

### **SECTION III**

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#### **Report of the Standing Committee on International Control (STACTIC) May 6-9, 2002 Copenhagen, Denmark**

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**Report of the Standing Committee on  
International Control (STACTIC)**  
(FC Doc. 02/11)

**Copenhagen, Denmark  
May 6-9, 2002**

**1. Opening of the Meeting**

The Chairman, Mr. David Bevan (Canada), opened the meeting at 10:00 on May 6, 2002. Representatives from the following Contracting Parties were present: Canada, Denmark (in respect of Faroe Islands and Greenland), Estonia, the European Union, Iceland, Japan, Lithuania, Norway, Russian Federation, and the United States (Annex 1).

**2. Appointment of Rapporteur**

Mr. Paul Steele (Canada) was appointed rapporteur.

**3. Adoption of the Agenda**

The proposed agenda was adopted with one amendment (see Annex 2).

**4. Review of the NAFO Observer/VMS Scheme**

**Review of the Observer/VMS Scheme**

The Secretariat introduced STACTIC Working Paper 02/4, which included a summary of observer reports received from Contracting Parties and the format/contents of those reports.

Several Contracting Parties noted that Annex 2 of the working paper indicated that for many fishing trips, observer reports had not been submitted to the Secretariat.

It was agreed that the first step of the review process should be for each Contracting Party to clearly describe their current observer and VMS programs. Two questionnaires were developed to guide this information gathering process. The information from the completed questionnaires is summarized in STACTIC Working Papers 02/16 and 02/17 (Annexes 3 and 4).

The Chairman requested Contracting Parties to provide answers to the Secretariat by June 15, 2002 to the questions contained in WP 02/18 and requested that the Secretariat forward those questions to Contracting Parties not present so that they too might respond by the established deadline. The intention is to compile the information needed for the review prior to the Annual Meeting, September 2002.

It was agreed that the NAFO Secretariat should be asked to compile the information provided in the questionnaires, including the additional information to be provided by Contracting Parties not attending this meeting. The Secretariat should then use this and other available information to develop summary tables and graphs regarding surveillance activities, costs and results. The format would be similar to the document prepared by STACTIC in 1998 as part of the evaluation of the observer and satellite tracking program (FC Doc. 98/13). A working paper describing the review framework is attached (Annex 5). The Secretariat will take steps, with the Contracting Parties, to implement the agreed-upon framework.

### **Evaluation of Options to Modify the Observer/VMS Scheme**

The representative from Iceland made a presentation regarding an alternative observer program. The alternative program proposed by Iceland is based on 20% observer coverage, daily electronic transmission of observer reports and catch reports, transmission of VMS messages every two hours and timely comparison of results from observed and unobserved vessels.

The representative from Canada questioned the scope of the proposed pilot project, i.e. would it apply to an entire fishery or to a small group of vessels within a fishery? He noted the need for clear evaluation criteria for such a project and questioned whether there would be a requirement for additional patrol vessel coverage in order to respond to problems arising from the catch and observer reports, i.e. would additional costs be incurred by Contracting Parties with an inspection presence in the Regulatory Area?

The representative from Iceland indicated that all of the details regarding the working paper had not yet been worked out and that Iceland is prepared to discuss these matters with other Contracting Parties.

The representative of Canada also asked if the functioning of the proposed pilot project could initially be implemented while 100% observer coverage was in place. The representative from Iceland replied that such an approach would not allow for comparative analysis between observed and non-observed vessels. This issue was addressed in the subsequent discussions and is outlined in the guidelines below.

The representative from the European Union stated that the daily transmission of catch data is a positive aspect of the proposal, but the potential cost implications and the scope of the project require further review. He noted that the project could only work if the Secretariat and all inspection vessels are fully equipped and capable of handling the reports transmitted from the fishing vessels.

The representative from Japan expressed agreement with the general approach outlined in the Icelandic proposal, but questioned whether the 20% coverage level may be too low.

The representative from the United States stated a preference for 100% observer coverage but indicated that the U.S. is willing to further review the proposal.

Several other Contracting Parties expressed a desire to study the proposal further before taking a firm position.

The representative from Iceland stated that, while he had hoped that the proposal could have been further advanced at this meeting, he was pleased that Contracting Parties are prepared to give it their full consideration. He stated that Iceland will be prepared to discuss the concept in more detail at the September 2002 annual meeting.

A group of representatives was then established to develop points for consideration by the Fisheries Commission. This guidance follows:

STACTIC has examined the working paper (STACTIC W.P. 02/9) in the light of the review of the program for observers and satellite tracking set out in part VI of the NAFO Conservation and Enforcement Measures.

Without prejudice to the decisions to be taken by the Fisheries Commission STACTIC notes a number of points for consideration by the Fisheries Commission, including:

1. Definition of the scope. The scope of such pilot project should be clearly defined in volume (number of vessels), percentage of coverage and time. As this pilot project implies that certain vessels may operate in the Regulatory Area without an observer onboard, the Fisheries Commission may consider to define the maximum number of vessels by Contracting Party without an observer. In part VI of the NAFO Conservation and Enforcement Measures a temporary exemption from the requirement to have 100 % observer coverage needs to be foreseen. Furthermore, as the pilot project proposed provides for daily catch reporting as well as the daily transmission of observer report, the total number of vessels participating in the pilot project should also be defined.
2. Technical facilities. It should be prohibited to engage in such pilot project if the technical facilities are not in place and tested. Only Contracting Parties which have these facilities put in place and tested with the NAFO Secretariat and with the Contracting Parties having means of inspection and surveillance in the Regulatory Area, could participate in the pilot project.
3. Evaluation criteria. At the end of the pilot project or more regularly if directed by the Fishery Commission, each Contracting Party should submit a detailed report on the execution of the pilot project containing all necessary information. STACTIC supported by the Executive Secretary should evaluate the results of the pilot project on the basis of the following criteria:
  - Cost / Savings
    - For the industry
    - For the authorities of the Contracting Parties (including those with an inspection presence)
    - For the NAFO Secretariat
  - Interaction with traditional means of control
  - Compliance overall and notably comparison between vessels with and without observers
  - Technical functioning of the Scheme and reliability
4. Implementation and follow-up of the pilot project. Participating Contracting Parties should notify the names of the vessels participating in the pilot project to the NAFO Secretariat. Furthermore each Contracting Party should provide at all times the NAFO Secretariat with the names of the vessels as well as the period during which they have no observer onboard. In the case where an unobserved vessel is found to be engaged in an infringement listed in part IV point 9 of the Scheme, the Contracting Party will apply the provisions of part IV point 10 of the Scheme and, when the vessel is not re-routed, it will embark without delay an observer onboard.

Before such pilot project can be implemented the Fisheries Commission should instruct STACTIC to examine in detail the catch report, observer report and all technical implications as well as to draw up the draft provisions to be included in the NAFO Conservation and Enforcement Measures

#### **Use of Observer Information for Scientific Purposes**

The discussion focussed on a paper titled Harmonized NAFO Observer Program Data System Proposal (NAFO SCS Doc. 00/23). This document had been developed by the Scientific Council to define scientific requirements for observer program data.

Contracting Parties agreed on the value of an automated system with common data elements. The representative from the European Union expressed some concerns regarding the potential cost

implications involved in making major changes to existing systems and databases. The Chairman agreed that implementation of the proposal outlined in SCS Doc. 00/23 would require significant investments on the part of Contracting Parties and the NAFO Secretariat. The representative from Canada agreed, but noted that the automation of observer data will be very important if STACTIC is to succeed in carrying out comparative analysis of compliance information in future.

The Chairman stated that this issue, will be brought to the attention of the Fisheries Commission at the annual meeting. They will be made aware of the cost implications, the need for standardization and automation of reports, and the need for integration of scientific and management requirements.

### **Confidentiality Issues Respecting Data from Automated Hail/VMS System**

The representative from Denmark (in respect of Greenland and the Faroe Islands) introduced a proposal for amendments to the Conservation and Enforcement Measures to provide for secure and confidential treatment of electronic reports and messages (STACTIC Working Paper 01/15).

The representative from Canada stated that Canada requires access to VMS data in advance of patrols for patrol planning purposes. It was agreed that the working paper would be amended to reflect that reports and messages will be transmitted to inspection platforms and inspectors not more than 48 hours prior to entry into the Regulatory Area. The amended working paper will be recommended to the Fisheries Commission for adoption.

### **Improvements to the Automated Hail/VMS System**

The Secretariat introduced STACTIC Working Paper 02/6, giving an update regarding implementation of the automated hail/VMS system. Since July, 2001 the Secretariat has been receiving automatic position reports from most Contracting Parties. It was noted that approximately 5% of entries are still being made manually and that some Contracting Parties do not yet have monitoring centres. Changes to the operating system were agreed upon at the Helsingor meeting in January 2002. The estimated cost for implementing those changes is \$10,000 Cdn. This issue will be discussed at the annual meeting of STACFAD in September, 2002.

The Norwegian representative introduced proposed amendments to the Conservation and Enforcement Measures regarding the automated hail/VMS system (STACTIC Working Paper 02/5). The discussion focussed on the need for return messages and the reporting frequency (the Norwegian proposal was for reports every two hours, compared with the current requirement for reports every six hours). Following some discussion, it was agreed that the proposal would be amended to make return messages optional, to maintain the current reporting frequency of six hours and to require manual reports every six hours from vessels experiencing technical failure of the satellite tracking device. The amended working paper will be recommended to the Fisheries Commission for adoption.

## **5. Review of Compliance**

The representative of the European Union introduced STACTIC Working Paper 02/8, describing proposed new terms of reference for STACTIC and a supportive role for the Executive Secretary with regard to the production of an annual report on compliance. Two other documents were also tabled for discussion (FC Working Paper 02/14 by the United States and STACTIC Working Paper 02/12 by Canada).

Following considerable discussion, it was agreed that the main task for this meeting should be to develop a framework that will describe the roles of the various parties and the process for completing an annual review of compliance. A working group was established to draft such a document. The working group presented STACTIC Working Paper 02/14, which describes the type of information to be collected and the role of the Executive Secretary in compiling this data and transmitting it in summary form to Contracting Parties 60 days prior to the annual meeting of STACTIC. It was noted that the sample tables in STACTIC Working Paper 02/14 are subject to further review and amendment if required. On the basis of this information, STACTIC would conduct its review of compliance in connection with the annual meeting. The first compliance review would be based on 2002 data, with the first compliance report to be submitted to the Fisheries Commission at the 2003 annual meeting.

The representative of the European Union noted that although the exercise would include a review on a vessel by vessel basis, the overall objective will be to review compliance on a Contracting Party basis.

It was agreed that the framework proposed in STACTIC Working Paper 02/14 (Revised) will be submitted to the Fisheries Commission for consideration in September 2002.

## **6. Review of Options for the Control/Avoidance of Incidental Catches**

The representative of the European Union introduced STACTIC Working Paper 02/7, a proposal to amend the Conservation and Enforcement Measures with regard to the calculation of by-catches. Two other proposals were later tabled for discussion (STACTIC Working Paper 02/13 presented by Canada and FC Working Paper 02/11 from Denmark, in respect of the Faroe Islands and Greenland).

There was general agreement on the need for clear and easily enforceable rules governing the issues of directed fishery and by-catch. Following discussion of the three proposals, it was agreed that a working group would be formed to draft proposed amendments to the applicable sections of the Conservation and Enforcement Measures.

The representative from Japan stated that the objective of the amendments should be to prevent directed fisheries for moratoria stocks, and that this may not necessarily require amendments to the incidental catch limits. He also questioned whether the term “catch” is meant to include discarded fish and whether discarded fish are to be counted against quotas. The Chairman stated that these questions will be addressed as part of the review of the Conservation and Enforcement Measures.

The representative from Lithuania indicated that he would require more time to review the proposal and is not in a position to support it at this time. Lithuania will provide further comments at the annual meeting in September 2002. This position was supported by the representative from the Russian Federation.

The working group developed STACTIC Working Paper 02/15 (Revised), which proposes to amend the Conservation and Enforcement Measures to add a definition for directed fishery and revise the limits for incidental catches and the method of calculation. It was agreed that these proposed amendments will be submitted to the Fisheries Commission for consideration at the annual meeting in September 2002.

#### **7. Other Business**

The European Union representative questioned how inspectors from other Contracting Parties measure larger mesh sizes (in the context of the new 280mm mesh size for skate fisheries). It was agreed that representatives of Canada and the European Union will discuss this issue further.

#### **8. Time and Place of Next Meeting**

The next meeting of STACTIC will take place in conjunction with the Annual Meeting, September 2002, in Spain.

#### **9. Adjournment**

The meeting adjourned at 1300 on May 9, 2002.

## Annex 1. List of Participants

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**Annex 2. Agenda**

1. Opening of the Meeting
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of the NAFO Observer/VMS Scheme
  - a) Use of observer information for scientific purposes
  - b) Review of performance of Automated Hail/VMS System
  - c) Evaluation of options to modify the observer/VMS Scheme
    - i) Effectiveness
    - ii) Benefits/Costs
  - d) Confidentiality issues respecting data received as a result of the Automated Hail/VMS System (discussion at Ad hoc group)
  - e) Improvements to the Automated Hail/VMS System (at Ad hoc group)
5. Review of Compliance
  - a) Framework for evaluation of compliance
  - b) Data sources, timeframes/formats for submission of data
  - c) Schedule of future work/meetings
6. Review of options for the control/avoidance of incidental catches
  - a) Measures for the control of incidental catches
  - b) Possible options with identified impacts for consideration by the Fisheries Commission
7. Other Matters
8. Time and Place of Next STACTIC Meeting
9. Adjournment

**Annex 3. Summary of Responses to STACTIC W.P. 02/10  
(STACTIC W.P. 02/16)**

<b>Question</b>	<b>Canada</b>	<b>Den – Faroes</b>	<b>Den – Greenland</b>
1	Government-contracted third party	Faroese Fishery Control (FFC)	Greenland Fisheries Licence Control Authority (GFLK)
2	Third party requiring screening qualification and security checks	FFC	Newspaper ads and personal recommendations
3	Marine experience: navigational, fishing gear, biological and enforcement	Marine experience: navigational, fishing gear, etc.	Knowledge of fishery, navigational skills, etc.
4	20 day training	Short course on enforcement and scientific data	8-10 weeks fishery regulations, additional sampling and 1 year trainee
5	Successful completion of exam after training	Must complete courses	Training at Fishing School + authorized institutions.
6	Yes	Yes	Yes
7	Prohibited from monetary gain from fishing industry	Authorized and employed by FFC	Employed and paid by GFLK
8	Yes	Yes	Yes
9	Yes	No	Yes
10	Yes	No	Yes (some administrative delays)
11	Yes (DFO)	No (FFC)	Yes (GFLK)
12	When catch is landed	When catch is landed	Landing of completed catch
13	Yes	No information on infringements received	Yes
14	Data package for fishery, contractor check tasks	Briefing and preparation by FFC	All observers are called in for briefing and debriefing
15	Yes	Yes	Available but not used
16	Yes	Yes (in terms of content)	Yes (also logbook)
17	Yes/also by FMC	No	Yes with the FMC
18	Yes	Yes	Yes
19a	Deployment of patrol aircraft to closure of fishery	If infringements are identified case will be investigated	Vessel is inspected and observer and master questioned
19b	Less serious offence observers consult with supervisor	-	Port inspection and if infringements, special report for legal action
19c	Violations entered into violation database	-	Basis for administrative warnings, etc.
19d	Used as witnesses	-	Administrative legal warnings
20	\$300/day + travel	1,800,000 Dkr Government	?
21	Government – groundfish/ Industry – shrimp	N/A	GFLK
22	10,800,000 per year + additional 5,000,000 military	N/A	N/A
23	-	N/A	Improved catch reporting
	For NRA no violations since prior to 1998.	N/A	Logbook catches more accurate and reliable.

Note: "Question" refers to Addendum 2 (to Annex 5).

Question	Estonia	EU	Iceland
1	Environmental Inspectorate	Contracts observer providers through public tender	Icelandic Directorate of Fisheries
2	Must pass training course	N/A	Vacancy announcement by Government rules
3	Physically/mentally capable. Fisheries, marine or biological experience favorable.	Background as fishery inspector, navigation, marine biology	Desired assets experience as Captains or officers of fishing vessels
4	Based on Canadian Observer Manual	N/A	Short course on CEM by Directorate + Research Institute for scientific samples
5	3-4 weeks training course + tested on completion	In accordance with NAFO Scheme, EU inspectors check if not, not-employed.	Must complete courses
6	Yes	Yes	Yes (voluntary basis)
7	No relationship to company or representatives of vessel owners	Declaration stating no financial or other relations with fishing industry	No relations to the vessel
8	Yes	Yes (EU Member States)	Yes
9	Yes	Yes	Yes
10	Yes (some delays)	No (Service Provider then NAFO)	Yes (as of 2002)
11	Yes (Environmental Inspectorate)	Yes (EU Commission + Member States)	Yes (Directorate of Fisheries)
12	Observer's departure and return	Observer's departure and return	From harbour to harbour
13	Yes	Yes	Yes (to Directorate then to NAFO)
14	Briefed on special requirements, etc. debriefed on any unusual activities, etc.	Service provider does the briefing and debriefing	Briefed and debriefed by the Sea Surveillance Dept.
15	Yes (Estonian Marine Institute)	Available but seldom used	Yes
16	Yes	Yes	Not consistently and improvements being made
17	Yes	Yes	Yes
18	Yes	Yes with few exceptions	Yes
19a	Data compared to logbooks and if any differences master contacted immediately	Reports are checked for infringements and inspection authorities are informed	This would be done on case by case basis.
19b	-	Service Provider send provisional information to Commission weekly	-
19c	-	Corrective action on basis of inspection	-
19d	-	Information used for policy making	-
20	150,000 Euro/year; State budget	2,075,332 Euro/year; Community budget	Approx 200 USD by vessel owner
21	N/A	2,500,000 Euro; 2.2 Community budget; 3 Spain	N/A
22	N/A	See EU review	N/A
23	N/A	32 infringements	N/A

Note: "Question" refers to Addendum 2 (to Annex 5).

Question	Japan	Lithuania	Norway
1	Public-service by Government	Department of Fisheries	Contracted Canadian company (Seawatch)
2	Introduced by research institutes	Completed training courses	Advertised competition by Seawatch
3	Knowledge and experience with respect to fishery and biology	Requirements for recruitment of observers now in preparation	Marine experience, navigation, fishing gear, biological and enforcement training.
4	Observer training project by Government	Training standards in preparation	3 weeks training
5	Must pass exam and practice for observer	-	Exam and certification
6	Yes	Yes	Yes
7	Observer jobs only and employed by Public Service	Perform only duties described in CEM	Independent company no links to shipowners or crew
8	Yes	Yes plus others that are certified	No
9	Yes	Yes (some missing due to reorganization)	Yes
10	Yes	Not all	Yes
11	Yes (Fisheries Agency of Japan)	Yes (Fisheries Dept.)	Yes (Directorate of Fisheries)
12	Leaving port to arrival at port	Observer to and from vessel	Time spent in Regulatory Area
13	?	No such case	Yes
14	Briefing once a year	Briefing at Fisheries Department	Directorate informs Seawatch of requirements & Seawatch checks that duties were performed.
15	Yes (stock assessment)	Yes (but not used)	Not on a regular basis
16	Yes	All requirements except scientific	Yes (some complaints on handwriting)
17	No	Yes	No (responsibility of FMC)
18	Yes	Yes	Yes
19a	Position, catch effort, by-catch, etc.	Irregularities are discussed and owners must make changes	Evaluation and possible reaction by legal office. If infringement is detected master must explain.
19b	Noon position, set & hauling position, etc.	-	Authorities decide on action & report to NAFO
19c	Compare observer rpt. With catch report. If different correct or improve.	-	
19d	Correct reports: suspend fishing or move	-	
20	10,000,000 yen/person/year (?)	Owners are responsible to pay through Fisheries Department	340 Cnd + travel + daily allowances; paid by shipowners
21	17,000,000 yen for satellite tracking system	-	N/A
22	See Japanese comment	-	N/A
23	1 master did not completely understand CEM	Answer later	Observer 1; Inspections 4 (2 are questionable)

Note: "Question" refers to Addendum 2 (to Annex 5).

Question	Russia	USA
1		US Government
2		Universities and periodicals which target interested individuals
3		University degree in biological science or fishery management
4		Intensive 2-week training
5		Must pass 4 written exams
6		Yes (but not currently fishing)
7		No connection or interests in fishing industry
8		Yes
9		N/A
10		N/A
11		N/A
12		N/A (entry & departure from NRA)
13		N/A
14		N/A
15		N/A (yes for domestic)
16		N/A
17		N/A (yes for domestic)
18		N/A
19a		N/A
19b		N/A
19c		N/A
19d		N/A
20		N/A (estimate \$550 US per day – Government paying)
21		N/A
22		N/A
23		N/A

Note: "Question" refers to Addendum 2 (to Annex 5).

**Annex 4. Summary of Responses to STACTIC W.P. 02/11  
(STACTIC W.P. 02/17)**

Question	Canada	Faroes	Greenland	Estonia	EU	Iceland	Japan	Lithuania	Norway	Russia	USA
1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
2	6 hrs	1 hr	1 hr	6 hrs	6 hrs	1 hr	1.5 -2.0 hrs	Technical problems with FMC	1 hr	1 hr	
3a	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	
3b	yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	No	
3c	yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	
3d	Course/speed	Course/speed	Course/speed	Speed	Optional	Course/speed	Course/speed	-	Course/speed	No	
4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	
5	Must leave area	Repair at port before next trip	←Same	←Same	←Same	←Same	Reserve unit + ←Same	-	Repair at port before next trip	Repair within 10 days or go to port	
6	No	24 hrs	24 hrs	24 hrs	24 hrs	12 hrs	24 hrs	-	12 hrs	6 hrs	
7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	
8	12 hrs (2)	1 hr	1 hr	6 hrs	6 hrs	6 hrs	6 hrs	-	6 hrs	6hrs	
9	Yes	Yes	Yes (NEAFC)	Yes	Yes	Yes	Yes	-	Yes	No	
10	Yes	N/A	N/A	N/A	Yes	N/A	N/A	-	N/A	N/A	
11a	1500-2000Cnd	24,000 Dkr	4500 Euro	150,000 Euro	3,300 Euro	3,000 US	300,000- 400,000 Yen	Will answer later	6000 Cnd	-	
11b	0.25-0.50 Cnd	1500 US /month	2Euro/day/ vessel	20,000 Euro/year	Approx. 0.20 Euro	0.45 US	980 Yen/day		100 Cnd	-	
11c	10,000 hardware 20,000 yearly	N/A	35,000 Euro	15,000 Euro/year	>150,000 Euro	-	17,000,000 Yen/year		100,000 Cnd	-	

Note: "Questions" refers to Addendum 4 (to Annex 5)

**Annex 5. Review of the Observer Scheme and Vessel Monitoring System (VMS)**  
(STACTIC Working Paper 02/18, Revised)

**Introduction**

A Pilot Project for a NAFO Observer and VMS Scheme (Part VI of the Conservation and Enforcement Measures) came in force in 1995. There were several modifications of the Project. The Program for Observers and Satellite Tracking was modified and adopted by the Fisheries Commission at the 22<sup>nd</sup> Annual Meeting, September 2000.

According to the provisions of the Conservation and Enforcement Measures (Part VI.A), the Program was introduced to improve and maintain compliance with the Conservation and Enforcement Measures by the vessels fishing in the Regulatory Area. A 100% coverage is required for all vessels fishing in the Regulatory Area, and this is a binding measure for all Contracting Parties except for Iceland pursuant to the Article XII of the NAFO Convention. As of January 1<sup>st</sup> 2001 VMS became mandatory for all contracting party vessels fishing in the NAFO Regulatory Area (NRA). Both the observer scheme and the VMS are subject to review at any time and on the instructions of the Fisheries Commission are to be reviewed in 2002 to provide the Fisheries Commission with information needed to aid them in making decisions regarding the two programs.

The NAFO Secretariat conducted preliminary reviews of the Observe Scheme and the VMS in order to aid STACTIC in conducting a more thorough review in 2002 of the two programs. The results of this review are contained in tables 1, 2, and 3 attached.

With respect to observers, the major "shall" functions of observers are following:

- a) monitor a vessel's compliance with the relevant Conservation and Enforcement Measures:
  - i) record and report upon the fishing activities of the vessel and verify the position of the vessel when engaged in fishing;
  - ii) observe and estimate catches with a view to identifying catch composition and monitoring discards, by-catches and the taking of undersized fish;
  - iii) record the gear type, mesh size and attachments employed by the master;
  - iv) verify entries made to the logbooks (species composition and quantities, round and processed weight and hail reports).
- b) collect catch and effort data on a set-by-set basis. (location, depth, time of net on the bottom, catch composition and discards) and the data on discards and retained undersized fish as outlined in the protocol developed by the Scientific Council.
- c) carry out such scientific work (for example, collecting samples) as requested by the Fisheries Commission based on the advice of the Scientific Council;
- d) provide a report to the Contracting Party of the vessel and to the Executive Secretary (within 30 days following completion of an assignment on a vessel).

The Fisheries Commission adopted the Scientific Council proposal "Harmonized NAFO Observer Program Data System Proposal" (SCS Doc. 00/23) during 22<sup>nd</sup> Annual Meeting, September 2000.

This proposal, as adopted, has not been incorporated in the NAFO Conservation and Enforcement Measures. Under the "Harmonized NAFO Observer Program Data System", the Contracting Parties should carry-on their national observer programs according to the recommended forms and formats contained in the Scientific Council proposal. As the follow-up of the Scientific Council intervention on this matter, there were several substantial recommendations by the Council in the following terms (June 2001 Meeting):

- to modify the Conservation and Enforcement Measures (Part VI, 3b and 3d) with the note that "the Conservation and Enforcement Measures are inconsistent with the Scientific Council protocols adopted by the Fisheries Commission in 2000" (this refers to SCS Doc. 00/23);
- to develop a training and operation manual for the collection of scientific data;
- the observer program "Access database" developed by Canada be adopted by the NAFO Secretariat to capture data collected under the NAFO Observer Program;
- the Secretariat is asked to develop cost estimates required for accomplishment of this task for inclusion in the 2002 budget.

These recommendations include several substantive issues, which, if adopted, should generate concrete actions by the Fisheries Commission, NAFO Contracting Parties and the NAFO Secretariat based on two documents: *NAFO Conservation and Enforcement Measures* and *SCS Doc. 00/23*.

The legal status of those two documents is very different from the point of view of commitments and implementation. The traditional constitutional way to carry out NAFO management decisions has been through the incorporation of clearly identified regulatory measures in the NAFO Conservation and Enforcement Measures with full understanding and acceptance by Contracting Parties. Accordingly, if the measure is in force and binding through adoption by the Fisheries Commission, this would imply to approve and implement a policy or proposal, and in such a case, the full significance of the proposal (motion, subject matter, etc.) would have been determined and technique of implementation would have been agreed.

Considering the Contracting Parties observers' reports presented to the Secretariat, this policy in application to the scientific task has not been fully recognized and/or implemented.

With respect to the VMS system, from July 2001, the NAFO Secretariat had started receiving Automatic Position Reports from various Contracting Parties. These messages were automatically entered into the NAFO data base and copies were forwarded to a mailbox for Contracting Parties with an inspection presence in the NAFO Regulatory Area to retrieve on a 24 hour a day, 7 days a week basis.

There were several briefing letters circulated by the Secretariat (GF/01-524, July 2001, GF/01-627, Sept. 2001, GF/01-655, Sept. 2001, GF/01-669, Sept. 2001, GF/01-733, Oct. 2001, GF/01-788, Nov. 2001) asking Contracting Parties to finalize their commitments under this program.

As can be seen in the attached table, there are currently 10 Contracting Parties or Member States which are sending automatic reports to the new system. There are, however, still manual entries which have to be inputted to the database but these would average approximately 5% of all messages received.

During the Helsingør Meeting, January 2002, there were discussions and recommendations for changes to be made to the operating system to make it more compatible with those being used in NEAFC. The Secretariat has obtained cost estimates for these changes from the system provider and the agreed changes would be in the range of \$10,000.00 Cdn. This cost will be higher if other changes that were proposed but not agreed upon are to be implemented. There is currently no budget item for these changes and this will have to be taken to STACFAD at the Annual Meeting to be held this coming September.

Tables 1-3 were extracted from STACTIC W.P. 02/04 and 02/06. In addition to these tables, Addendum 1 contains notes regarding the observer scheme that have been extracted from W.P. 02/4.

STACTIC agreed to modify the framework used in 1998 to conduct the review of these programs. STACTIC agreed to use the following framework for the review:

- Contracting Parties will respond to the questions in Addendum 2 regarding the observer scheme. The answers will be forwarded to the NAFO Secretariat by June 15, 2002.
  - Preliminary responses are summarized in Addendum 3. Individual Contracting Party responses are attached in Addendum 6.
- Contracting Parties will respond to the questions in Addendum 4 regarding the VMS. The answers will be forwarded to the NAFO Secretariat by June 15, 2002
  - Preliminary responses are summarized in Addendum 5. Individual Contracting Party responses are attached in Addendum 6.
- The NAFO Secretariat will review the responses for completeness and identify any gaps in the information received to the Contracting Parties involved. The Secretariat will contact those Contracting Parties that have been identified as having gaps in their information with the objective of obtaining the needed information.
- Contracting Parties with an inspection presence in the NRA are to provide updated costs in Canadian dollars for traditional surveillance covering the years 1998, 1999, 2000 and 2001, to the secretariat by June 15, 2002.
- All Contracting Parties will review their responses to the questions and will provide the NAFO Secretariat, by June 15, 2002, with cost estimates in Canadian dollars for the years 1998, 1999, 2000, and 2001 for the observer scheme and VMS
- The NAFO Secretariat will update table 4 (1998 version attached) based on the information received from the Contracting Parties.
- The NAFO Secretariat will update tables 5, 6, and 7 (1998 versions attached) based on the best available information. The Secretariat will be assisted by Contracting Parties with an inspection presence in the area in completing this task.
- STACTIC will review the resulting information and determine if it is complete and accurate
- Once satisfied with the information available, STACTIC, will evaluate the two programs using, as appropriate, the evaluation framework summary table established in 1998 (Table 8) and provide a report on the results of the evaluation to the Fisheries Commission.

**Table 1. Summary/Contents of National Observer Reports  
(2000-2001) (Annex 1 W.P. 02/4)**

Contracting Party	monitor vessels' compliance:				Effort Data	Scientific data***	Reports % (delivered to the Secretariat)	
	fishing activities	catches	gear	logbooks			2000	2001
Canada	✓	✓	✓	✓	✓	N/A	100	100
Cuba	✓	✓	✓	✓	✓	N/A	100	100
Denmark:	✓	✓	✓	✓	✓	N/A	12	8
Faroes	✓	✓	N/A	N/A	N/A	N/A	72	100
Greenland								
Estonia	✓	✓	N/A	✓	✓	N/A	N/A	100
EU	✓	✓	✓	✓	✓	N/A	100	100
France-SPM	not fishing							
Iceland*	✓	✓	✓	✓	✓	N/A	100	100
Japan	✓	✓	N/A	✓	✓	N/A	100	100
Korea	not fishing							
Latvia	✓	✓	N/A	✓	✓	N/A	75	100
Lithuania	✓	✓	✓	✓	✓	N/A	15	72
Norway	✓	✓	✓	✓	✓	N/A	100	100
Poland	✓	✓	N/A	N/A	N/A	N/A	100	N/A
Russia**	✓	✓	✓	N/A	N/A	N/A	57	40
Ukraine	not fishing							
USA	not fishing							

Notes:

N/A – not available

\* Reports from Iceland are presented in Icelandic only (and we presume those corroborate with observer duties)

\*\* Reports from Russian vessels are presented by Russian observers and several Canadian nationals (which have more complete form according to Canadian requirements)

\*\*\* "Scientific data" refer to information according to the protocol developed by the Scientific Council.



<b>Contracting Party</b>	<b>Vessels fishing in the RA 2000</b>	<b>Observer Reports</b>	<b>Vessels fishing In the RA 2001</b>	<b>Observer Reports</b>
EU (cont'd)	Maria Eugenia G Moradina Nuevo Virgen De La Barca Nuevo Virgen De Lodairo Pascoal Atlantico Patricia Nores Patricia Sotelo Pedra Rubia Pesca Vaqueiro Pescaberbes Dos Playa De Cativa Playa De Menduina Playa De Rodas Playa De Sartaxens Playa De Tambo Puente Pereiras Cuatro Puente Sabaris Punta Robaleira Rio Orxas Santa Cristina Santa Isabel Santa Mafalda Santa Marina Solsticio Xinzo	yes yes  yes  yes	Nuevo Virgen De La Barca Nuevo Virgen De Lodairo Pascoal Atlantico Patricia Nores Patricia Sotelo Pesca Vaqueiro Pescaberbes Dos Playa De Arneles Playa De Cativa Playa De Menduina Playa De Rodas Playa De Sartaxens Playa De Tambo Puente Sabaris Punta Robaleira Rio Orxas Santa Cristina Santa Isabel Santa Mafalda Santa Marina Solsticio Xinzo	yes  yes
<b>Total:</b>	48	48	45	45
Faroese	Arctic Viking Borgin Hogifossur Hviltenni Ljosafelli Ocean Castle Sjurdarberg Vesturvonn	yes	Arctic Viking Borgin Enniberg Fuglberg Hogifossur Hviltenni Ljosafelli Ocean Castle Ocean Pride Sjurdarberg Solborg South Island Vesturvonn	yes
<b>Total:</b>	8	1	13	1
France (SP)				
<b>Total:</b>	0		0	
Greenland	Kiliutaq Nicoline C Polar Amaroq Polar Arfvik Polar Nattooralik Polar Sigilir Regina C	yes yes yes yes yes	Polar Sigilir	yes
<b>Total:</b>	7	5	1	1

Contracting Party	Vessels fishing in the RA 2000	Observer Reports	Vessels fishing In the RA 2001	Observer Reports
Iceland	Askur Baldur Arni Bliki Eldborg Orri Petur Jonsson Rauoinupur Sunna	yes yes yes yes yes yes yes yes	Askur Baldur Arni Petur Jonsson Rauoinupur Sunna	yes yes yes yes yes
<b>Total:</b>	8	8	5	5
Japan	Anyo Maru No. 7 Shinkai Maru	yes yes	Anyo Maru No. 7 Zuiho Maru No. 88	yes yes
<b>Total:</b>	2	2	2	2
Latvia	Arnarborg Atlass Freija Otto	yes yes yes	Arnarborg Freija Otto	yes yes yes
<b>Total:</b>	4	3	3	3
Lithuania	Cape Circle Cape Ice Maironis Sekme Svalbakur Treimani Utena	yes	Anuva Atlas Eyborg Maironis Neringa Radvila Sekme Treimani Utena Zunda	yes yes yes yes yes yes yes yes yes yes
<b>Total:</b>	7	1	10	8
Norway	Ingar Iversen Nordoybas Nordstar Olympic Prawn Polaris Volstad Viking	yes yes yes yes yes yes	Ingar Iversen J. Bergvoll Juvel Koralen Nordoytral Ocean Trawler Olympic Prawn Remoy Fjord Remoy Viking Saevking Tonsnes Volstad Viking	yes yes yes yes yes yes yes yes yes yes yes yes
<b>Total:</b>	6	6	12	12
Poland	Esther	yes	Myrdoma	
<b>Total:</b>	1	1	1	0
Russia	Andrey Markin Bizon Bootes Dimas Eyborg Gornostaevka Granat	yes yes yes yes yes yes	Amerlog Andrey Pashkov Andvari Bizon Dimas Eyborg Gemeny	yes yes yes yes yes yes

Contracting Party	Vessels fishing in the RA 2000	Observer Reports	Vessels fishing In the RA 2001	Observer Reports
Russia (cont'd)	Kadri Kapitan Naumov Kobrin Maroanjoca Matrioska Merak Mozdok Murman Obva Odoevsk Okeanator Olchan Olga Onezhskiy Oyra Polessk Semenovsk Stakfell Tynda Vest Rumb Viking	yes yes yes yes yes yes yes yes  yes      yes      yes yes yes yes	Granat Kapitan Naumov Kobrin Maroanjoca Matrioska Mozdok Murman Nikolay Afanasyev Obva Okeanator Olchan Olga Oma Onezhskiy Polesssk Semenovsk Sevryba-1 Tynda Vest Rumb Vityza Vyshgorod	yes yes   yes yes  yes           yes   yes yes
<b>Total:</b>	28	16	28	11

**Table 3. Status report of NAFO automated HAIL/VMS activities up to  
April 18, 2002**

Contracting Party	Tested OK	Entry	Move	Trans-zonal	Tranship-ment	Exit	Position
Bulgaria	NA	-	-	-	-	-	-
Canada	22/08/01	automatic				automatic	automatic
Cuba	Unable						
Den.-Faroe Islands	10/09/01	automatic	automatic			automatic	automatic
Greenland	12/07/01						
Estonia	29/11/01	manual	manual			manual	automatic
E.U.-Denmark	21/08/01						
France	No reply						
Germany	08/02/02						
Great Britain	No reply						
Portugal	10/08/01	manual	manual			manual	
Spain	25/10/01	manual	manual	manual			automatic
France SPM	No contact						
Iceland	07/07/01	manual				manual	automatic
Japan	29/08/01	automatic	automatic			automatic	automatic
Korea	No reply						
Latvia	No contact	manual	manual			manual	automatic
Lithuania	No contact	manual				manual	
Norway	07/07/01	automatic				automatic	automatic
Poland	27/09/01	automatic	automatic				automatic
Romania	NA	-	-	-	-	-	-
Russia	18/07/01	automatic	manual			automatic	automatic
Ukraine	Ongoing	manual	manual			manual	
U.S.A.	Ongoing						

**Table 4. Estimated Cost of Surveillance – NAFO Regulatory Area  
(Based on 1996 information)**  
(previously Table 2, FC Doc. 98/13, Part II, Annex 2)

CONTRACTING PARTY	Secretary	Germany	Denmark	Canada	Latvia	USA	Sweden	Japan	Estonia	Iceland	EU	Quota	Total	Average
Reference Documents	9704	9011.3112	9173.3175	9019.0102	9112	9129	9179	9176	9117	9179	9173.3174			
<b>Satellite Tracking Technology</b>														
Capital	\$ 21,000	\$ 105,000			\$ 12,000	\$ 70,000	\$ 22,000		\$ 24,000	\$ 200,000			\$ 449,000	
Operating Costs	\$ 4,000	\$ 20,000		\$ 166,000	\$ 4,000	\$ 20,000	\$ 1,000		\$ 8,000	\$ 24,000	\$ 500,000		\$ 733,000	
Operations Center							\$ 20,000						\$ 20,000	
Other	\$ 5,000				\$ 2,000				\$ 1,000				\$ 13,000	
<b>Observer Coverage</b>														
Operating Costs (Based on)		\$ 400	\$ 388	\$ 261	\$ 261	\$ 262	\$ 220	\$ 520	\$ 260	\$ 218	\$ 202		\$ 3,658	\$ 268
<b>Traditional Surveillance</b>														
Vessels				\$ 2,600,000							\$ 2,300,000		\$ 6,100,000	
Aircraft				\$ 1,500,000									\$ 6,000,000	
Administration				\$ 1,500,000							\$ 160,000		\$ 1,660,000	
Total Inspections				278							67		370	
Cost/Inspection				\$ 19,980							\$ 24,900		\$ 43,880	\$ 18,880
Number of Vessels (WCI Vot 84/8)		16	6	8	3		15	2	8	23	47		141	
Number of Observer and Fishing Days (WCI Vot 84/8)		1565	172	179	171		1082	320	1086	864	1618		9502	
<b>Total costs</b>														
Satellite Technology														
One Year	\$ 21,000	\$ 100,000			\$ 12,000	\$ 70,000	\$ 22,000		\$ 24,000	\$ 200,000			\$ 449,000	
Aircraft	\$ 11,000	\$ 20,000		\$ 166,000	\$ 4,000	\$ 20,000	\$ 21,000		\$ 11,000	\$ 24,000	\$ 500,000		\$ 733,000	
Observer Coverage		\$ 400,000	\$ 37,000	\$ 250,000	\$ 261,000		\$ 277,000	\$ 171,000	\$ 380,000	\$ 1,896,000	\$ 2,000,000		\$ 6,179,000	\$ 328
Traditional Surveillance				\$ 10,800,000							\$ 2,493,000		\$ 13,293,000	\$ 497

1. Costs for NAFO Secretariat based on satellite technology at headquarters
2. Some Contracting Parties exceeded the 35% satellite requirement
3. Fishing days for some Contracting Parties decreased in 1997
4. Canadian vessel surveillance excludes military vessel support (estimated at \$5.0M)

**Table 5.**  
(previously Table 3, FC Doc. 98/13, Part II, Annex 2)

	<b>1997</b>	<b>1996</b>	<b>1995</b>	<b>1994</b>	<b>1993</b>	<b>1992</b>
<b>OBSERVER RELEVANT</b>						
Recording of Catch	6	1	7	15	17	19
Incidental Catch Limits	1					
Quota (includes conducting a directed fishery when a ban on fishing in effect)	2	3		10	11	2
<b>Retaining Undersize fish</b>			3	10	4	
<b>Gear:</b> Mesh size, chafers, straps, sorting straps	1	8	2	19	23	13
<b>Catch record discrepancy</b>	1	1	4	14	4	5
<b>Hail system</b>	2	4	8	20	18	32
<b>SUBTOTAL</b>	<b>13</b>	<b>17</b>	<b>24</b>	<b>88</b>	<b>77</b>	<b>71</b>
<b>NOT OBSERVER RELEVANT</b>						
<b>Documentation</b>	7	8	9	27	25	21
<b>Failure to carry observer</b>		3				
<b>Other:</b> Improper boarding ladder, Refusal/interference with Inspection	3	6	5	4	3	2
<b>SUBTOTAL</b>	<b>10</b>	<b>17</b>	<b>14</b>	<b>31</b>	<b>28</b>	<b>23</b>
<b>GRAND TOTAL</b>	<b>23</b>	<b>34</b>	<b>38</b>	<b>119</b>	<b>105</b>	<b>94</b>

**Table 6. Number of fishing vessels, fishing effort, inspections and observer relevant  
Apparent Infringements, 1993-1997**

(previously Table 4, FC Doc. 98/13, Part II, Annex 2)

Year	F/vessels	FN effort	PN effort	Inspections	Infringements Obs. Related
1993	233	23,352	548	518	77
1994	181	22,816	647	628	88
1995	189	23,842	556	343	24
1996	169	17,157	514	375	17
1997	101	12,473	536	350	13

**Table 7. Inspections and fishing days/observer relevant infringement and  
fishing days/patrol vessel day**

(previously Table 5, FC Doc. 98/13, Part II, Annex 2)

<b>Year</b>	<b>Insp/AIN</b>	<b>Fday/AIN</b>	<b>Fday/PV day</b>
1993	6.7	303	42.6
1994	71	259	35.2
1995	14.3	993	42.8
1996	22	1009	33.4
1997	26.9	959	23.3

Source of Information:

NAFO Secretariat based on hail and surveillance reports from Contracting Parties.

**Table 8. Evaluation Framework Summary Table**  
(previously Table 1, FC Doc. 98/13, Part II, Annex 2)

	Pilot Project Compliance Measures										Traditional methods of control (*)				
	Satellite Tracking					Observer Scheme									
Management Measures	Relevance		Efficacy/ Efficiency			Relevance		Efficacy/ Efficiency			Relevance		Efficacy/ Efficiency		
	YES	NO	H	M	L	YES	NO	H	M	L	YES	NO	H	M	L
Fishing location	Y		H			Y		H			Y		H		
Fishing activities															
No. of operation	Y		No Consensus			Y		H			Y				L
Time in the area	Y		H			Y		H			Y		H		
Fishing Time	Y			M		Y		H			Y				L
Gear used		N				Y		H			Y				M
Catch retained															
By species		N				Y		H			Y		No Consensus		
By live weight		N				Y		H			Y			M	
Discards															
Juveniles		N				Y		H			Y				L
By-catches		N				Y		H			Y				L
High-grading		N				Y		H			Y				L
Processing															
By species		N				Y		H			Y			M	
By presentation		N				Y		H			Y			M	
By production weight		N				Y		H			Y			M	
Landing/Transshipment															
Port/Location	Y		H			Y		H			Y		H		
Quantities Landed		N					N				Y		H		

Efficiency/Efficacy – H(High), M(Medium), L(Low)

\*Traditional means: fishing and processing logbook, landing/transshipment declaration, sightings and inspections at sea (either by vessel or aircraft), hail-system and communication of catches, single mesh size, inspection ashore, etc.

1. Bolded ratings reflect consensus view, subject to explanatory notes.
2. Shaded areas reflect no consensus on efficiency/efficacy.

No. of operations (satellite tracking) - Efficiency/efficacy dependant on number and frequency of transmissions.

Catch retained by species (traditional) - Efficiency/efficacy subject to level of surveillance and fishery (shrimp versus multiple species).

Table 8. (cont'd)

<b>Explanatory Notes</b>		
<u>Management Measure</u>	<u>Contracting Party</u>	<u>Note</u>
Catches retained on board	Denmark (Faroes & Greenland)	Observers assumed 100% effective.
No. of Operations	European Union	Satellite Tracking – Moderate, depending on number of positions per day.
Gear Used	European Union	Includes mesh size and sorting grid.
	Canada	Traditional – High during inspections.
Discards	European Union	Evaluation of discards goes beyond simple enforcement effectiveness.
Landing/Transshipments	EU/Norway	No transshipments observed.
Port/Location	EU	Observer-High, but not included in observer duties.
Efficiency/Efficacy (Observer)	Iceland	Overall – Not in terms of cost efficiency.
		Fishing location – High, in respect of accuracy but this is not real time location so it will not support inspection control.
		Juveniles – Not relevant for shrimp fishery.
		By-catches, high-grading and Processing by species – High, but not significant issue in shrimp fishery.
Efficiency/Efficacy (Satellite)	Iceland	All fishing activities (excluding gear used) – High, but due to low coverage, potential efficiency does not equal actual efficiency.
		Fishing time – High, can be obtained by calculation of vessel speed, although variable or lower speed may not necessarily indicate fishing.

Efficiency/Efficacy (Traditional)	Iceland	May be improved through enhanced use of electronic data exchange.
Efficiency/Efficacy (Traditional)	Canada	Dependent on level of surveillance by platform type (aircraft, patrol vessel, dockside monitoring)
Overall	Iceland, Norway, Denmark (Faroes & Greenland)	Evaluation based on experience in the shrimp fishery only.

### **Addendum 1. Performance of the NAFO Program for Observers (and Satellite Tracking)**

The following are brief notes from the Secretariat:

Canada: reports are in a detailed format of standardized tables reflecting all requirements under the Observer Program. The text is handwritten and sometimes not easy to read, which would be unacceptable for electronic reprocessing of data. No scientific data presented.

Cuba: reports are in very detailed format based on set by set (trawl) fishing activity. The text is handwritten and not easy to read, which would be unacceptable for electronic reprocessing of data. No scientific data presented.

Denmark: *Faroes*: reports are in accurate typed-in straight forward format, which would be practical to apply for electronic/scanning tally of fishery/scientific data. No scientific data presented. *Greenland*: reports are in a specific format of questionnaire tables, which do not completely reflect on observer duties. No scientific data presented.

Estonia: reports are in a format of logbook print-outs and do not completely reflect on observer duties. No scientific data presented.

European Union: reports are in a well-structured format with typed-in text and complete information, which could be applied in electronic/scanning techniques. No scientific data presented.

Iceland: reports are in Icelandic language and structured in a unified table. No scientific data presented.

Japan: reports are in a format of logbook print-outs and do not completely reflect on observer duties. No scientific data presented.

Latvia: reports are in a format of "set by set" data and do not completely reflect on observer duties. No scientific data presented.

Lithuania: reports are in a comprehensive set of tables with typed-in information. No scientific data presented.

Norway: reports are in good elaborate format of comprehensive tables. However, all records in a handwritten form and not easy to read, especially, if this information would go to electronic reprocessing. No scientific data presented.

Poland: reports in a restricted (1-2 pages) format with limited reflections on observer duties and fishing activities. No scientific data presented.

Russia: reports presented by Russian observers are in a limited descriptive format, which do not completely reflect on observer duties. Canadian observers deployed on Russian vessels provide their reports in the Canadian format as noted above. No scientific data presented.

## **Addendum 2. Review of the NAFO Observer/VMS Scheme (STACTIC W.P. 02/10, Revised)**

Further to the 1998 evaluation of the Observer and Satellite Tracking Program STACTIC has reviewed the questions asked at that time and has revised the questions as follows:

### **Questions:**

1. Who employs the observers?
2. How are they recruited?
3. What are the qualifications required for observer recruits?
4. What are the training standards?
5. How is the training delivered and what is the process for verifying that observers have successfully completed training?
6. Is the 100% coverage requirement being adhered to? i.e. are observers deployed to all vessels fishing in the Regulatory Area?
7. How do the observers meet all requirements regarding independence and impartiality?
8. Are observers nationals of the flag state of the vessel?
9. Are all observer reports submitted to the NAFO Secretariat?
10. Are observer reports submitted to the Secretariat within 30 days of completion of the trip?
11. Are all observer reports submitted to officials of the Contracting Party? Who receives the reports?
12. How is the term "trip" defined by the Contracting Party?
13. Are observer reported infringements reported to NAFO inspection vessels within 24 hours?
14. What are the procedures for briefing and de-briefing observers prior to and following trips to sea?
15. Are the observer reports available to scientists, and to what extent do they make use of the reports?
16. Do the observer reports meet all of the requirements set out in the Conservation and Enforcement Measures, in terms of content and format?
17. Do observers report on the functioning of satellite tracking systems?
18. Have observers been provided with suitable accommodations, board and cooperation from fishing vessels masters and crews?
19. What procedures are in place for the Contracting Party to follow up on observer reports which identify irregularities/infringements?
  - What analysis is conducted?
  - What reports are prepared?
  - How are the reports/analysis used to take corrective action?
  - What corrective action is taken?
20. What are the costs of deploying observers? Who is responsible for paying these costs?
21. What are the costs in Canadian dollars in 1998, 1999, 2000 and 2001 of traditional enforcement methods? What number of boardings and sightings were achieved each year?
22. What level of compliance is indicated by the observer reports? i.e. how many potential cases of non-compliance have been detected by observers and how many infringements have been detected by traditional means of inspection in 1998, 1999, 2000 and 2001? What were the nature of the infringements detected?

**Addendum 3. Abbreviated responses to questions on NAFO Observer/  
VMS Scheme (STACTIC W.P. 02/16)**

<b>Question</b>	<b>Canada</b>	<b>Den – Faroes</b>	<b>Den – Greenland</b>
1	Government-contracted third party	Faroes Fishery Control (FFC)	Greenland Fisheries Licence Control Authority (GFLK)
2	Third party requiring screening qualification and security checks	FFC	Newspaper ads and personal recommendations
3	Marine experience: navigational, fishing gear, biological and enforcement	Marine experience: navigational, fishing gear, etc.	Knowledge of fishery, navigational skills, etc.
4	20 day training	Short course on enforcement and scientific data	8-10 weeks fishery regulations, additional sampling and 1 year trainee
5	Successful completion of exam after training	Must complete courses	Training at Fishing School + authorized institutions.
6	Yes	Yes	Yes
7	Prohibited from monetary gain from fishing industry	Authorized and employed by FFC	Employed and paid by GFLK
8	Yes	Yes	Yes
9	Yes	No	Yes
10	Yes	No	Yes (some administrative delays)
11	Yes (DFO)	No (FFC)	Yes (GFLK)
12	When catch is landed	When catch is landed	Landing of completed catch
13	Yes	No information on infringements received	Yes
14	Data package for fishery, contractor check tasks	Briefing and preparation by FFC	All observers are called in for briefing and debriefing
15	Yes	Yes	Available but not used
16	Yes	Yes (in terms of content)	Yes (also logbook)
17	Yes/also by FMC	No	Yes with the FMC
18	Yes	Yes	Yes
19a	Deployment of patrol aircraft to closure of fishery	If infringements are identified case will be investigated	Vessel is inspected and observer and master questioned
19b	Less serious offence observers consult with supervisor	-	Port inspection and if infringements, special report for legal action
19c	Violations entered into violation database	-	Basis for administrative warnings, etc.
19d	Used as witnesses	-	Administrative legal warnings
20	\$300/day + travel	1,800,000 Dkr Government	?
21	Government – groundfish/ Industry – shrimp	N/A	GFLK
22	10,800,000 per year + additional 5,000,000 military	N/A	N/A
22	-	N/A	Improved catch reporting
23	For NRA no violations since prior to 1998.	N/A	Logbook catches more accurate and reliable.

Question	Estonia	EU	Iceland
1	Environmental Inspectorate	Contracts observer providers through public tender	Icelandic Directorate of Fisheries
2	Must pass training course	N/A	Vacancy announcement by Government rules
3	Physically/mentally capable. Fisheries, marine or biological experience favorable.	Background as fishery inspector, navigation, marine biology	Desired assets experience as Captains or officers of fishing vessels
4	Based on Canadian Observer Manual	N/A	Short course on CEM by Directorate + Research Institute for scientific samples
5	3-4 weeks training course + tested on completion	In accordance with NAFO Scheme, EU inspectors check if not, not-remployed.	Must complete courses
6	Yes	Yes	Yes (voluntary basis)
7	No relationship to company or representatives of vessel owners	Declaration stating no financial or other relations with fishing industry	No relations to the vessel
8	Yes	Yes (EU Member States)	Yes
9	Yes	Yes	Yes
10	Yes (some delays)	No (Service Provider then NAFO)	Yes (as of 2002)
11	Yes (Environmental Inspectorate)	Yes (EU Commission + Member States)	Yes (Directorate of Fisheries)
12	Observer's departure and return	Observer's departure and return	From harbour to harbour
13	Yes	Yes	Yes (to Directorate then to NAFO)
14	Briefed on special requirements, etc. debriefed on any unusual activities, etc.	Service provider does the briefing and debriefing	Briefed and debriefed by the Sea Surveillance Dept.
15	Yes (Estonian Marine Institute)	Available but seldom used	Yes
16	Yes	Yes	Not consistently and improvements being made
17	Yes	Yes	Yes
18	Yes	Yes with few exceptions	Yes
19a	Data compared to logbooks and if any differences master contacted immediately	Reports are checked for infringements and inspection authorities are informed	This would be done on case by case basis.
19b	-	Service Provider send provisional information to Commission weekly	-
19c	-	Corrective action on basis of inspection	-
19d	-	Information used for policy making	-
20	150,000 Euro/year; State budget	2,075,332 Euro/year; Community budget	Approx 200 USD by vessel owner
21	N/A	2,500,000 Euro; 2.2 Community budget; 3. Spain	N/A
22	N/A	See EU review	N/A
23	N/A	32 infringements	N/A

Question	Japan	Lithuania	Norway
1	Public-service by Government	Department of Fisheries	Contracted Canadian company (Seawatch)
2	Introduced by research institutes	Completed training courses	Advertised competition by Seawatch
3	Knowledge and experience with respect to fishery and biology	Requirements for recruitment of observers now in preparation	Marine experience, navigation, fishing gear, biological and enforcement training.
4	Observer training project by Government	Training standards in preparation	3 weeks training
5	Must pass exam and practice for observer	-	Exam and certification
6	Yes	Yes	Yes
7	Observer jobs only and employed by Public Service	Perform only duties described in CEM	Independent company no links to shipowners or crew
8	Yes	Yes plus others that are certified	No
9	Yes	Yes (some missing due to reorganization)	Yes
10	Yes	Not all	Yes
11	Yes (Fisheries Agency of Japan)	Yes (Fisheries Dept.)	Yes (Directorate of Fisheries)
12	Leaving port to arrival at port	Observer to and from vessel	Time spent in Regulatory Area
13	?	No such case	Yes
14	Briefing once a year	Briefing at Fisheries Department	Directorate informs Seawatch of requirements & Seawatch checks that duties were performed.
15	Yes (stock assessment)	Yes (but not used)	Not on a regular basis
16	Yes	All requirements except scientific	Yes (some complaints on handwriting)
17	No	Yes	No (responsibility of FMC)
18	Yes	Yes	Yes
19a	Position, catch effort, by-catch, etc.	Irregularities are discussed and owners must make changes	Evaluation and possible reaction by legal office. If infringement is detected master must explain.
19b	Noon position, set & hauling position, etc.	-	Authorities decide on action & report to NAFO
19c	Compare observer rpt. With catch report. If different correct or improve.	-	
19d	Correct reports; suspend fishing or move	-	
20	10,000,000 yen/person/year (?)	Owners are responsible to pay through Fisheries Department	340 Cnd + travel + daily allowances; paid by shipowners
21	17,000,000 yen for satellite tracking system	-	N/A
22	See Japanese comment	-	N/A
23	1 master did not completely understand CEM	Answer later	Observer 1; Inspections 4 (2 are questionable)

Question	Russia	USA
1		US Government
2		Universities and periodicals which target interested individuals
3		University degree in biological science or fishery management
4		Intensive 2-week training
5		Must pass 4 written exams
6		Yes (but not currently fishing)
7		No connection or interests in fishing industry
8		Yes
9		N/A
10		N/A
11		N/A
12		N/A (entry & departure from NRA)
13		N/A
14		N/A
15		N/A (yes for domestic)
16		N/A
17		N/A (yes for domestic)
18		N/A
19a		N/A
19b		N/A
19c		N/A
19d		N/A
20		N/A (estimate \$550 US per day – Government paying)
21		N/A
22		N/A
23		N/A

**Addendum 4. Questions to each Contracting Party on the application of VMS  
(STACTIC W.P. 02/11, Revision 2)**

1. Are all your vessels equipped with VMS?
2. What is the frequency of messages sent by vessels to the FMC?
3. Do the messages contain:
  - Vessel identification?
  - Most recent position of the vessel?
  - Date and time of the fixing of the position?
  - Other data elements? If yes, please specify.
4. Is the FMC equipped with the appropriate computer hardware and software to process the transmissions automatically?
5. In the event of equipment failure, what are the obligations to repair or replace the equipment and how soon must such repairs/replacement be made?
6. Do vessels with defective VMS equipment communicate reports to the FMC, and if so with what frequency?
7. Are VMS reports communicated to NAFO?
8. What is the frequency of the transmission of such reports to the NAFO Secretariat?
9. Are the reports and messages in accordance with the VMS position report format?
10. Do inspection vessels in the Regulatory Area receive the VMS reports from the NAFO Secretariat?
11. What are the costs of the system for:
  - Installation of the equipment?
  - Transmissions?
  - FMC (hardware/software and day to day management)?
12. Is the ship borne VMS installation (ALC) a dedicated VMS-unit or is it a part of the vessels communication system?
13. Is the ALC an intelligent terminal with memory which transmit status information to the FMC such as power failure, antenna failure (disconnection), satellite loss and non-communicated messages?
14. What is the general experience about the stability of the VMS system and units and what has been the main problem?
15. Have there been any attempts of tampering with the ALC?

**Addendum 5. Abbreviated Responses to Questions on the Application of VMS (STACTIC W.P. 02/17)**

Question	Canada	Faroes	Greenland	Estonia	EU	Iceland	Japan	Lithuania	Norway	Russia	USA
1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
2	6 hrs	1 hr	1 hr	6 hrs	6 hrs	1 hr	1.5-2.0 hrs	Technical problems with FMC	1 hr	1 hr	
3a	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	
3b	yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	No	
3c	yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	
3d	Course/speed	Course/speed	Course/speed	Speed	Optional	Course/speed	Course/speed	-	Course/sp	No	
4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	eed	Yes	
5	Must leave area	Repair at port before next trip	← Same	← Same	← Same	← Same	Reserve unit + ← Same	-	Repair at port before next trip	Repair within 10 days or go to port	
6	No	24 hrs	24 hrs	24 hrs	24 hrs	12 hrs	24 hrs	-	12 hrs	6 hrs	
7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	
8	12 hrs (2)	1 hr	1 hr	6 hrs	6 hrs	6 hrs	6 hrs	-	6 hrs	6 hrs	
9	Yes	Yes	Yes (NEAFC)	Yes	Yes	Yes	Yes	-	Yes	No	
10	Yes	N/A	N/A	N/A	Yes	N/A	N/A	-	N/A	N/A	
11a	1500-2000C and	24,000 Dkr	4500 Euro	150,000 Euro	3,300 Euro	3,000 US	300,000-400,000 Yen	Will answer later	6000 Cnd	-	
11b	0.25-0.50 Cnd	1500 US /month	2Euro/day/vessel	20,000 Euro/year	Approx. 0.20 Euro	0.45 US	980 Yen/day		100 Cnd	-	
11c	10,000 hardware 20,000 yearly	N/A	35,000 Euro	15,000 Euro/year	>150,000 Euro	-	17,000,000 Yen/year		100,000 Cnd	-	

**Addendum 6. Individual Contracting Party Responses to Questions  
in STACTIC W.P. 10 (Rev.) and STACTIC W.P. 11 (Rev.)**

The individual responses submitted by Contracting Parties to the questions in STACTIC W.P. 10 (Rev.) and STACTIC W.P. 11 (Rev) are herewith attached.

**Review of NAFO Observer/VMS Scheme  
STACTIC Questionnaire**

**Canadian Response**

QUESTIONS	ANSWERS
Observer	
1. Who employs the observers?	<p>The observers are employed by a Government-contracted (Department of Fisheries and Oceans through the Department of Public Works and Government Services) third party company, primarily Seawatch Ltd of St. John's, Newfoundland. Seawatch Ltd has been providing observer coverage in Canada since 1978.</p> <p>Two other companies provide observer coverage to the Government of Canada in the provinces of Nova Scotia, New Brunswick, Quebec, and Prince Edward Island. These companies are also authorized to provide observer coverage in the NAFO Regulatory Area.</p>
2. How are they recruited?	Observers are hired by the third party companies through advertised competition requiring screening, qualification and security checks. See attachment #1.
3. What are the qualifications required for observer recruits?	Qualifications are outlined in the attachment #1 but include, for example, as mandatory requirements, the ability to pass DFO security clearance, Canadian citizenship or landed immigrant status, mobility and availability on short notice and willingness to remain at sea for extended periods, ability to write technical reports and, as desirable requirements, related maritime experience, experience in use of navigational aids and fishing gear, knowledge of foreign languages, and biological research and/or enforcement training and experience.
4. What are the training standards?	Observers are required to participate in a 20-day training session. The training syllabus is subject to the approval of DFO. See attachment #2. Classroom and on-site (wet-lab) training is provided. Qualified instructors provide training on various aspects of the course syllabus.
5. How is the training delivered and what is the process for verifying that observers have successfully completed training?	Refer to previous response. Successful completion of an examination is required at the end of the training session. Certification requirements are specified in Section 39.1 of the Fishery General Regulations. See attachment #3.
6. Is the 100% coverage requirement being adhered to? i.e. are observers deployed to all vessels fishing in the Regulatory Area?	<p>Yes. Canada requires all vessels fishing groundfish or shrimp in the NRA to carry an observer. The requirement is outlined as a mandatory condition of each fishing licence.</p> <p>However, in 2001, two vessel operators were detected by Canadian surveillance in the NRA without observers onboard.</p>

	<p>On May 10, 2001 the vessel Canadian Navigator was observed by aerial surveillance steaming in the NAFO Regulatory Area. On May 12, 2001 this vessel was inspected in port where it was determined that the vessel had fished in the NRA for a short period. The master was charged under the Fisheries Act for failing to hail entry/exit and for failing to carry an observer. The master appeared in court on August 24, 2001 and plead not guilty. The matter is awaiting trial.</p> <p>On July 30, 2001 the vessel Eastern Mariner was observed by aerial surveillance fishing in the NAFO Regulatory Area. The master was charged under the Fisheries Act for failing to hail entry/exit and for failing to carry an observer. The matter is awaiting trial.</p>
7. How do the observers meet all requirements regarding independence and impartiality?	<p>There are specific legislative requirements that prohibit an observer from holding a certificate of accreditation issued under the Professional Fish Harvesters Act or a fisher's registration card; from purchasing fish for the purpose of resale; and from owning, operating, managing, or being employed of/by an enterprise that catches, cultures, processes or transports fish. See attachment #4.</p> <p>As well, observers are supplied through a third party contract. Under Canadian law, these contracts must be at arm's length from government, i.e the government cannot enter into personal services relationship with observer and must contract through a designated employment company. There are also conflict of interest guidelines for observers that prohibit employment by fishing industry during periods between deployments.</p>
8. Are observers nationals of the flag state of the vessel?	Yes, all observers deployed on Canadian vessels are Canadian citizens.
9. Are all observer reports submitted to the NAFO Secretariat?	Yes.
10. Are observer reports submitted to the Secretariat within 30 days of completion of the trip?	Yes.
11. Are all observer reports submitted to officials of the Contracting Party? Who receives the reports?	Yes, the observer reports are submitted by the Contractor to the Coordinator, Observer Program, Department of Fisheries and Oceans.
12. How is the term "trip" defined by the Contracting Party?	A fishing trip to the NAFO Regulatory Area concludes when a vessel lands its catch.
13. Are observer reported infringements reported to NAFO inspection vessels within 24 hours?	Yes, observer reported infringements (which have been incorporated into the Canadian Fisheries Act) are reported immediately to a Canadian Fishery Officer.
14. What are the procedures for briefing and de-briefing observers prior to and	Prior to any observer deployment, DFO indicates to the contractor the requirements of a particular fishery. On this basis, the contractor provides the observer with a detailed briefing on the anticipated fishery. All regulatory and

following trips to sea?	scientific requirements for the deployment are discussed. The observer is given a “data-package” outlining the type of information to be collected on the deployment as well as the frequency with which this information will be provided to DFO. Upon completion of the deployment, the results of the trip are discussed by the observer and contractor to ensure all tasks were completed and any issues were identified.
15. Are the observer reports available to scientists, and to what extent do they make use of the reports?	Yes, all observer data is forwarded to Canadian scientists for review and assessment and is entered into a database. This information is used by Canadian scientists at annual Scientific Council meetings.
16. Do the observer reports meet all of the requirements set out in the Conservation and Enforcement Measures, in terms of content and format?	Yes, Observer reports meet all requirements including: <ul style="list-style-type: none"> <li>(i) record of fishing activities of the vessel and verification of the position of the vessel;</li> <li>(ii) estimates of catch identifying composition and discards, by-catches and undersized fish;</li> <li>(iii) record of gear type, mesh size and attachments;</li> <li>(iv) verification of logbooks (species composition/quantities, round/processed weight);</li> <li>(v) catch and effort data on a set-by-set basis including latitude/longitude, depth, catch composition and discards;</li> <li>(vi) record of sampling;</li> <li>(vii) submission, within 30 days following completion of an assignment, of a written report.</li> </ul>
17. Do observers report on the functioning of satellite tracking systems?	Yes, although, in recent months, this responsibility is generally completed by the FMC.
18. Have observers been provided with suitable accommodations, board and cooperation from fishing vessels masters and crews?	Yes, observers are generally provided best available accommodations and receive good cooperation. In instances where non-cooperation is observed, the matter is investigated by Fishery Officers and, where appropriate, charges are laid.
19. What procedures are in place for the Contracting Party to follow up on observer reports which identify irregularities/infringements? <ul style="list-style-type: none"> <li>▪ What analysis is conducted?</li> <li>▪ What reports are prepared?</li> <li>▪ How are the reports/analysis used to take corrective action?</li> <li>▪ What corrective action is taken?</li> </ul>	<p>Occurrence reports are forwarded to the Department of Fisheries and Oceans during the deployment period for all contraventions of the Fisheries Act (which has incorporated the provisions of the Conservation and Enforcement Measures), either on an immediate basis for serious offences or as part of the weekly report for less serious offences.</p> <p>When a report of a serious offence is received, the Department of Fisheries &amp; Oceans will respond through a variety of methods ranging from deployment of patrol aircraft or vessels to closure of fisheries.</p> <p>When a report of a less serious offence is received, a Fishery Officer will be assigned to investigate the matter, establish a violation file, and conclude the matter in consultation with his/her supervisor.</p>

	In all cases, observer-reported violations are entered into the Departmental Violation System (DVS database). Observers are used as witnesses, often the primary witness, for charges stemming from observer reports.
20. What are the costs of deploying observers? Who is responsible for paying these costs?	The cost of observers is approximately \$300/day + travel expenses. Generally, costs are billed to the owner/operator although, on occasion, observer coverage is government-funded. For example, government covers the costs of observer coverage on groundfish vessels operating in the NAFO Regulatory Area. Industry covers the cost for shrimp vessels fishing in Division 3M.
What are the costs of traditional enforcement methods?	The approximate cost of traditional surveillance is \$10.8M/year, exclusive of military support estimated at an additional \$5.0M.
22. What are the results of observer coverage, VMS coverage, and other traditional control methods as evaluated as per NAFO FC 98/3, Annex 4.	
23. What level of compliance is indicated by the observer reports? i.e. how many infringements have been detected by observers and traditional means of inspection over the 4 year period 1998-2001?	There is a high level of compliance indicated by observer reports. For the NRA, no observer reported violations have been identified since prior to 1998.
<b>VMS</b>	
1. Are all your vessels equipped with VMS?	Yes, for all vessels that fish groundfish or shrimp in the NRA. Canadian vessel owners have a choice obtaining one of three unique VMS equipment packages, all of which meet DFO requirements.
2. What is the frequency of messages sent by vessels to the FMC?	The messages are automatically sent every 6 hours but can be changed upon a request from FMC.
3. Do the messages contain: <ul style="list-style-type: none"> <li>▪ Vessel identification?</li> <li>▪ Most recent position of the vessel?</li> <li>▪ Date and time of the fixing of the position?</li> <li>▪ Other data elements? If yes, please specify.</li> </ul>	The current messages sent include: <ul style="list-style-type: none"> <li>a. Vessel name</li> <li>b. Side Number</li> <li>c. Call sign</li> <li>d. Position (latitude/Longitude) (decimal degrees)</li> <li>e. Date and Time</li> <li>f. Course and Speed</li> </ul>
4. Is the FMC equipped with the appropriate computer hardware and	Canada's FMC is equipped with a desktop computer capable of providing automated message in the formats outlined under the NAFO Conservation and Enforcement Measures.

software to process the transmissions automatically?	The messages are reviewed twice a day for accuracy and forwarded to NAFO Secretariat by an FTP process.
5. In the event of equipment failure, what are the obligations to repair or replace the equipment and how soon must such repairs/replacement be made?	<p>Canadian vessel masters are required by condition of licence to comply with the following;  <u>VESSEL MONITORING SYSTEMS (VMS)</u></p> <p>1. Effective January 1, 2001, vessels fishing groundfish and shrimp in the NAFO Regulatory Area (NRA) shall be equipped with an electronic monitoring system approved by DFO, transmitting positional information at least once every 6 hours.</p> <p>2. The master shall ensure that the electronic monitoring system is fully operational and in use at all times while fishing in the NRA.</p> <p>3. The master shall not alter or tamper with any part of the electronic monitoring system, or destroy, dispose of, or remove the electronic monitoring system or associated electronic records or storage media.</p>
6. Do vessels with defective VMS equipment communicate reports to the FMC, and if so with what frequency?	No, the vessels are required to have an operational Vessel Monitoring System onboard and are not permitted in the NAFO Regulatory Area if it is not operational.
7. Are VMS reports communicated to NAFO?	All VMS reports are provided to the NAFO Secretariat via the FTP protocols as specified by the Secretariat. However, on one occasion in 2002, the vessel monitoring system malfunctioned at the FMC (service provider) and positional data was lost for a period of two days on one vessel.
8. What is the frequency of the transmission of such reports to the NAFO Secretariat?	The position records are forwarded to the NAFO Secretariat twice daily but include records on 6 hour intervals.
9. Are the reports and messages in accordance with the VMS position report format?	The FMC is setup to produce the NAFO VMS records in the formats outlined under the NAFO Conservation and Enforcement Measures Part III E.
10. Do inspection vessels in the Regulatory Area receive the VMS reports from the NAFO Secretariat?	Canadian Inspection Vessels are provided surveillance data on a daily basis via e-mail or fax.
11. What are the costs of the system for: <ul style="list-style-type: none"> <li>Installation of the equipment?</li> <li>Transmissions?</li> <li>FMC (hardware/software and day to day management)?</li> </ul>	<p>The system costs are approximately:</p> <p>Installation of the equipment - \$1500-2000</p> <p>Transmissions - \$0.25-0.50/message</p> <p>FMC (hardware/software and day to day management) - \$10,000 hardware, \$20,000 annually.</p>

**OBSERVER STATEMENT OF QUALIFICATIONS****Mandatory Qualifications**

- Ability to pass DFO security clearance to the Enhanced Reliability level.
- Canadian citizen or landed immigrant status.
- Good health and physical condition.
- Not prone to motion sickness.
- Mobility and availability on short notice and willingness to remain at sea for extended periods.
- Minimum of successful completion of secondary education.
- Ability to write technical reports.
- Ability to complete computer and narrative data forms.
- In possession of valid foreign travel documents.
- Be bondable.
- Mature, responsible and capable of working independently.
- Proficiency in English.

**Desirable Qualifications**

- Related maritime experience, preferable onboard a commercial fishing vessel.
- Experience in use of navigational aids and fishing gear.
- Knowledge of foreign languages
- Familiarity with major fisheries and fishing methods used.
- Biological research and/or enforcement training and experience.
- Marine Emergency Duties (MED) certificate.

## **FISHERIES OBSERVER TRAINING COURSE OUTLINE**

### **Acts and Regulations**

- Overview of Acts and Regulations
- Structural Organization of Fisheries Regulations
- Referencing Acts and Regulations
- Relevance of Regulations to Observers
- Amendment Process

### **Fisheries Management**

- Necessity of Fisheries Regulations
- The Objectives of Fisheries Management
- Regulatory Measures
- Licenses
- Management and Conservation Harvesting Plans

### **Fishing Gear**

- Trawl Nets
- Longlines
- Gillnets
- Purse Seining
- Trap Nets
- Weirs
- Tended Lines
- Harpoons
- Jigging
- Trolling
- Crab Nets
- Sablefish Trap
- Lobster Traps
- Scallop Rakes
- Clam Dredge
- Legislation and Conditions of License Respecting Fishing Gear

### **Vessel Operations and Requirements**

- Daily Vessel Operations
- Navigation
- Production
- Safety
- Logbooks

### **Sampling and Fisheries Science**

- Fish Populations
- Fisheries Science
- Species Identification
- Sampling Methodology
- Special Requirements

### **Catch and Effort**

- Catch and Effort
- Catch Estimation
- Determining Catch Composition

- Discard Estimation
- Estimates from Monitoring Production
- Bycatch Regulations
- Small Fish Protocol
- Enforcement and Management Issues Regarding Catch

#### Operational Procedures

- Observer Duties
- Professionalism and Objectivity
- Situation Reports
- Communication Procedures
- Trip Report
- Time Management
- Daily Note Taking
- Irregularities
- Courtroom Presentation
- Briefing and De-briefing

- Fishing Vessel Types
- Vessel Operations
- Species Identification Features
- Species Length Measurements
- Internal Anatomy

*Fishery (General) Regulations*  
*Certificate of Designation*

**39.1** (1) The Regional Director-General may designate as an observer any corporation that has submitted

(a) a description of a program that is capable of accurately collecting and compiling information obtained by individual observers in the course of their duties under paragraph 39(2)(b) and that includes

- (i) a business plan for the corporation that describes the organization of the corporation, its human resources and its plan of operations,
- (ii) a plan for the training and independent examination of individuals who will be designated as observers to perform the duties described in paragraph 39(2)(b), and for the supervision of those observers, and
- (iii) a quality control system for ensuring the integrity of the information collected and compiled that identifies a person responsible for the system and his or her duties, and that describes the operation of the system, the manner in which records are kept, the control points, the verification procedures and the process for correcting deficiencies in the system;

(b) a statement that discloses all conflicts of interest that the corporation or any of its directors, officers or employees, or any shareholder having a significant interest in the corporation may have with the fishing industry, and that explains how those conflicts are to be resolved; and

(c) evidence of the corporation's financial viability, or a performance bond guaranteeing three months of operation.

(2) An observer designated under subsection (1) has the following duties:

- (a) to comply with the program submitted under paragraph (1)(a);
- (b) to transmit to the Department, in a timely manner, the information collected and compiled as part of the program;
- (c) to disclose all conflicts of interest that arise after the observer's designation and explain how they are to be resolved; and
- (d) to resolve any conflicts of interest disclosed under paragraph
- (e) or paragraph (1)(b).

(3) The Regional Director-General may revoke the designation of an observer designated under subsection (1) if the observer

- (a) falsifies any information transmitted in the course of its duties or fails to perform those duties; or
- (b) fails to maintain the performance bond submitted under paragraph (1)(c).

**39.2** The designation of an observer is valid for

- (a) six months for the first designation and 36 months for any subsequent designation, in the case of an individual; and
- (b) 12 months for the first and second designations and 24 months for any subsequent designation, in the case of a corporation.

**39.3** (1) No person shall submit false information to the Regional Director-General for the purpose of obtaining their designation as an observer.

(2) No observer shall falsify any information that they transmit in the course of their duties. SOR/98-481, s. 4.

- 40.** (1) The Regional Director-General shall provide each observer with a certificate that certifies the observer's designation as such and specifies the duties that have been assigned to the observer.
- (2) An observer shall, on entering any place to perform the observer's duties, on request, show the certificate of designation to the person in charge of the place.

Fishery (General) Regulations  
*Designation and Duties*

**39.** (1) The Regional Director-General may designate as an observer any individual who is qualified and trained to perform any of the duties described in subsection (2) and who

(a) does not hold a certificate of accreditation issued under the Professional Fish Harvesters Act, S.N. 1996, c. P-26.1, or a fisher's registration card;

(b) does not purchase fish for the purpose of resale; and

(c) is not an owner, operator, manager or employee of an enterprise that catches, cultures, processes or transports fish.

(2) The Regional Director-General shall assign to an observer designated under subsection (1) one or more of the following duties:

(a) the monitoring of fishing activities, the examination and measurement of fishing gear, the recording of scientific data and observations and the taking of samples;

(b) the monitoring of the landing of fish and the verification of the weight and species of fish caught and retained; and

(c) conducting biological examination and sampling of fish.

(3) Where an observer is assigned the duties set out in paragraph (2)(a), the observer shall perform the duties while on board a fishing vessel.

(4) Where an observer is assigned the duties set out in paragraph (2)(b), the observer shall perform those duties while at a fish landing station.

(5) Where an observer is assigned the duties set out in paragraph (2)(c), the observer shall perform the duties while at a fish landing station.

(6) The Regional Director-General may revoke the designation of an observer designated under subsection

(1) if the observer

(a) no longer complies with the criteria set out in that subsection;

(b) performs his or her duties in respect of a fisher with whom the observer is not dealing at arm's length;

(c) falsifies any information transmitted in the course of his or her duties or fails to perform those duties; or

(d) fails to perform his or her duties in a competent and professional manner. SOR/98-481, s. 3.

**Provisional response by Denmark (Faroe Islands & Greenland) to  
STACTIC WP 02/10**

**FAROE ISLANDS**

1. The Faroese Fisheries Control
2. The observers are recruited by the Faroese Fisheries Control.
3. The qualifications required are experience from fishing vessel, knowledge of navigation, fishing operation, gear types, etc.
4. The Faroese Fisheries Control run a short course for the observers on NAFO Control and Enforcement Measures relevant to the task of observers. The Faroese Fisheries Laboratory run a training course on how to collect the scientific data required.
5. There is no process for verifying that the observers have successfully completed training, except that they completed the mentioned courses.
6. Observers are deployed to all Faroese fishing vessels in NAFO Regulatory Area.
7. In order to meet requirements regarding independency and impartiality, the observers on Faroese vessels in the RA are authorized and employed by the Faroese Fisheries Control.
8. All observers on Faroese vessels are nationals of the flag state.
9. No.
10. No.
11. The Faroese Fisheries Control receives the observer reports. Not all observer reports are submitted.
12. The period from the day the observer enters the vessel and the vessel lands its catch.
13. No information on apparent infringement identified by an observer has been received.
14. Prior to the trip the observers are contacted by the Fisheries Control for briefing and preparation.
15. The scientific data collected by Faroese observers has been used in several papers submitted to the Scientific Council.
16. Different format has been used, but the observer reports meet the requirements set out in the Conservation and Enforcement Measures in terms of content.
17. No
18. There has not been any complaints from observers on the accommodations and facilities.
19. There are no specific procedures in place to follow up on observers reports which identify irregularities. If infringements are identified in the observers reports the case will be investigated. Based on this information it will be determined whether action should be taken according to Faroese legislation.
20. In 2001 the costs of the observers was about 1,8 mill. Danish kr. The local government is responsible for paying these costs.
21. N/A
22. N/A
23. N/A

**Provisional response by Denmark (Faroe Islands & Greenland)  
to STACTIC WP 02/11**

**FAROE ISLANDS**

1. All Faroese vessels fishing in the NAFO Regulatory Area are equipped with VMS.
2. Messages are sent by vessels to the FMC with 1 hour frequency.
3. The messages contain
  - vessel name, side number, call signal
  - most recent position of the vessel
  - date and time of the fixing of the position
  - course and speed of the vessels. Possibilities for tracking of vessels.
4. Yes.
5. No specific rules. In the event of equipment failure the vessel is instructed to repair or replace the equipment as soon as possible.
6. Vessels with defective VMS equipment do communicate reports to the FMC at least daily.
7. VMS report are communicated to NAFO.
8. ... with 1 hour frequency.
9. Yes
10. N/A
11. The costs of the system:
  - installation of the equipment 24 000 dkr
  - transmission of 1500 \$ US per month
  - FMC (hardware/software and day to day management) N/A

## **Response by Denmark (Faroe Islands & Greenland) to STACTIC WP 02/10**

### **GREENLAND**

1. Who employs the observers?  
Greenland Fisheries Licence Control Authority (GFLK) employs the observers.
2. How are they recruited?  
They are recruited through newspaper ads and personal recommendations.
3. What are the qualifications required for observer recruits?  
Professional knowledge of fishery, navigational skills such as fishing skipper etc..
4. What are the training standards?  
8 to 10 weeks training course in fishery regulation and fishery control. Additional sampling courses arranged by Greenland Institute of Natural Resources. One year as trainee before they start working independently.
5. How is the training delivered and what is the process for verifying that observers have successfully completed training?  
The training is taking place at the Fishing School and other authorised institutions in Greenland.
6. Is the 100% coverage requirement being adhered to? i.e. are observers deployed to all vessels fishing in the Regulatory Area?  
Yes.
7. How do the observers meet all requirements regarding independence and impartiality?  
The observers are government employed and officials and as such paid by the Government.
8. Are observers nationals of the flag state of the vessel?  
Yes.
9. Are all observer reports submitted to the NAFO Secretariat?  
Yes.
10. Are observer reports submitted to the Secretariat within 30 days of completion of the trip?  
Yes, - However, delays may happen due to administrative delays
11. Are all observer reports submitted to officials of the Contracting Party? Who receives the reports?  
Yes, GFLK receives the reports.
12. How is the term “trip” defined by the Contracting Party?  
A trip is defined as from departure port with no fish on board (empty fishing holds) to arrival for a complete discharge.
13. Are observer reported infringements reported to NAFO inspection vessels within 24 hours?  
Yes, if they find any.
14. What are the procedures for briefing and de-briefing observers prior to and following trips to sea?  
All observers are called in for briefing and de-briefings.

15. Are the observer reports available to scientists, and to what extent do they make use of the reports?  
As such the reports used by Greenland is available but not used.  
However, logbooks-information and data will carry an indication that an observer was present during this trip.
16. Do the observer reports meet all of the requirements set out in the Conservation and Enforcement Measures, in terms of content and format?  
Yes as far as the shrimp fishery concerns. However, the logbook is also considered as a part of the report.
17. Do observers report on the functioning of satellite tracking systems?  
Yes. However, it is limited what observers can check on these systems and this must be in close cooperation with the FMC.
18. Have observers been provided with suitable accommodations, board and cooperation from fishing vessels masters and crews?  
Greenland observers are covered by national regulation and they must be provided with the similar accommodation and board as officers on board.
19. What procedures are in place for the Contracting Party to follow up on observer reports which identify irregularities/infringements?  
- What analysis is conducted?  
Upon arrival at Greenland port the vessel will be inspected and the observer and master questioned.  
- What reports are prepared?  
A port inspection report is prepared and if any infringements have been detected a special report to the Directorate is also prepared for further legal action.  
- How are the reports/analysis used to take corrective action?  
Form the basis for administrative warnings etc.  
- What corrective action is taken?  
Administrative legal warnings.
20. What are the costs of deploying observers? Who is responsible for paying these costs?  
GFLK is paying the full costs of the observers.
21. What are the costs of traditional enforcement methods?  
Since the seagoing inspection and control is carried out by the Danish Navy theses costs are not available.
22. What are the results of observer coverage, VMS coverage, and other traditional control methods as evaluated as per NAFO FC 98/3, Annex 4.  
Improved catch reporting. Such as catch positions and compositions.
23. What level of compliance is indicated by the observer reports? i.e. how many infringements have been detected by observers and traditional means of inspection over the 4 year period 1998-2001?  
  
The information and data recorded in the logbook of catches are much more accurate and especially the data on discards and by-catches are far more reliable.  
Highgrading in quota areas has been reduced to a minimum.

## **Response by Denmark (Faroe Islands & Greenland) to STACTIC WP 02/11**

### **GREENLAND**

1. Are all your vessels equipped with VMS?  
Yes, all Greenland vessels operation in the NRA are equipped with an Inmarsat-C ALC.
2. What is the frequency of messages sent by vessels to the FMC?  
A position report is transmitted every hour.
3. Do the messages contain:
  - Vessel identification? Yes.
  - Most recent position of the vessel? Yes.
  - Date and time of the fixing of the position? Yes.
  - Other data elements? If yes, please specify. Yes; Course and speed.
4. Is the FMC equipped with the appropriate computer hardware and software to process the transmissions automatically?  
Yes, all VMS messages are transmitted automatically. Hail messages are manually processed.
5. In the event of equipment failure, what are the obligations to repair or replace the equipment and how soon must such repairs/replacement be made?  
The master or owner must replace or repair the ALC at first port of call.
6. Do vessels with defective VMS equipment communicate reports to the FMC, and if so with what frequency?  
Yes, ones every 24 hours
7. Are VMS reports communicated to NAFO?  
Yes.
8. What is the frequency of the transmission of such reports to the NAFO Secretariat?  
Once every hour.
9. Are the reports and messages in accordance with the VMS position report format?  
For the time being they are in accordance with the NEAFC format.
10. Do inspection vessels in the Regulatory Area receive the VMS reports from the NAFO Secretariat?  
No Greenland inspection present in the NRA.
11. What are the costs of the system for:
  - Installation of the equipment?  
ALC: Approx. € 4.500,- Inmarsat-C vessel installation.
  - Transmissions?  
Approx. € 2,00 /day pr. vessel
  - FMC (hardware/software and day to day management)?  
Hardware: Approx. € 130.000,-;  
Software: Approx. € 80.000,-  
Day to day management: Approx. € 35.000,-.<sup>1</sup>

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<sup>1</sup>) Software maintenance and communication only

### **Response by Estonia to the questions in STACTIC Working Paper 02/10**

1. The Environmental Inspectorate employs observers.
2. All candidates have to pass the observers' training course.
3. Must be physically and mentally capable to carry out observers' duties, fisheries, marine or biological background is favourable.
4. Training is based on the Canadian observers' manual.
5. 3-4 weeks training course (depends on the background of candidates) is carried out when needed. There is a test at the end of the course covering all main parts of the training.
6. Not one vessel flying Estonian flag is allowed to fish in the NAFO area without an observer on board.
7. The Environmental Inspectorate employs observers; they cannot have any relationship to the company or representatives of the company that owns the vessels observer is deployed on.
8. All observers on board Estonian vessels are Estonian citizens.
9. All observer reports have been submitted to the NAFO Secretariat.
10. There have been some delays on submitting reports within 30 days. However, no delays are noticed from 2002.
11. The Environmental Inspectorate collects all observer reports.
12. Trip – time between observer's departure and return to the home country.
13. Yes if discovered.
14. Observers are briefed on fisheries, special requirements/restrictions, reports, and materials to be collected during the trip. De-briefing shall bring out, inter alia any unusual/suspicious activities during the trip, failure following national and NAFO rules by the master/crew of the vessel or observer.
15. All observer reports are available for the scientists and are regularly sent to the Estonian Marine Institute for analysis.
16. Yes.
17. Yes.
18. Yes.
19. Information in the observer reports is compared with data transferred by the master of the vessel, logbook entries and VMS data. In the case of any difference the contact is made with observer and master/vessel owner immediately.
20. Costs about 150 000 EUR/year, paid from the State budget.
21. No information at the moment.
22. -
23. No data available.

**Response by Estonia to the questions in STACTIC Working Paper 02/11**

1. All vessels fishing outside of Estonian waters must be equipped with VMS.
2. Frequency of messages from vessels fishing in the NAFO area is 6 hours.
3. Messages contain vessel identification, position, date, time and speed at this position, calculated speed from previous position.
4. The Terravision program is used for data processing.
5. In the case of technical failure or non-functioning the master of the vessel has to report the position of the vessel every 24 hours until device is fixed. The device on board has to be fixed within one month, in the case of trip longer than one month the vessel is not allowed to start new trip before system is functioning.
6. 24 hours
7. Yes
8. Every 6 hours
9. Yes
10. Yes
11. Installation of the equipment ~150 000 EUR, transmissions (incl. vessels in other areas) ~20 000 EUR/year, FMC ~15 000 EUR/year.

**Replies of the EU to the questions pointed out in STACTIC Working  
Paper 02/10 (revised)**

1. Who employs the observers?

The European Commission contracts observer providers through a public tender procedure.

Over the past years the Commission concluded contracts with:

- Exploration Logistics (ExLog);
  - Marine Resources Assessment Group (MRAG); and,
  - McAlister and Partners
- all based in the UK

2. How are observers recruited?
3. What are the qualifications required for observer recruits?

The observer provider is recruiting observers.

In accordance with the contract concluded observers must have a background as:  
fisheries inspector, navigator, marine biology.

Most observers are recruited from a professional fisheries observers pool. Most observers have a background in marine biology.

4. What are the training standards?
5. How is the training delivered and what is the process for verifying that observers have successfully completed training?

Training is acquired by the service provider in accordance with the standards of the NAFO Scheme.

Each observer is provided with an observer manual.

EU inspectors check whether observers are well trained. Observers which do not meet the requirements, are not re-employed again by the observer provider.

6. Is the 100% coverage requirement being adhered to? i.e. are observers deployed to all vessels fishing in the Regulatory Area?

Yes. It is prohibited to fish in the NAFO Regulatory Area without an observer on board.

7. How do the observers meet all requirements regarding independence and impartiality?

Observers must provide declaration stating that it has no financial or other relations with the fishing industry.

8. Are observers nationals of the flag state of the vessel?

Observers have the nationality of one of the EU Member States.

In most cases the observer has a nationality different than the vessel on which he is deployed.

9. Are all observer reports submitted to the NAFO Secretariat?

Yes.

10. Are observer reports submitted to the Secretariat within 30 days of completion of the trip?

No. The report is made in handwriting on board and completed after leaving the vessel on which the observer was deployed. Subsequently it is provided to the observer company which is logging all data in a database. The observer provider transmits the report to the NAFO Secretariat.

11. Are all observer reports submitted to officials of the Contracting Party? Who receives the reports?

The observer provider transmits the report to:

- The European Commission (report hard copy and disc and original observer books)
- the flag Member State (report hard copy)

The master of the vessel will be provided with a copy on request.

12. How is the term “trip” defined by the Contracting Party?

In accordance with NAFO rules trip means the assignment of an observer to a vessel.

An assignment of an observer to a vessel does not coincide necessarily with a fishing trip. Community fishing vessels may operate fishing trips of 6 months whilst observers trips will normally not last more than 3 months.

13. Are observer reported infringements reported to NAFO inspection vessels within 24 hours?

Where appropriate, yes. (In cases where inspectors have a fair chance to cite an infringement.)

14. What are the procedures for briefing and de-briefing observers prior to and following trips to sea?

The observer provider briefs the observer prior to its trip and organizes also a debriefing following a trip.

Inspectors are in principle not involved in briefings and debriefings.

15. Are the observer reports available to scientists, and to what extent do they make use of the reports?

Observer reports are available to scientists but they do not make a lot of use of all data collected. Scientists criticize in many cases the quality of the data collected by NAFO observers.

During certain fishing trips, scientific Institutes deploy their own observers in addition to NAFO observer.

16. Do the observer reports meet all of the requirements set out in the Conservation and Enforcement Measures, in terms of content and format?

Yes

17. Do observers report on the functioning of satellite tracking systems?

Yes

18. Have observers been provided with suitable accommodations, board and cooperation from fishing vessels masters and crews?

Yes, with few exceptions.

19. What procedures are in place for the Contracting Party to follow up on observer reports which identify irregularities/infringements?
- What analysis is conducted?
  - What reports are prepared?
  - How are the reports/analysis used to take corrective action?
  - What corrective action is taken?

The observer reports are checked for potential irregularities/infringements. Inspection authorities responsible for the landing control are informed of any such cases.

The observer provider makes provisional information available to the Commission on a weekly basis and at the end of each observer trip which is intended for inspection.

Corrective action is taken on the basis of inspections.

On a general level, the information collected by observers together with other information is used for policy making (fishing industry and authorities of the flag Member States and the Commission).

20. What are the costs of deploying observers? Who is responsible for paying these costs?

The expenditure is paid from the Community budget – 188 EURO per observer day (based on round trip observer)

	1999	2000	2001*
Vessel presence days	6498	7402	8189
Observer days	8409	9347	11039
Total price	1.597.370	1.757.236	2.075.332

\*provisional

21. What are the costs of traditional enforcement methods?

The traditional enforcement costs amount to 2,5 million EURO per year of which 2,2 million is paid from the Community budget and 0,3 million by Spain.

22. What are the results of observer coverage, VMS coverage, and other traditional control methods as evaluated as per NAFO FC 98/3, Annex 4.
23. What level of compliance is indicated by the observer reports? i.e. how many infringements have been detected by observers and traditional means of inspection over the 4 year period 1998-2001?

As regards questions 22 and 23 the following information is available:

	1992	1993	1994		1998	1999	2000	2001
NAFO infringements EU vessels	104	89	75		4	10	8	10

As regards the type of infringements in the period 1999-2001 most infringements relate to recording of catch and incidental catch limits whilst in the period 1992-1994 infringements such as relating to gear, minimum fish size and hail system occurred also frequently.

As regards 122 observer reports concerning 2001 available by the beginning of April 2002, 75 contained information on potential cases of non-respect of NAFO rules ranging from slight excess of by-catch to misreporting of catches.

Almost all potential cases of non-respect of NAFO rules related to catch recording and by-catch. Other cases of non-respect are rarely observed.

**Replies of the EU to the questions pointed out in STACTIC  
Working Paper 02/11**

1. Are all your vessels equipped with VMS?  
Yes (all vessels >24m)
2. What is the frequency of messages sent by vessels to the FMC?  
Variable but at least every 6 hours (depending on the systems the interval may vary from a few minutes to several hours).
3. Do the messages contain:
  - Vessel identification? - Yes
  - Most recent position of the vessel? - Yes
  - Date and time of the fixing of the position? - Yes
  - Other data elements? If yes, please specify. – Optional: course/speed, name, IRCS, External ID, Coastal State, Activity.
4. Is the FMC equipped with the appropriate computer hardware and software to process the transmissions automatically?  
Yes
5. In the event of equipment failure, what are the obligations to repair or replace the equipment and how soon must such repairs/replacement be made?  
Same rules as those laid down in the NAFO Conservation and Enforcement Measures.
6. Do vessels with defective VMS equipment communicate reports to the FMC, and if so with what frequency?  
Yes, each 24 hours
7. Are VMS reports communicated to NAFO?  
Yes
8. What is the frequency of the transmission of such reports to the NAFO Secretariat?  
Simultaneously, at least a report each 6 hours
9. Are the reports and messages in accordance with the VMS position report format?  
Yes
10. Do inspection vessels in the Regulatory Area receive the VMS reports from the NAFO Secretariat?  
Yes. As the European Commission does not yet operate a fully automatic system, the transmission to its surveillance vessel requires manual intervention.
11. What are the costs of the system for:
  - Installation of the equipment? - >3300 EURO
  - Transmissions? – about 0,20 EURO per transmitted report (transmission in data format message 0,05 EURO)
  - FMC (hardware/software and day to day management)? - >150.000 EURO (up to > 1 million EURO for sophisticated FMCs)

**Provisional response by Iceland to STACTIC WP 02/10**

1. The Icelandic Directorate of Fisheries
2. Vacancy announcement according to governmental rules
3. Desired assets of observers is that they have experience as captains or officers of fishing vessels.
4. A short course provided by The Directorate of Fisheries in Reykjavík concerning the NAFO Conservation and Enforcement Measures, and The Marine Research Institute concerning the collecting of samples for certain scientific purposes.
5. To complete the above courses.
6. Yes, without exemption. This is done on a voluntary basis, as Iceland has objected to the Observer Program.
7. All the Icelandic observers are recruited by Icelandic authorities and it is insured that they do not have any relations to the vessel in question. They are therefore rated as totally independent and impartial.
8. Although there are no requirements concerning this, all observers on Icelandic vessels have been Icelandic citizens.
9. Yes.
10. Yes, as of 2002.
11. Yes, to The Directorate of Fisheries.
12. From harbour to harbour.
13. Observers are instructed to report to The Directorate if they become aware of an infringement. The Directorate would then report to the Secretariat without delay.
14. The preparations for observers are on the hand of one official of the Sea Surveillance Dep. at The Directorate of Fisheries. This official is briefed on changes by the Icelandic delegation in NAFO.
15. Scientists make use of the observer reports as the observers are partially trained by them.
16. Not consistently, but improvements are being made in accordance with proposal on a standardized observer report.
17. Yes.
18. Yes.
19. There are no specific rules to go by but this would be done on a case-by-case basis. If an infringement becomes apparent via these channels, corrective action would be taken by The Directorate of Fisheries according to the Icelandic legislation.
20. The current cost is approx. 200 USD. This is fully paid by vessel owners to The Directorate of Fisheries as cost related to control and enforcement in the Icelandic EEZ generally is.
21. N/A
22. N/A
23. N/A

**Provisional response by Iceland to STACTIC WP 02/11**

1. Yes.
2. Every hour.
3.
  - Yes
  - Yes
  - Yes
  - Speed and course
4. Yes.
5. Vessels are allowed to finish the fishing trip where the equipment failure occurs, but the fishing trip can not exceed one month.
6. Yes, every twelve hours.
7. Yes.
8. 6 hours.
9. Yes.
10. N/A
11. Mobile equipment approx. 3.000 USD.
  - 4 cents US pr packet, 8 cents US for position incl. speed and heading (two packets)

**Japanese comments to the questions listed in STACTIC Working  
Paper 02/10(Revised)**

1. The public-service corporation which is approved by the Japanese Government employs observers.
2. They are introduced by research institutes.
3. The public-service corporation employs a person who has an expert knowledge and an experience with respect to a fishery and a biology.
4. It is according to an Observer Training Project conducted by a Japanese Government.
5. Japanese Government gives the authorization for a person to be qualified as an observer after passing an examination, when a person finishes a course and a practice for observer.
6. Yes, it is
7. With respect to the independence, observers do observer job only.  
With respect to the impartiality, observers are employed by a public-service corporation and they are not controlled by the master of fishing vessels.
8. Yes, they are.
9. Yes they are.
10. Yes, they are.
11. Yes, they are. The Fisheries Agency of Government Japan does it.
12. It is from the leaving port to the arriving at port.
13. We do not understand the question's meaning.
14. Observers get a briefing once a year, when they return to Japan.
15. Yes, they are. It utilizes for a stock assessment.
16. Yes, they do .
17. No, they do not .
18. Yes, they have.
19. a. vessel position, catch per unit efforts, species, by-catch , etc  
b. noon position, set net position, hauling net position, etc  
c. We compare the catch report with the observer report. In case of that there are different figures between the catch report and the observer report, we instruct the fishing vessel to correct it or improve it.  
d. The correction of catch report, suspend fishing, move to other fishing ground, etc.
20. It is approximately Japanese yen 10,000,000/person/year.
21. It is approximately Japanese yen 17,000,000/year. The traditional enforcement method for us is a Satellite Tracking System.
22. The effect of enforcement way of 3 methods is almost same, because a fishing vessel is given an enough fish quota for fishing throughout the year.
23. It is excellent level. It is only one.(it is caused by that the master of fishing vessel did not understand the CEM completely )

**Japanese comments to the questions listed in STACTIC Working  
Paper 02/11(Revised)**

1. Yes, they are.
2. It is one time between 1.5 hours and 2 hours.
3.
  - a) Yes, it does.
  - b) Yes, it does.
  - c) Yes, it does.
  - d) Yes, it does. They are a speed of fishing vessel and the distance between coast and fishing vessel.
4. Yes, it is.
5. Japanese Government put on the owner of fishing vessel an obligation to have a reserve one.  
In case that such a reserve one does not operate, the fishing vessel has to send the noon position to FCM everyday until the arriving at port.  
The fishing vessel does not leave the port until the completion of repairing of VMS, after the enter of the port.
6. Yes, they do. They communicate one report of the noon position a day to FMC.
7. Yes, they are.
8. It is one time every 6 hours.
9. -
10. Yes, they do.
11.
  - a) The cost is approximately Japanese yen 300,000 to 400,000 for one installation of the equipment.
  - b) It is Japanese yen 980 per one day.
  - c) It is approximately Japanese yen 17,000,000 per year.

**Provisional replies of the Lithuania to the questions in the STACTIC  
Working Paper 02/10**

1. Fisheries Department under the Ministry of Agriculture.
2. Presently on fishing vessels are working observers which have been completed observers training courses.
3. Requirements for recruitment of new observers are in preparation.
4. Training standards are also in preparation.
5. –
6. Yes
7. They do not perform any others duties than described in the NAFO Conservation and Enforcement Measures.
8. Mostly nationals but work also observers from other Contracting Parties. In these cases observers from other Contracting Parties must have certificates.
9. Yes. During 2000-2001 few reports were not provided due to the reorganization of Lithuanian fisheries administration.
10. Presently not all.
11. Yes. Fisheries Department.
12. Trip is defined from observer's embarking the vessel until vessel landed fish in harbour. But reports are being provided to the Fisheries Department after observer is being replaced by another observer.
13. There was no such case.
14. Before departure of observer he is instructed in the Fisheries Department.
15. Reports are available to the scientists but not being used by them.
16. All requirements except scientific data.
17. Yes.
18. Yes.
19. The irregularities are discussed with observers. After that owners of fishing vessels have been noticed to make necessary changes. The data from observers reports have been compared with information from fishing logbooks and fishing enterprises reports.
20. Owners of fishing vessels are responsible for the payment of expanses and this payment is done through Fisheries Department.
21. –
22. –
23. Would be answered later.

**Provisional replies of the Lithuania to the questions in the STACTIC  
Working Paper 02/11**

1. All fishing vessels are equipped with satellite-tracking devices.
2. Vessels do not send messages due to not functioning of the FMC.
3. -.
4. FMC is equipped with computer hardware and software but there are technical problems with software.
5. -.
6. -.
7. -.
8. -.
9. -.
10. -.
11. Would be answered later.

**Responses by Norway to questions in STACTIC Working Paper 02/10 (Revised)**

1. Norwegian authorities (the Directorate of Fisheries) has contracted a Canadian company (Seawatch).
2. Advertised competition (by Seawatch).
3. Related maritime experience, including navigation. Knowledge of fishing gear, biological research and enforcement training.
4. Three weeks training session.
5. Examination, followed by a certification (if passed).
6. Yes
7. Independent company with no links to shipowners or crew.
8. No
9. Yes
10. Yes
11. Yes. The Directorate of Fisheries
12. Time spent in the Regulatory Area.
13. Yes
14. The Directorate of Fisheries indicates to Seawatch the requirements of the relevant fisheries who gives the observer a manual for the use of information to be collected. By the end of the trip Seawatch examine (together with the observer) if the observer has fulfilled his/her tasks.
15. Norwegian authorities do not submit reports to scientists on a regular basis.
16. Yes, but some complaints about the handwriting have been received.
17. No, the responsibility of the FMC.
18. Yes, no complaints from observers.
19. An evaluation and possible reaction by the Legal office (in the Directorate of Fisheries). If an infringement is detected the master of the vessel is requested for an explanation and possible views. Based on this the authorities decide on an adequate reaction to the irregularities/ infringements. A report would be submitted to the NAFO Secretariat.
20. 340 CAD, plus travel costs and daily allowances, paid by the shipowners.
21. So far CEM, Part IV, 3 second paragraph has not been applicable to Norway.
22. N/A
23. Observer reports: 1 - Inspections: 4 (of which 2 are regarded as questionable)

**Responses by Norway to questions in STACTIC Working Paper 02/11(Revised)**

1. Yes
2. 1 hour
3.
  - yes
  - yes
  - yes
  - speed and course
4. Yes
5. The vessel might conclude the fishing trip. The vessel is not allowed to continue fishing (leaving the port) before the failure is repaired and/or the function is restored.
6. The vessel has to submit a manually report twice a day.
7. Yes
8. Every 6 hours
9. Yes
10. No Norwegian inspection vessel has so far been in the Regulatory Area (cf. CEM Part IV, 3).
11.
  - 6000 CAD
  - 100 CAD
  - 100 000 CAD

**Reply of the Russian Federation to the questions on the application of VMS  
(STACTIC W.P. 02/11, revised)**

1. Are all your vessels equipped with VMS?  
Yes, all vessels longer than 24m
2. What is the frequency of messages sent by vessels to the FMC?  
Every hour
3. Do the messages contain:
  - Vessel identification? - Yes
  - Most recent position of the vessel? - No
  - Date and time of the fixing of the position? - Yes
  - Other data elements? If yes, please specify. - No
4. Is the FMC equipped with the appropriate computer hardware and software to process the transmissions automatically?  
Yes
5. In the event of equipment failure, what are the obligations to repair or replace the equipment and how soon must such repairs/replacement be made?  
Within 10 days to repair, then go to harbour for replacement.
6. Do vessels with defective VMS equipment communicate reports to the FMC, and if so with what frequency?  
4 times per day
7. Are VMS reports communicated to NAFO?  
Yes
8. What is the frequency of the transmission of such reports to the NAFO Secretariat?  
4 times/day
9. Are the reports and messages in accordance with the VMS position report format?  
No
10. Do inspection vessels in the Regulatory Area receive the VMS reports from the NAFO Secretariat?  
No
11. What are the costs of the system for:
  - Installation of the equipment?
  - Transmissions?
  - FMC (hardware/software and day to day management)?

No comments.

**U.S. Response to STACTIC Working Paper 02/10**

1. U.S. observers are employed by the U.S. government.
2. U.S. observers are recruited from Universities and positions are advertised in periodicals which target interested individuals.
3. U.S. observers possess a university degree, preferably in biological sciences or fisheries management.
4. U.S. observers must undergo an intensive two week training course which includes formal classroom instruction on fisheries management, regulations, species identification, fishing methods and vessel safety.
5. Training of U.S. observers consists of formal classroom instruction and field work related to observer duties. U.S. observers must successfully pass four written examinations to demonstrate proficiency.
6. The U.S. is not currently fishing in the NAFO regulatory area, however U.S. vessels would not be permitted to undertake fishing operations in the NAFO regulatory area without an embarked observer. Acceptance of an observer is a condition of a vessel's authorization to fish in the NAFO regulatory area.
7. U.S. observers are recruited from outside the commercial fishing industry. They are employed, and paid, by the U.S. government. They generally have no connection to, or interest in, the vessels on which they serve.
8. U.S. observers are employees of the U.S. federal government and therefore, according to law, must be U.S. citizens.
9. The U.S. is not currently fishing in the NAFO regulatory area, however in the event U.S. vessels undertake fishing operations in the NAFO regulatory area the U.S. will ensure observer reports are made available to the NAFO Secretariat in a timely manner.
10. See item 9 above.
11. The U.S. is not currently fishing in the NAFO regulatory area, however in the event U.S. vessels undertake fishing operations in the NAFO regulatory area the U.S. will ensure observer reports are submitted to the U.S. National Marine Fisheries Service's Northeast Regional Office located in Gloucester, MA.
12. The U.S. is not currently fishing in the NAFO regulatory area, however in the event U.S. vessels undertake fishing operations in the NAFO regulatory area the U.S. would define a NAFO trip to begin with entry into the NAFO regulatory area and would conclude upon departure of the vessel from the regulatory area.
13. U.S. is not currently fishing in the NAFO regulatory area, however U.S. observer protocol calls for immediate notification of enforcement authorities for subsequent investigation.
14. U.S. is not currently fishing in the NAFO regulatory area, however U.S. procedures call for U.S. observers to be fully briefed on NAFO procedures and conservation and enforcement measures prior to the entry of any U.S. fishing vessel into the NAFO regulatory area.

15. U.S. is not currently fishing in the NAFO regulatory area, however current practice in U.S. domestic fisheries is to process observer data and make it available in the scientific community to aid in stock assessment and other management efforts.
16. U.S. is not currently fishing in the NAFO regulatory area, however the U.S. has adopted NAFO reporting requirements to ensure that all U.S. fishing operations in the NAFO regulatory area comply with all aspects of the NAFO Conservation and Enforcement Measures.
17. U.S. is not currently fishing in the NAFO regulatory area, however U.S. observer protocol calls upon observers to report any malfunction of onboard satellite tracking systems.
18. U.S. is not currently fishing in the NAFO regulatory area, however the U.S. would require all U.S. fishing vessels contemplating fishing operations in the NAFO regulatory area to provide adequate accommodations and other support prior authorizing the vessel to fish in the NAFO regulatory area.
19. U.S. is not currently fishing in the NAFO regulatory area, however U.S. protocol provides for comparison of observer reports with landing reports and provisional catch data.
20. U.S. is not currently fishing in the NAFO regulatory area, however the U.S. estimates that costs associated with deployment of observers to U.S. vessels fishing in the NAFO regulatory area would amount to \$550 (USD) per day. The U.S. government is responsible for paying for the services of fisheries observers.
21. U.S. is not currently fishing in the NAFO regulatory area and currently incurs no direct enforcement costs. The U.S. can, however, make available details on costs associated with individual enforcement resources if necessary.
22. Not applicable, the U.S. is not currently fishing in the NAFO regulatory area.
23. Not applicable, the U.S. is not currently fishing in the NAFO regulatory area.