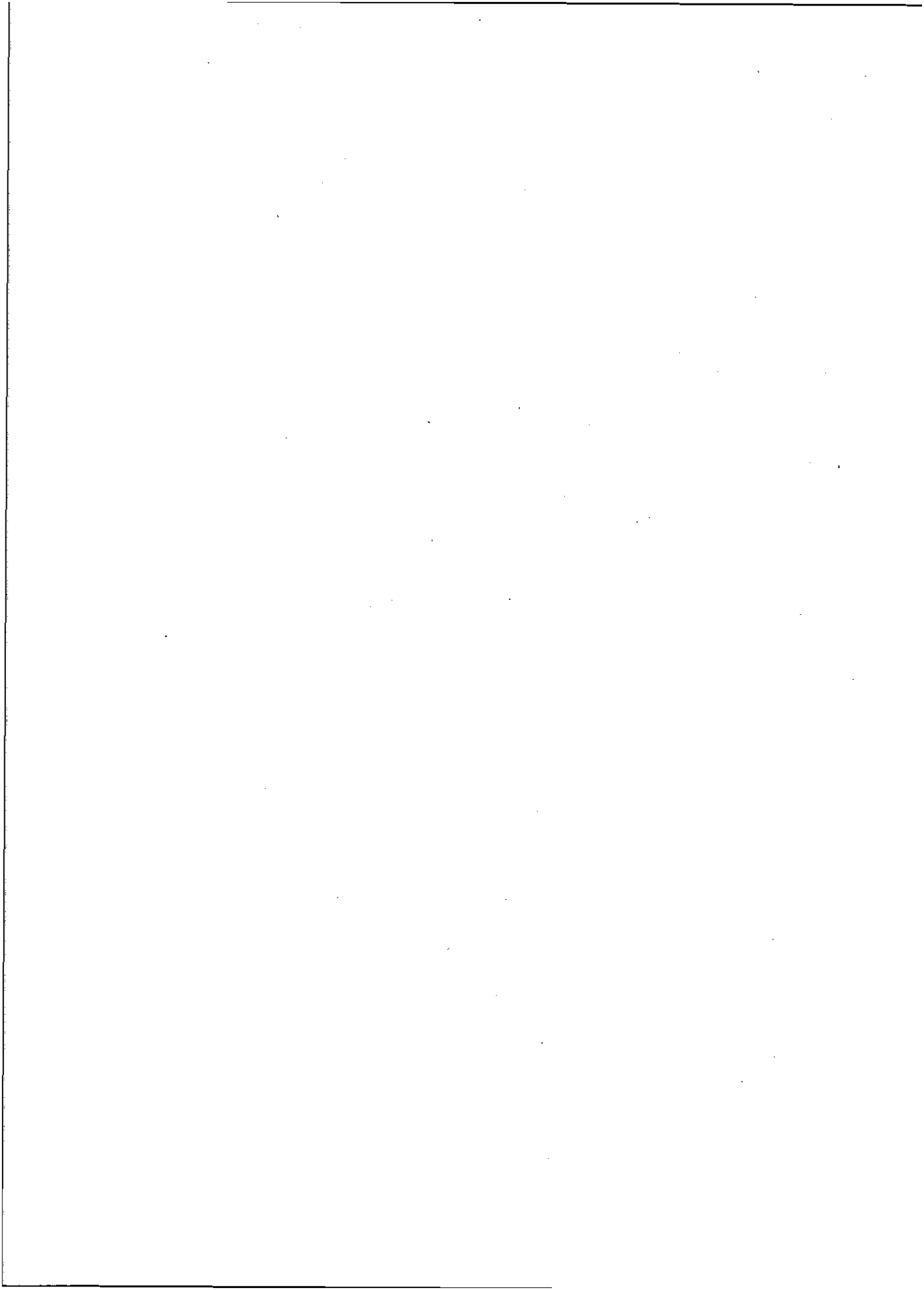
1. Opening by the Chairman, D. Bevan (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Annual Returns of Infringements
5. Review of Surveillance and Inspection Reports
6. Review of the Pilot Project for Observers and Satellite Tracking
7. Review of Operation of the Hail System
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
9. 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

SECTION VIII

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Report of the STACTIC Working Group on Satellite Tracking 28-30 October 1997 Dartmouth, N.S., Canada

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Report of the STACTIC Working Group on Satellite Tracking

(FC Doc. 97/15)

28-30 October 1997
NAFO Headquarters, Dartmouth, N.S., Canada

1. Opening of the Meeting

The Executive Secretary opened the Meeting and welcomed the Delegations from Canada, Estonia, European Union, Iceland, Japan, Norway, Russia and United States of America (Annex 1). He informed that the Chairman of the Working Group, D. Bevan (Canada), could not attend the Meeting and proposed to elect a Chairman.

The delegate from Canada nominated O. A. Davidsen, delegate from Norway for the Chair, and this nomination was **adopted** by the Working Group.

2. Appointment of Rapporteur

Tony Blanchard (Canada) was appointed Rapporteur.

3. Adoption of Agenda

The agenda was discussed and **adopted** with the change of moving item 6 to position 4 and items 4 and 5 ahead respectively (Annex 2).

4. Consideration of a hail system that can operate using satellite technology and establish the need for formats and data exchange protocols

It was **agreed** that the Working Group would evaluate the present hail system and outline a hail system that would fulfil the mandate and provide a sound basis for operations.

The Executive Secretary stated that there had been no changes to the hail system with respect to automation since the April meeting, and that no system was in place to receive satellite data at the NAFO Secretariat. The Executive Secretary also stated that in the future there may be many inspection vessels in the NRA, and there should be agreement on an automatic communication system to be used to communicate hails to Contracting Parties with an inspection presence. The Secretary added that there should be a connection between the hail system and satellite tracking as outlined in Part VI of the Conservation and Enforcement Measures.

It was **agreed** that the Conservation and Enforcement Measures are important to the discussions of the Working Group, and that the mandate for the group is outlined in FC Working Paper 97/17 (Annex 3).

The delegate from the European Union emphasized the technical nature of the Working Group and that it should discuss the satellite system in terms of the Pilot Project as outlined in Part VI of the NAFO Conservation and Enforcement Measures. It was also stated that the hail system is presently working fine and that the vessel monitoring system is different from the hail system and that the Working Group cannot move outside its' mandate. The Working Group can discuss infrastructure at the Secretariat but cannot provide alternatives to the present hail system.

The delegate from Canada stated that positional information is an addition to hails and that the satellite is the method of transmission. The delegate from Canada gave a presentation on a proposed automatic hail system using satellites in which a contracted service provider would

receive hails from Contracting Parties in all forms, convert them to a standard protocol and then forward to the Secretariat. After considerable debate it was agreed that this is the model that the Working Group would recommend to the Fisheries Commission. The delegate from the EU entered a reservation on this point.

It was noted that there are two systems;

- Hail system that uses satellites or not;
- Vessel Monitoring System

Under Agenda item 5, the Working Group considered a hail system that can use satellite technology, with a view to integrate both.

There was a discussion concerning the formats for messages. It was **agreed** that things should be kept simple and standard formats should be used when forwarding messages to the Executive Secretary.

To address the issue of possible needs for data exchange protocols (item 4 of the Agenda) the Working Group agreed that the best approach would be for the Working Group to try to map the current reporting requirements as per Part III of the conservation and Enforcement Measures into a possible standardized format. For this purpose, the Working Group took the North Atlantic Fisheries Ministers Conference (NAFMC) recommendations of May 1997 as their point of reference (GF/97-470 circulated to Contracting Parties on 22 September 1997).

The records so produced are attached to the Working Group report. The Working Group took note that the above mentioned record formats are reproduced in the Working Group report only to demonstrate what is possible by applying a format which may be suitable also for automatic processing by the Secretariat (Annex 4).

5. Consideration of hardware and software which should be installed at the NAFO Secretariat

The Working Group **agreed** that there is a need for a minimum network facility at the Secretariat to handle available data. The delegate from Canada noted that the maintenance of a network is not trivial and that there are options that don't require a lot of in house expertise or maintenance contracts. It was **agreed** that this system should be kept simple and not a large strain on the resources of the Secretariat.

There was discussion about the message transfer agent between Contracting Parties, the Secretariat, and Contracting Parties with an inspection vessel presence. It was **agreed** that there are a variety of options for message transfer, each with a different degree of security. When choosing the methods of communication, Contracting Parties should keep in mind the level of security required. Currently, the Secretariat sends and receives hails from the EU via X-25 and kermit, and sends hails to Canada via E-mail. The Working Group is confident that the automatic message handling is possible and can be achieved at the Secretariat.

The Working Group identified the X-25 protocol as one possible medium to transfer data between Contracting Parties and the Secretariat.

The delegate from Canada asked whether any Contracting Party would volunteer to send daily position reports to the Secretariat to test the system.

6. Consideration of a standardized format for satellite tracking reports at the Secretariat

It was noted that the meeting of the fisheries ministers in the Faroe Islands called for a standard format for reporting from sea.

The delegate from Iceland gave a presentation on a vessel tracking system currently being used in Iceland demonstrating the North Atlantic Format STACTIC W.G. W.P. 97/10 (Annex 5).

It was also **agreed** that the Working Group would look at the format being used by the EU for their operation of satellite monitoring systems. It was agreed that the Working Group would look at the format presented by Iceland with a view to look at the data items that are relevant to satellite tracking and propose standard message formats. A subgroup was formed to develop standard report formats as reported in STACTIC W.G. W.P. 97/11 (Annex 6), and the delegate from the EU stated that this file format could be used as the standard for the remainder of the pilot project. Such a format offers flexibility for additional data elements to be represented also.

Using conventional Vessel Monitoring Systems (VMS), NAFO divisions can only easily be reported as the division into which the vessel has moved after the event. Bringing this to the attention of the Fisheries Commission, the Working Group took note that the Fisheries Commission may want to consider identifying the VMS position reports by other names than "MOVE", etc. for a possible permanent NAFO VMS.

The delegate from Russia made a presentation on a satellite tracking system being used by Russia in various places around the world. The system collects a variety of information for use by enforcement and science. There is a standard report format. The system is piloting the use of "black box" technology along with electronic logs (STACTIC W.G. W.P. 97/13).

It was **agreed** that there may be no opportunity for the Working Group to discuss black box technology under the terms of the meeting.

There was some discussion as to the need of return messages for hails sent to the Secretariat. It was **agreed** that there should be an option of error messages including; message unreadable, inconsistent data, and sequence error.

7. Review of appropriateness of the available data bases with respect to vessel positions and hails with a view to improving the data base and its appropriate distribution

The Executive Secretary stated that there is no guidance from the Conservation and Enforcement Measures for data management other than the requirement for the distribution of hails to Contracting Parties with an inspection vessel. All hail data are kept in a data base (ACCESS) at the Secretariat.

The Working Group was satisfied with the present approach of the relational data base by the Secretariat. However, the working group encourages the Secretariat to look into the matter of having a consultant establish interfaces with a Spread Sheet such as Excel, in the event of future information requirements from the Secretariat. It should also be noted that the Secretariat does not have authority from any specific regulation or provision to make analysis of any data.

The Working Group **recommended** that the issue of data bases and data distribution should be reviewed in light of the consultants recommendations.

8. Costs associated with the implementation of satellite tracking/hails by the NAFO Secretariat

The Working Group noted that funds totalling \$35,000 Cdn were allocated for the purposes of satellite tracking technology. The Working Group felt that the budget allocated to the task is adequate for the 1998 period, although there may be some limits. The working group also noted that although the allocated funds are sufficient for 1998, it should be recognized that a permanent budget allotment will be required if a permanent system is adopted.

In view of the limited funding, and the temporary nature of the pilot project, the working group recommended that where practical, the Secretariat lease rather than purchase equipment.

9. Recommendations to the Fisheries Commission and General Council (finance)

Standard satellite tracking reports **should be utilized** during the 1998 trial period and reports to be based on STACTIC W.P. 97/11 (Annex 6). It was the view of the majority of the working group that a contracted outside service provider would be the best option to handle the communication aspect (between Contracting Parties and Secretariat) of the satellite tracking pilot project. It was noted that the possibility exists that a contracted service provider to handle the communication aspect can be located wherever found appropriate. The data received at the Secretariat will be processed and distributed by the Secretariat.

It was **recommended** that Hail messages sent from Contracting Parties to the NAFO Secretariat conform with the attached annex (Annex 4) entitled "Example of Formats Which Would Allow for the Electronic Transmission of NAFO Hails from Contracting Parties to the NAFO Secretariat.

Canada has agreed to assist the Secretariat with any informatics problem and there was a general consensus that the Secretariat could call upon any Contracting Party with relevant experience for assistance.

It was noted by the Executive Secretary, that, given the NAFO procedures with regard to the approval and adoption of reports and pursuant to the provision of NAFO Convention, as per article XI and XII of the NAFO Convention, the Secretariat won't be in a position to officially implement any system before February 1998, however, all required research could be done during this time.

10. Other business

A presentation was made by a Canadian information technology firm "Satlantic" on vessel detection with synthetic aperture radar.

11. Adjournment

The meeting was adjourned at 1630 hrs on 30 October 1997.

Adoption of the Report

The Report has been adopted by the Fisheries Commission through a standard procedure of one (1) month of review, during 31 October-30 November 1997 (GF/97-541, 31 Oct 97).

Annex 1. List of Participants

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SECRETARIAT

L. I. Chepel, Executive Secretary

T. Amaratunga, Assistant Executive Secretary

G. Moulton, Statistical Officer

B. Cruikshank, Senior Secretary

Annex 2. Agenda

1. Opening of the Meeting by the Chairman, O. A. Davidsen (Norway)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Consideration of a hail system that can operate using satellite technology and establish the need for formats and data exchange protocols
5. Consideration of hardware and software which should be installed at the NAFO Secretariat
6. Consideration of standardized format for satellite tracking reports at the NAFO Secretariat
7. Review of the appropriateness of the available data bases with respect to vessel positions and hails with a view to improving the data base and its appropriate distribution
8. Costs associated with implementation of satellite tracking/hails by the NAFO Secretariat
9. Recommendations to the Fisheries Commission and General Council (finance)
10. Other business
11. Adjournment

Annex 3. Mandate of Working Group
(FC Working Paper 97/17-from 19th Annual Meeting)

STACTIC Working Group

Intersessional Meeting of Technical Experts

An intersessional meeting of technical experts will be held at a time and place to be established by the Executive Secretary to deal with the following:

- Improve the satellite tracking system introduced under the 1995 pilot project. This will include taking steps, as needed, to develop formats and data exchange protocols, and propose changes to the equipment at the NAFO Secretariat so that real time data on vessel positions can be received by the Secretariat and be forwarded to those Contracting Parties operating inspection vessels in the NAFO Regulatory Area.
- Develop a hail system that can operate using satellite technology and establish the needed formats and data exchange protocols. Propose changes to the equipment of the NAFO Secretariat needed to implement the system.
- 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.

**Annex 4. Example of Formats Which Would Allow for the Electronic
Transmission of NAFO Hails from Contracting Parties
to the NAFO Secretariat**

NOTES

- a) The formats herein conform with the requirements for the NAFO Hails System as set out in FC Document 97/1 Part III Annex I Hail System Message Format.
- b) The formats consist of variable length delimited records, and are based on systems currently in use in the EU, Iceland and Norway.
- c) The variable length record is preferred over a fixed length record as some Contracting Parties collect more information from their vessels than is required by NAFO, and are forwarding the entire record to NAFO. The format is conducive to extraction of the required data fields by the receiving parties.
- d) The following convention is used in this paper: //FIELD NAME/field value//, where the field name is shown in uppercase, followed by the character "/", followed by the field value in lowercase. Fields are separated by "//".
- e) Each record begins with the string //SR// to indicate the Start of the Record.
- f) Each record ends with the string //ER// to indicate the End of the Record.
- g) Character fields (CHAR) shall conform with the ISO 8859.1 character set standard.
- h) Country codes used for addressee (AD) and sender (FR) shall conform with the ISO 3166 (1993) standard. E/F 7.3 states that user-assigned country codes shall start with the character "X", therefore it is proposed that the code XNS be used to designate the NAFO Secretariat, the addressee for hail messages.

NAFO HAILS SYSTEM - NAFO FC Document 97/1 Part III Annex I Hail System Message Format

1.1 ENTRY HAIL

//SR			Start Record
//FR/from	(ISO-3)		
//AD/addressee	XNS		
//SQ/sequence number	NUM(4)		
//NA/name of vessel	CHAR(40)		
//RC/call sign	CHAR(8)		
//XR/external identification letters and numbers	CHAR(14)		
//DA/date	CHAR(8)		YYYYMMDD
//TI/time	NUM(4)		HHMM UTC
//LA/latitude	CHAR(5)		NDDMM
//LO/longitude	CHAR(6)		WDDDMM
//TM/indication of the message code	CHAR(3)		ENT
//DI/NAFO Division into which the vessel is about to enter.	CHAR(2)		
<i>//HO/total round weight of fish by species (3 alpha codes) on board in kilograms rounded to the nearest 100 kilograms. Allow several pairs of fields, consisting of species + weight, with each field separated by a space. e.g. //HO/species weight species weight species weight//</i>			
	SPECIES	CHAR(3)	FAO Codes
	WEIGHT	NUM(7)	
//MA/name of the Master		CHAR(30)	
//DS/directed species (target species)		CHAR(3)	FAO Codes
<i>Allow several species to be entered, with the values separated by spaces, e.g. //DS/species species species//</i>			
//ER//	-		End Record

NAFO HAILS SYSTEM - NAFO FC Document 97/1 Part III Annex I Hail System Message Format

1.2 MOVE HAIL

NOTE that FC Document 96/1 Part III states that vessels equipped with devices which enable the automatic transmission of their positions are exempt from the Hail requirements set out in Part III.

//SR	-	Start Record
//FR/from	(ISO-3)	
//AD/addressee	XNS	
//SQ/sequence number	NUM(4)	
//NA/name of vessel	CHAR(40)	
//RC/call sign	CHAR(8)	
//XR/external identification letters and numbers	CHAR(14)	
//DA/date	CHAR(8)	YYYYMMDD
//TI/time	NUM(4)	HHMM UTC
//LA/latitude	CHAR(5)	NDDMM
//LO/longitude	CHAR(6)	WDDDMM
//TM/indication of the message code	CHAR(3)	MOV
//DI/NAFO Division into which the vessel is about to enter.	CHAR(2)	
//MA/name of the Master	CHAR(30)	
//DS/directed species (target species)	CHAR(3)	FAO Codes
Allow several fields to be entered, with the fields separated by spaces, e.g. //DS/species species species//		
//ER//	-	End Record

NAFO HAILS SYSTEM - NAFO FC Document 97/1 Part III Annex I Hail System Message Format

1.3 TRANSZONAL HAIL (between NAFO Divisions)

NOTE that FC Document 96/1 Part III states that vessels equipped with devices which enable the automatic transmission of their positions are exempt from the Hail requirements set out in Part III.

//SR	-	Start Record
//FR/from	(ISO-3)	
//AD/addressee	XNS	
//SQ/sequence number	NUM(4)	
//NA/name of vessel	CHAR(40)	
//RC/call sign	CHAR(8)	
//XR/external identification letters and numbers	CHAR(14)	
//DA/date	CHAR(8)	YYYYMMDD
//TI/time	NUM(4)	HHMM UTC
//LA/latitude	CHAR(5)	NDDMM
//LO/longitude	CHAR(6)	WDDDMM
//TM/indication of the message code	CHAR(3)	ZON
//MA/name of the Master	CHAR(30)	
//DS/directed species (target species)	CHAR(3)	FAO Codes
Allow several fields to be entered, with the fields separated by spaces, e.g. //DS/species species species//		
//ER//	-	End Record

NAFO HAILS SYSTEM . - NAFO FC Document 97/1 Part III Annex I Hail System Message Format

1.4 EXIT HAIL

//SR	-	Start Record
//FR/from	(ISO-3)	
//AD/addressee	XNS	
//SQ/sequence number	NUM(4)	
//NA/name of vessel	CHAR(40)	
//RC/call sign	CHAR(8)	
//XR/external identification letters and numbers	CHAR(14)	
//DA/date	CHAR(8)	YYYYMMDD
//TI/time	NUM(4)	HHMM UTC
//LA/latitude	CHAR(5)	NDDMM
//LO/longitude	CHAR(6)	WDDMM
//TM/indication of the message code	CHAR(3)	EXI
//DI/NAFO Division from which the vessel is about to leave.	CHAR(2)	
//CA/catch in round weight taken in the Regulatory Area by species (3 alpha codes) in kilograms (rounded to the nearest 100 kilograms). Allow several pairs of fields, consisting of species + weight, with each field separated by a space. e.g. //CA/species weight species weight species weight//		
	SPECIES	CHAR(3)
	WEIGHT	NUM(7)
		FAO Codes
//MA/name of the Master	CHAR(30)	
//ER//	-	End Record

NAFO HAILS SYSTEM - NAFO FC Document 97/1 Part III Annex I Hail System Message Format

1.5 TRANSHIPMENT HAIL

//SR	-	Start Record
//FR/from	(ISO-3)	
//AD/addressee	XNS	
//SQ/sequence number	NUM(4)	
//NA/name of vessel	CHAR(40)	
//RC/call sign	CHAR(8)	
//XR/external identification letters and numbers	CHAR(14)	
//DA/date	CHAR(8)	YYYYMMDD
//TI/time	NUM(4)	HHMM UTC
//LA/latitude	CHAR(5)	NDDMM
//LO/longitude	CHAR(6)	WDDMM
//TM/indication of the message code	CHAR(3)	TRA
//KG/total round weight by species (3 alpha codes) to be transhipped in kilograms (rounded to the nearest 100 kilograms) Allow several pairs of fields, consisting of species + weight, with each field separated by a space. e.g. //KG/species weight species weight species weight//		
	SPECIES	CHAR(3)
	WEIGHT	NUM(7)
		FAO Codes
//MA/name of the Master	CHAR(30)	
//ER//	-	End Record

Annex 5. Presentation by Delegate of Iceland re North Atlantic Format

The North Atlantic Format

Field name	Field code	Type	Contents	Remarks	Mand/Opt
Start record	SR			Indicates start of the record	
From	FR	Char*5	ISO-3/NAFO/NEAFC	Address of the transmitting state	M
Address	AD	Char*5	ISO-3/NAFO/NEAFC	Address of the receiving state	M
Trip N°	TN	Num*3	001 - 999	Number of the fishing trip in current year	M
Sequence N°	SQ	Num*3	001 - 999	Serial number of the message in current year	M
Int. fleet N°	IR	Char*12	EU	Internal fleet registration number	O
Ext. fleet N°	XR	Char*12	Side number	External fleet registration number	O
Radio call sign	RC	Char*8	ITU code	The radio call sign of the vessel	M
Vessel Name	NA	Char*30	ISO 8859.1	Name of the vessel	O
Flag state	FS	Char*3	ISO-3	Code for the vessels flag state	O
Date	TI	Num*6	HHMMSS (UTC)	eg. //TI//23500 = 12:35 UTC	M
Time	DA	Num*6	YYMMDD	eg. //DA//101222 = 22. January 1997	M
Reporting area	RA	Char*6	ICES/NAFO codes	Code for the fishing area	M
Type of message	TM	Char*4	Codes	See note 1	M
Activity	AC	Char*3	Codes	See note 2	M
Lat	LA	Snum*8	±99.9999 (WGS-84)	eg. //LA//62.3544 = 62°35'44N	M
Long	LO	Snum*9	±999.9999 (WGS-84)	eg. //LO//021.3455 = 021°34'55W	M
Speed	SP	Num*3	Knots * 10	eg. //SP//105 = 10.5 knots	O
Course	CO	Num*3	360° scale	000 - 359 eg. //CO//270 = 270°	O
Catch items	CA	Char*3/Num*7	FAO Codes, 10 pairs	eg. //CA//COD 5000 HAD 3000 = 5 tons Cod and 3 tons Haddock	O
Items in Hold	HO	Char*3/Num*7	FAO Codes, 10 pairs	Total items in hold	O
Other Items	KG	Char*3/Num*7	FAO Codes, 10 pairs	Can be used for information on items temporarily stored on board	O
Count Groups	CG	Char*3/Num*7	FAO Codes, 10 pairs	Used for detailed information regarding the catch	O
Agreement	AG	Char*4		Used for reference to special fishing or licensing agreements	O
Control Point	CP	Char*10	ISO 8859.1		O
Forward To	FT	Char*5	ISO-3/NAFO/NEAFC	Address of the secondary receiving party	O
Transfer To	TT	Char*8	ITU code	Radio call sign of the receiving vessel	O
Transfer From	TF	Char*8	ITU code	Radio call sign of the vessel loaded from	O
Port Name	PO	Char*20	ISO 8859.1	Name of the port	O
Master Name	MA	Char*30	ISO 8859.1	Name of the vessels master	O
National Zone	NZ	Char*3	ISO-3	Code for the National Zone	O
Platform Number	PL	Num*9			O
Position Quality	PQ	Char*1	ARGOS code	Code as received from ARGOS LES	O
Authenticity Code	AU	Hex*8	Hexadecimal	Comparison code for the message	O
Return Status	RS	Char*3	Codes	Used to indicate "ACK" / "NACK" (Acknowledgement / Not Acknowledgement)	O
Return Error Number	RE	Num*3	Lookup Table	Codes indicating errors as received at operation centre	O
Text String	MS	Char*32	ISO 8859.1	Text	O
Days Fished	DF	Num*5			O
Global Area Grid N°	GG	Num*2	FAO Glob Area Grid		O
Gear	GE	Char*3	FAO Code	Name of the vessel owner	O
Vessel Owner	VO	Char*60	ISO 8859.1	Total length of the vessel in meters	O
Vessel Length	VL	Num*3	Overall length meters		O
Vessel Gross Tonnage	VT	Num*4	GT 1989 Convention		O
Zone Name	ZN	Char*6	ICES/NAFO codes	Name of Zone or Area if type of message is "MOVE"	O
Items Transferred	IT	Char*3/Num*7	FAO Codes, 10 pairs	Items transferred between ships	O
End record	ER			Indicates end of the record	M
Trailer start	TS	Max. 80		Space for extra information	O
Trailer end	TE			Indicates end of the trailer	M if TS used

ICES/NAFO COAST GUARD

Prepared by LCDR Gylfi Geirsson 29.03.1997

Icelandic Coast Guard

Messages received from the Icelandic trawler "Vestmannaey" TFLC in the "North Atlantic Format", automatically generated from a software onboard the vessel, with a full automatic transmitting process via BoaTrack.

Initialiasion message, 4th September 1997:

//SR//AD/ICE//RC/TFLC//FS/ICE//XR/1273//NA/VESTMANNAEY//VL/60//VT/923
 //VO/Bergur Huginn ehf. Vestmannaeyjar//TN/5//SQ/79//TI/234307//DA/970904
 //RA/Va//TM/INIT//LA/63.1222//LO/-021.2794//SP/107//CO/090//AC/STM
 //AU/ISLX//MA/Birgir Þór Sverrisson//ER//

Catch Report 5th September 1997:

//SR//AD/ICE//RC/TFLC//TN/5//SQ/80//TI/150559//DA/970905//RA/Va//TM/CATC
 //LA/??/??//LO/-??/??//SP/032//CO/270//AC/FIS//CA/DSR 4000//ER//

8th September 1997

Type of Message is: CATCH

Vessel: Vestmannaey
 Reg: 1273
 Owner: Bergur Huginn ehf
 Master: Birgir Þór Sveinsson

Adr: ICE
 Iceland

Area: Va
 Iceland grounds

Optional text string:

Position: 66 22 27 N 22 22 37 W
 Date: 05/09/1997 150559

Speed: 3.2
 Course: 270

Call sign: TIFLC
 GRT: 923

Flag: ICE
 Length: 60

Activity: Fishing
 Nat. Zone:
 Agreement:
 Days Fished:

*** REGISTRATION OF CATCH ***

Press "F2" to Send

Item 1:	DSR	4.000	Deep-sea red
Item 3:			
Item 5:			
Item 7:			
Item 9:			

Item 2:			
Item 4:			
Item 6:			
Item 8:			
Item 10:			

Annex 6. Standardized File Format for Satellite Tracking Reports at the NAFO Secretariat

Definition of mandatory data elements

Data Element	Field Code	Maximum Width	Mandatory/Optional	Definition/Remarks
Start of Record	SR		M	
From	FR	3	M	Alpha-3 ISO country code
Address	AD	4	M	XNS
Sequence Number	SQ	4	M	
Name	NA	40	M	Vessel detail
International radio call sign	RC	8	M	Vessel detail
External identification	XR	14	M	Vessel detail
Flag State	FS	3	M	Alpha-3 ISO country code
Date	DA	8	M	YYYYMMDD
Time	TI	4	M	HHMM
Latitude	LA	5	M	NDMM
Longitude	LO	6	M	WDDMM
Type of Message	TM	3	M	ENT/EXI/MOV
NAFO Division*	DJ	2	M	NAFO division in which the vessel has entered
End Record	ER		M	

*to be left blank if the report is an "exit"

Definition of optional data elements

Data Element	Field Code	Maximum Width	Mandatory/Optional	Definition/Remarks
Name of the Master	MA	30	O	
Target Species	DS	3	O	FAO codes; allowance for multiple main species

Note: Character set: ISO 8859.1. A data transmission is structured in the following manner: - a double slash ("/") and a field code indicate the start of a data element; - a slash ("/") separates the field code and the data. Optional data elements have to be inserted between "Start of record" and "End of record".

Example of messages based on the standardized file format

```

//SR//FRJNR//AD//XNS//SQ345//RC//FLN//XR/V1-5943//NA/VESSEL NAME//
FS/RUS//DA/YYYYMMDD//TI/0400//TM/MOV//DI/3M//LA/N472//LO/NV04640//ER//
Optional elements: //NA/MASTERS NAME//DS//DIRECTED SPECIES//

```

NAFO Regulations: PART III.E. AND VI.B. OF THE CONSERVATION AND ENFORCEMENT MEASURES APPLIES