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Annual Compliance Review 2015 (Compliance Report for Fishing Year 2014)

1. Introduction

This compliance review is being undertaken in accordance with Rules 5.1 and 5.2 of the Fisheries Commission Rules of Procedure. The scope of the review is to determine how international fisheries complied with the annually updated NAFO Conservation and Enforcement Measures (NCEM) when fishing in the NAFO Regulatory Area (NRA), and assess the performance of NAFO Contracting Parties with regard to their reporting obligations.¹

This review utilizes information for the years 2004 to 2014 from the following sources: vessel monitoring system (VMS) and hail messages delivered by the vessels (Vessel Transmitted Information – VTI), Port Inspection Reports, At-sea Inspection Reports and Reports on Dispositions of Apparent Infringements provided by the Contracting Parties, and Observer Reports sent to the Secretariat. It starts with the description of the fisheries in the NAFO Regulatory Area.

2. Fishing effort and fishing trends in the NAFO Regulatory Area

NAFO identifies three main fisheries in its Regulatory Area: the groundfish (GRO - primarily in Div. 3LMNO), shrimp (PRA - primarily in Div. 3LM) and pelagic redfish fisheries (REB - primarily in Div. 1F and 2J). Shrimp and pelagic redfish fisheries utilize shrimp trawls and midwater trawl gears, respectively. In 2014, there were 59 fishing vessels spending a total of 4822 days in the NRA (Table 1), and 140 trips were identified.

Table 1. *2013-2014 Comparison of Fishing Effort in the NAFO Regulatory Area.*

Number of fishing vessels					Fishing effort (days present)				
Year	Groundfish (GRO)	Shrimp (PRA)	Pelagic Redfish (REB)	TOTAL	Year	Groundfish (GRO)	Shrimp (PRA)	Pelagic Redfish (REB)	TOTAL
2013	54	7	4	64	2013	4510	190	79	4779
2014	52	3	5	59	2014	4699	67	56	4822
% change	-3.7%	-57.1%	25.0%	-7.8%	% change	4.2%	-64.7%	-29.1%	0.9%

The groundfish fishery accounted for 97.4% of the total fishing effort (in terms of fishing days), shrimp for around 1.4%, and the pelagic redfish fishery for around 1.2%. The groundfish fishing

¹For the purpose of this compliance analysis, only fishing trips which ended in 2014 were considered. Fishing trip for a fishing vessel includes “the time from its entry into until its departure from the Regulatory Area and continues until all catch on board from the Regulatory Area is unloaded or transhipped” (NCEM Art. 1.7).



effort increased by 4%, while shrimp and pelagic redfish effort decreased by 65% and 29% respectively. The big decrease in the shrimp effort is largely attributed to the 50% of the Total Allowance Catch (TAC) in 2014. In all, a slight increase (0.9%) of the total fishing effort was observed (Table 1) compared to 2013.

For the period 2004–2014, the overall fishing activities in the NRA show a declining trend, from 134 active vessels in 2004 to 59 in 2014, representing a 56% decrease. The decline in terms of overall fishing days was a 71% decrease for the same period from 16 480 days in 2004 to 4 822 days in 2014. The average number of days each vessel operates in the NAFO Regulatory Area also declined from 123 days in 2004 to 82 days in 2014.

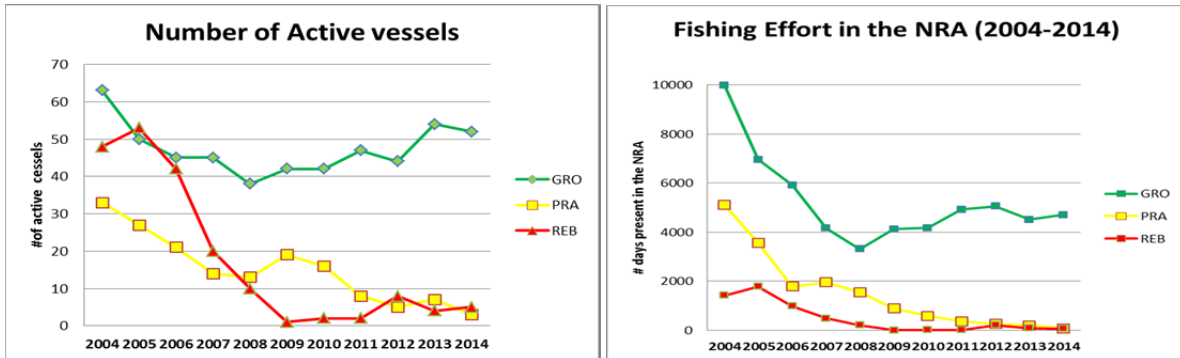


Figure 1. The trend of fishing effort in the NAFO Regulatory Area in the period 2004-2014.

Figure 1 illustrates the changes described above for each of the major fisheries. NAFO fisheries remain dominated by the groundfish category. After five years of steep decline, the groundfish effort has been stable since 2009. Figure 2 illustrates the current effort distribution compared to 2004 and the 2004-2014 average. By 2014, the fishing effort contribution of shrimp fisheries was reduced to 1% largely due to the shrimp fishing moratorium in Division established in 2011 and a reduction of the TAC in 2014.

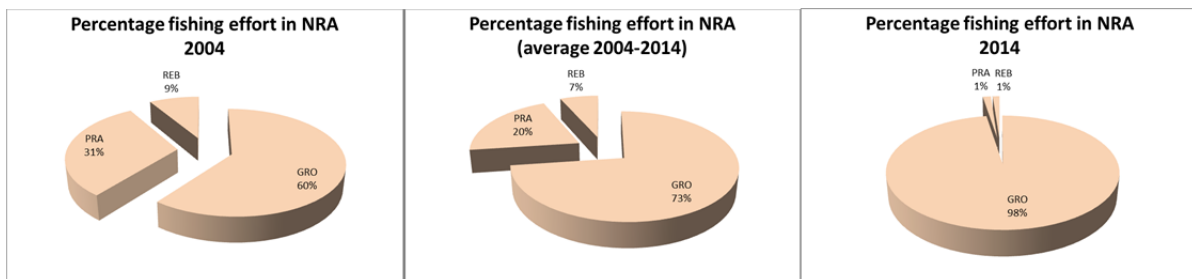


Figure 2. Fishing effort proportions of the three different fishery types (2004-2014) suggesting a shift in fisheries over the years).

Effort distribution by depth of groundfish vessels

The requirement of providing the speed and course information in the Vessel Monitoring System (VMS) reports facilitated the estimation of fishing effort in terms of fishing hours. Speeds between 1 and 5 knots were considered fishing speeds. In Figure 3, the distribution of fishing effort in hours of groundfish vessel is presented. Figure 3 shows that about half of all groundfish effort is at depths 400 meters and below (skates, redfish and cod).

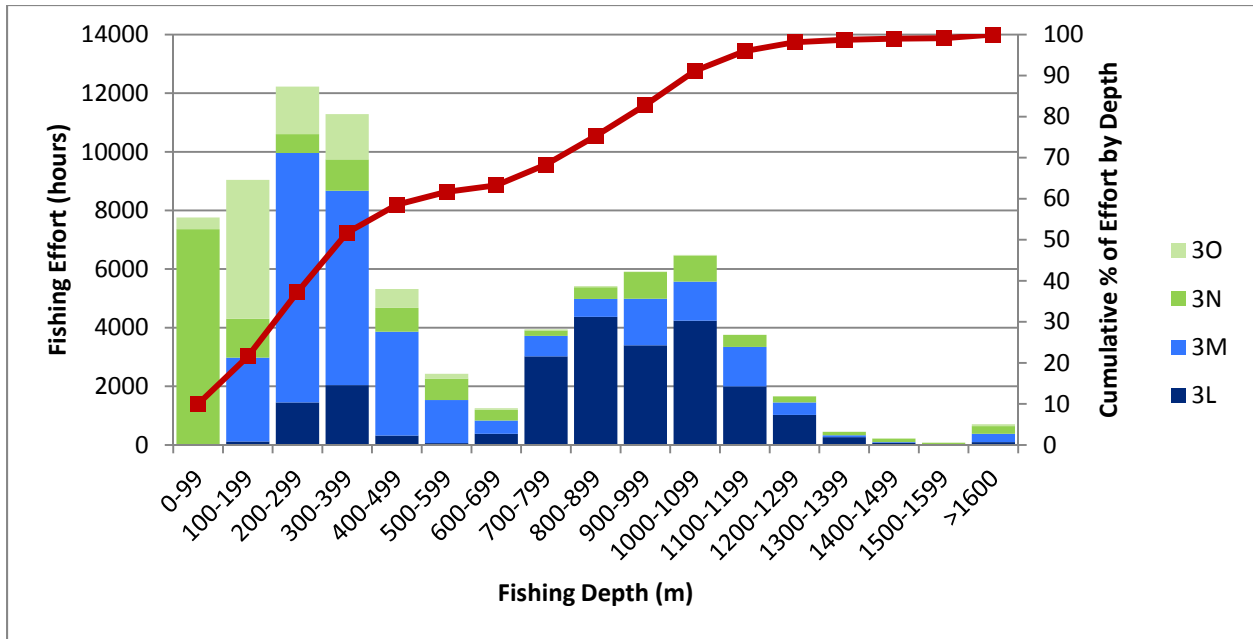


Figure 3. Distribution of groundfish fishing effort by depth in the NRA in 2014 (Divisions 3L, 3M, 3N, and 3O).

Catch Trends

The 2012 CATs represent the first year of complete and generally correct daily catch reports submitted to the Secretariat. With three years of CAT reports, it is now possible to conduct preliminary analysis for catch trends.

Figure 4 shows the plot of groundfish annual catches in Divisions 3LMNO in the years 2012-2014. Major species that are managed through TAC and two species of grenadiers are included in the plot. The examination of Figure 4 revealed the following characteristics of the groundfish fisheries in the NRA Divisions 3LMNO.

- Except for the catches of 3LN Redfish in Division 3L, 3LMNO Greenland halibut in Division 3N and 3LNO Skates in Division 3O, the 2014 catches of the major stocks in the four Divisions decreased in 2014 compared to 2013.
- Division 3M (Flemish Cap) was the most productive (in terms of fish catch) during the three years compared to other Divisions 3LNO.
- Cod in the Flemish Cap represented the most predominant catch, followed by redfish.
- Redfish was the most predominant catch in Division 3O.
- Redfish was a major species caught in all four divisions.
- The fish stocks 3NO Skates and 3LNO Yellowtail were mostly caught in Division 3N.
- A major portion of the 3LMNO GHL catch came from Division 3L.
- More catch of grenadiers occurred in Divisions 3LM than in Divisions 3NO.



Figure 4. Trends in groundfish catches of selected major species in Divisions 3LMNO (2012-2014).



3. Compliance by Fishing Vessels

Monitoring, Control and Surveillance (MCS) measures are spelled out in Chapters III-VII of the NCEM. Through the at-sea and port inspections, NAFO monitors, controls and conducts surveillance of the fisheries in the NRA exposing infringements of the NAFO regulations and collecting evidence for the following prosecution within the legal system of each NAFO flag State Contracting Party.

Position reporting – Vessel Monitoring System (VMS)

Vessels in the NRA are required to transmit position reports at one hour intervals. In addition, the course and speed information must be included in the position reports. Examination of the position reports revealed that vessels were compliant to this requirement. The position reports were received by the Secretariat in practically real-time through the Fisheries Monitoring Centres (FMC) of individual flag States. When technical difficulties were encountered by the vessels in complying with the position reporting requirements, the position reports were transmitted electronically by email and promptly entered into the VMS database by the Secretariat. In cases of technical difficulties, VMS reports can be sent at least once every four hours. Generally, the technical issues were resolved at most within a few days through the coordination and communication between the Secretariat and the FMCs. The timeliness of submission of position reports was not an issue since VMS reports were being received by the Secretariat and CPs with inspection presence in real-time through satellite technology.

With an estimated total fishing effort of 4822 vessel-days, the expected number of VMS reports is 115 728. A total of 124 968 VMS position reports within the vessel-days were received in 2014 fishing trips. This amount suggests that some vessels transmitted their positions more frequently than the required hourly interval. Some vessels which were landing or calling on Canadian ports continued to transmit VMS reports. This also contributed to the higher-than-expected number of VMS reports received in the Secretariat. From compliance perspective, this is not an issue.

Activity and catch reporting – Vessel Transmitted Information (VTI): Catch-on-Entry, Catch-on-Exit, Daily Catches

Catch quantities on board upon entry to (COE) and exit from (COX) the NRA must be reported for each fishing trip. While fishing in the NRA, fishing vessels are required to transmit daily catch reports (CAT) detailing catch quantities by species and division. Catch reports are transmitted through the same technology and communication channel as the transmission of VMS (positions) reports. (See section *Vessel Transmitted Information (VTI) – Catch-on-Entry (COE), Catch-on Exit (COX), Daily catch reports (CAT)* below.)

Daily catch reports are not limited to species listed in Annex I.A of the NCEM (under TAC or moratorium). Vessels are required to report catches (and discards) at the species level to the extent possible. The catches of regulated and selected non-regulated species are presented in Table 2.

Table 2. *Total reported catches (in tons) of regulated and selected non-regulated species in 2014 (Source: CAT reports).*

Division	1F	3L	3M	3N	3O	4Vn	6G	?
Species (3-alpha FAO code)								
CAP		0.0		0.4	0.3			
COD		124.4	12719.9	280.9	235.3	0.0		
GHL		6130.8	1395.3	874.7	0.3			
HKW		0.3	3.8	46.7	222.4			
PLA		106.9	245.7	431.1	220.6	0.0		
PRA		475.9						19.0
REB	686.1		1.2					
RED		2929.5	6670.5	1361.6	7021.3	2.8		
SKA		60.5	85.5	3128.9	1168.9	0.7		
WIT		49.3	248.5	131.9	184.9			
YEL		29.3	0.3	2458.7	47.9			
ALF							90.0	
ANG			0.2	34.1	170.8			
CAT		26.8	20.1	10.2	1.5			
HAD		0.1	156.9	20.2	190.8			
HAL		58.4	80.4	288.1	120.9			
RHG		211.0	336.7	53.4	0.6			
RNG		73.6	66.2	14.6				
Grand Total	686.1	10276.7	22031.1	9135.6	9586.6	3.6	90.0	19.0

Vessel activity after 3M redfish 100%-TAC-uptake notification

The stock 3M Redfish is the only regulated stock which Total Allowable Catch (TAC) is considerably less than the sum of the quotas. The Secretariat monitors the TAC uptake through the daily catch reports (CATs) it receives from the fishing vessels. When the TAC is reached, Contracting Parties are notified required to instruct their vessels to cease directed fishery on the stock.

According to Footnote 8 of the Quota Table (Annex I.A of the 2014 NCEM), not more than 50% of the TAC may be fished before 1st July. On 13th March 2014, a 50%-TAC uptake notification was circulated by the Secretariat, on which time the fishery would be suspended until 30th June. Figure 5 shows the total daily catches and the percentage cumulative catch derived from CAT reports. On 8th July 2014, a 100% TAC uptake notification (6500 t) was sent effective 10th July. By the closure date, the TAC was exceeded by 4%.

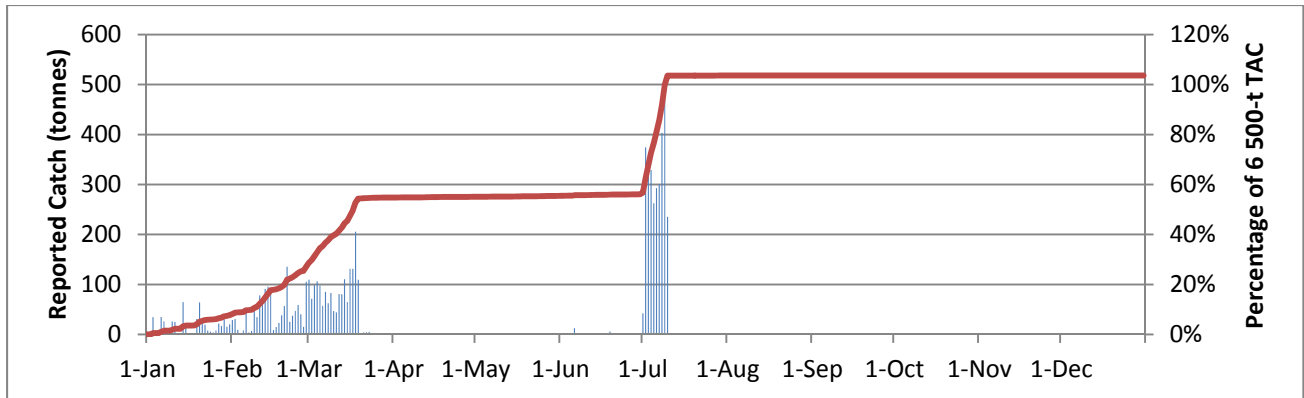


Figure 5. Daily 3M redfish catches of all vessels in 2014.

Shrimp vessels

Shrimp in Division 3M has been under moratorium since 2011. Examination of the VMS and VTI reports revealed that the moratorium is being respected. All fishing were confined in Division 3L. According to NCEM Art. 9.7, no vessel shall fish at the depth less than 200 meters. Figure 6 confirms that shrimp vessels complied with this regulation. Majority of shrimp fishing took place at depths 300-400m.

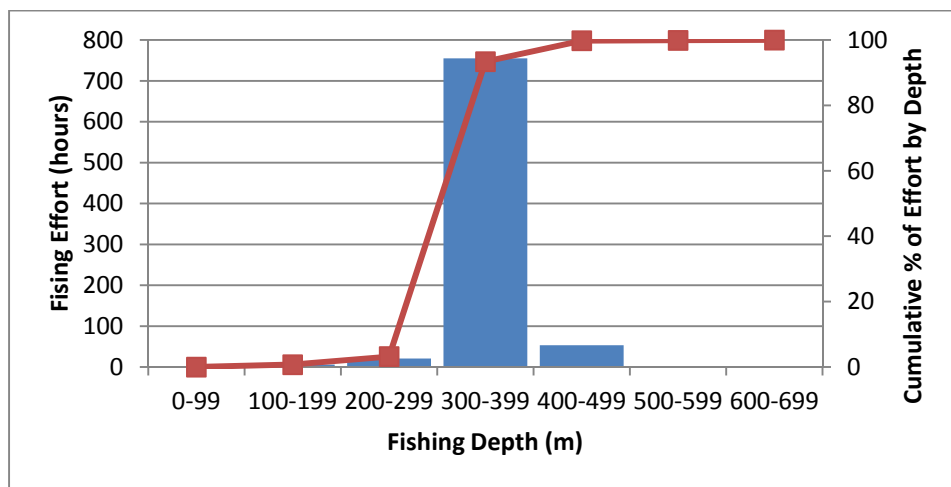


Figure 6. Distribution of shrimp fishing effort by depth in the NRA in 2014.

Closed areas and Exploratory Fisheries

Since 2007, in total 19 areas in NAFO have been closed to bottom fishing including 12 significant coral and sponge areas, one coral protection zone and six seamounts. The conservation and enforcement measures concerning the protection of the VMEs are stipulated in Chapter II of the NCEM.

An examination of the VMS position reports revealed that the closed areas were respected (Fig. 7). Fishing activities were confined within the footprint, except for one vessel which fished in Division 6G (in the environs of the closed Corner Seamounts) for 13 days in February 2014 (Fig. 7.D). According to the observer report of this fishing trip in Division 6G, the fishing gear that was used was a mid-water trawl (OTM). The main species caught was splendid alfonsinos. With the use of

non-bottom fishing gear, NCEM Chapter II provisions (more specifically relating to Exploratory Fisheries) would not apply. Possible management measures concerning fishing stocks associated with seamounts are currently under discussions at the Joint FC-SC Working Group on Ecosystem Approach Framework to Fisheries Management.

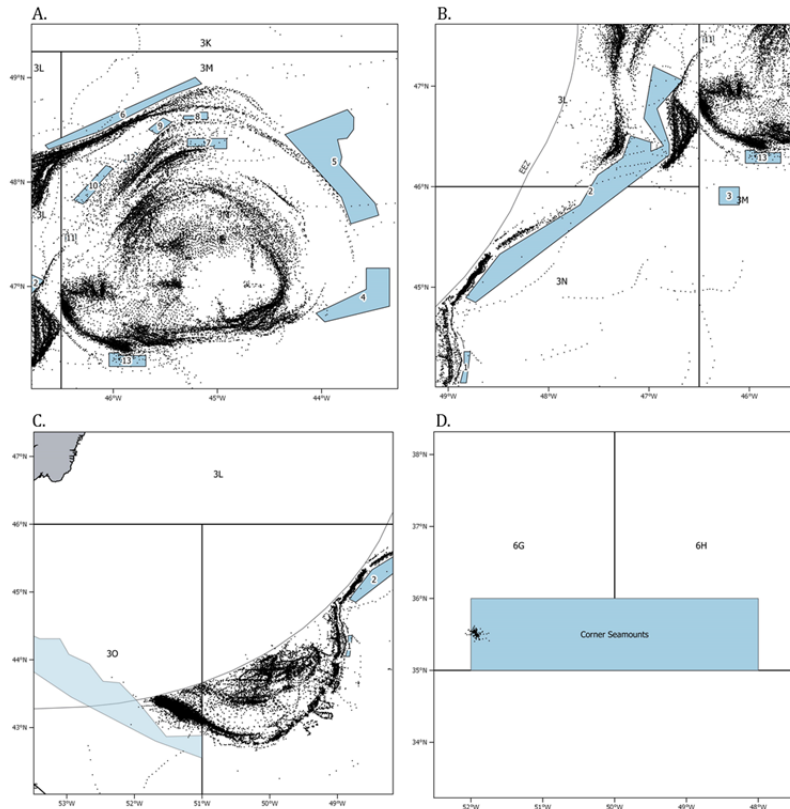


Figure 7. VMS position plots of all vessels at speed 0.5 -5.0 knots in the NRA in 2014 in relation to the VME closed areas and Corner Seamount. A: Flemish Cap, B: Flemish Pass, C: Division 30 Coral Zone, D: Corner Seamount

Catch reporting on sharks

Fishing for the purpose of collecting shark fins is prohibited under NCEM Art. 12. Sharks species taken in NAFO fisheries are not associated with shark fining practices, and there has never been an incident of shark fining observed in the NRA. It has been noted that there has been a lack of species-specific reporting of shark catches in the NRA. In this regard, it became a requirement in 2012 to report, the extent possible, all shark catches at the species level (NCEM Art. 28.2.g).

All 2014 CAT reports were examined. Not all sharks catches were reported to the species levels. About half of all shark catches were reported as dogfishes (Table 4). It is not known how many species of shark were lumped into DGX.

Table 4. Amount of shark catches (in tons) as reported in CATs.

FAO 3- Alpha Code	English Name	Reported catches in 2014 (t)	Percentage
BSH	Great Blue Shark	0.6	0.94%
BSK	Basking Shark	5.0	7.99%
DGX	Dogfishes (NS)	28.4	45.28%
GSK	Greenland Shark	21.6	34.45%
POR	Porbeagle	7.0	11.18%
SHX	Large Sharks (NS)	0.1	0.16%

At-sea inspections

The NAFO Joint Inspection and Surveillance Scheme is implemented to ensure management and enforcement measures are complied with by fishing vessels fishing in the NRA. Inspectors are appointed by Contracting Parties and assigned to fishery patrol vessels tasked to carry out NAFO inspection duties at sea (Chapter VI of NCEM).

The total number of at-sea inspections dropped from 169 in 2013 to 135 in 2014. With the slight increase of total fishing effort (1%, from 4779 days in 2013 to 4822 days in 2014), the inspection rate (number of inspections/fishing effort) decreased from 3.5% to 2.8% (Fig.8).

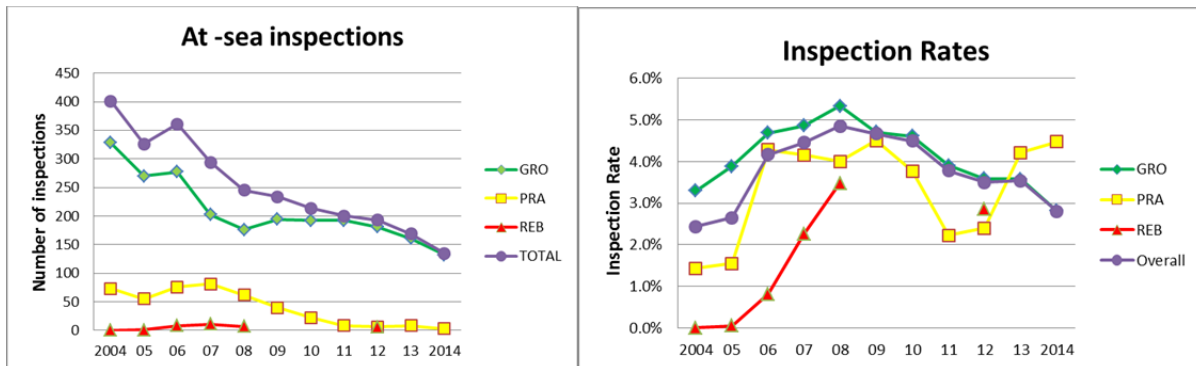


Figure 8. Number of At-Sea Inspections and Inspection rates (number of at-sea inspection/vessel-days) in the NAFO Regulatory Area by fishery type.

Port inspections

Prior to 2009, port State Contracting Parties were required to conduct port inspections on *all* vessels landing or transshipping fish species from the NRA, i.e. 100% coverage. Since the adoption of the Port State Control measures in 2009, the 100% coverage has been maintained for vessels landing NAFO species under recovery plans, in particular Greenland halibut. When landing catch species not under recovery plans, port inspections are not required if the vessel flag State Contracting Party and the port State Contracting Party are the same; if the flag State and the port State are different, the latter is required to conduct port inspections only 15 % of the total fish landing port of call in a year.

In 2014, 98 port inspection reports were received by the Secretariat, 97 of which were associated with groundfish and one with shrimp landings. Some port States submitted port inspection reports on their own vessels making the coverage considerably more than 15% (see Section 4).

Apparent infringements

Each citation issued by at-sea or port inspectors can list one or more apparent infringements (AI). NCEM Art. 38 lists fifteen kinds Apparent Infringements (AI's) considered serious. In 2014, eleven vessels were issued with apparent infringement/s either at sea or at port. There were twenty one AIs issued. The nature of the AIs ranges from expired capacity plans (considered non-serious) to mis-recording of catches (considered serious). Inspectors determine during the time of inspection whether the AI is considered non-serious or serious. Table 5 give details of the AIs issued at-sea and at ports in 2014 (See Section 5 for follow-up actions and disposition of the AI cases).

In Figure 9, the composite list of AIs and the frequency of the cases since 2004 are shown. The black and the blue dots represent AIs issued by at-sea inspectors and port authorities, respectively. Product mis-labelling, expired vessel capacity plans, and mis-recording of catches are the most frequent AI.

Table 5. Details of Apparent Infringements (AI) detected in 2014 by at-sea inspectors and port authorities.*AIs detected at sea*

AI	Vessel Code	Directed Species (according to CAT)	Insp. CP	Division in NRA or Port Location	Insp. Date	Apparent Infringement	Serious AI? According to Inspectors	Article (2014 NCEM)	Disposition/Followup/update as of Apr 2014	Reference of Disposition
1	4	COD, RED	CAN	3M	13-Apr	Failed to maintain accurate logbook catch	No	Art. 28.2 b)	Infringement confirmed at landing inspection (Aveiro 14-21 Apr). Case pending.	2014 EU Report on Sea Inspections and on follow-up to Infringements.
2	4	COD, RED	CAN	3M	13-Apr	Failed to report catches accurately in CAT	No	Art. 28.6 c)	"	"
3	3	COD, GHL, RED	CAN	3L	19-Apr	Small mesh size and illegal attachment to gear	Yes	Art. 13.2 and 13.6	Not verified in Port Inspection in Aviero completed 01/08/14. Case Closed.	"
4	2	GHL	CAN	3L	03-May	Mis-recording of catch in the fishing logbook	Yes	Art. 28.2 a) b)	Art. 28.2 (a)(b) verified in EU port inspection (Vigo 12/05/14). Case pending.	
5	2	GHL	CAN	3L	03-May	Failure to maintain a stowage plan.	No	Art. 28.5	Not verified in port inspection(Vigo, 12/05/14)	
6	1	PRA	CAN	3L	18-Aug	Failure to maintain a stowage plan.	No	Art 28.5	The Faroese Fisheries Inspection decided to issue a warning with a notification that infringements of the NCEM should not be repeated.	Faroese Disposition Report - 5 Sep 2014
7	1	PRA	CAN	3L	18-Aug	No Observer on board while committing AI (Failure to maintain stowage plan)	Yes	Art. 38.1 m	"	"
8	1	PRA	EU	3L	12-Sep	Out-of-date capacity plans	No	Art 25.8 h)	The Faroese Fisheries Inspection decided to issue a warning.	Faroese Disposition Report - 31 Oct 2014
9	1	PRA	EU	3L	12-Sep	Product Labelling	No	Art. 27	"	"
10	1	PRA	EU	3L	12-Sep	Failure to transmit COE and COX.	Yes	Art. 28.6.a-b and Art 38-1.k	Circumstances were comparable with a force majeure situation. The Faroese Fisheries Inspection decided to issue a warning.	"

AIs detected at ports

AI	Vessel Code	Directed Species (according to CAT)	Insp. CP	Division in NRA or Port Location	Date of insp.	Apparent Infringement (Section E.1.B.c)	Serious AI? As considered by Inspectors	Article (2014 NCEM)	Disposition/Followup/update as of May2014, as reported by flag State Contracting Party	Reference of Disposition
11	6	SKA, GHL	EU	Vigo	04-Feb	Mis-recording of catch HKW and HAD	Yes	Art. 38.1.i	<i>-to be clarified-</i>	
12	11	GHL, SKA	EU	Vigo	21-Mar	>5% of YEL	No	Art. 6.3.d	<i>-to be clarified-</i>	
13	10	COD, GHL, RED	CAN	Argentia	05-May	Exceeding by-catch COD 3N	No	Art. 6.3.b	Fined 101 000 Russian rubles.	Russian Disposition Report - 18 Dec 2014
14	10	COD, GHL, RED	CAN	Argentia	05-May	Failure to leave the division	No	Art. 6.6.ii	Fined 101 000 Russian rubles.	Russian Disposition Report - 18 Dec 2014
15	4	COD, RED	EU	Aveiro	21-May	Mis-recording of catches	Yes	Art. 38.1	<i>-to be clarified-</i>	
16	9	GHL, RED	EU	Vigo	16-Jun	Incorrect labelling, 3-alpha code of the species missing	No	Art. 27.1.b	<i>-to be clarified-</i>	
17	5	GHL, SKA	EU	Vigo	11-Jul	Labelling not correct regarding the Division of fishing and the 3-Alpha code for Atlantic Halibut	No	Art. 27	<i>-to be clarified-</i>	
18	7	GHL, PRA, COD, RED	EU	Vigo	29-Jul	Mis-recording of catches	Yes	Art. 38.1.i	<i>-to be clarified-</i>	
19	7	GHL, PRA, COD, RED	EU	Vigo	29-Jul	Tampering with evidence.	Yes	Art. 38.1.n	<i>-to be clarified-</i>	
20	6	SKA	EU	Vigo	06-Aug	Mis-recording of several species (COD, HAD, SKA, HAL, WIT, ANG)	Yes	Art. 38.1.i and 6.3 d	<i>-to be clarified-</i>	
21	8	COD, GHL, RED	EU	Vigo	03-Dec	Failure to record one of the production types of HAL in logbook.	No	Art. 28.3.b	<i>-to be clarified-</i>	

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Greenland halibut measures				•					•		
Mis-recording of catches -stowage		•••••	•••••••	•••••	••	•••••	•	•••••	•		••
Product labelling	•	•••	•••••••••	•••••	••	••		•	•••••	•••••	•••••
Vessel requirements - capacity plans	•••	••	•	•••••••	•••	••••••	••	•	•••	•••••	•
Bycatch - move-away										•	•
Bycatch - retaining 3m Redfish										•••••••••	
By-catch requirements	•••••	•••••	•••••	•••••	•	•		•		•	••
Catch communication violations			•	•••••							
Fishing without authorization	••	•									
Gear requirements - illegal attachments	•	•••	•••••	••			•				
Gear requirements - mesh size	•••••••	•••••	•			•	•	•			•
Inspection protocol	••	•••••	•			•••			•	•	
Mis-recording of catches - inaccurate recording	•••••••••	•••••••••	••••••••• •••••	••••••••• •••••••••	••	•••••	••		••	•••••	••••••••• •••••
Observer requirements	•	•									•
Quota requirements	•		•						••		
VMS requirements	••	•							•		•
Falsification of documents										•	
Evidence tampering									•	•	•

Figure 9. Frequency of AI cases detected by NAFO at-sea and port inspectors in 2004 -2014 (black and blue dots represent AIs issued at sea and at port, respectively).

4. Reporting obligations by NAFO Contracting Parties and Observers

The NCEM obliges vessels and Contracting Parties to provide reports on their activity within a determined time frame. The completeness and regular delivery of those reports in time are of key importance to evaluating overall compliance. In evaluating the completeness, reports were examined to determine which fishing trips were covered by the reports. Each fishing trip must have Vessel Transmitted Information and Observer reports; vessels landing Greenland halibut must have port inspection reports. The percentage coverage is computed as a ratio of fishing days accounted for by the reports and total fishing days effort in the NRA. Less than 100% coverage suggests that there were missing reports that should have been received by the Secretariat.

Vessel Transmitted Information (VTI) – Catch-on-Entry (COE), Catch-on Exit (COX), Daily catch reports (CAT)

The FMCs of flag States are responsible in transmitting the VTI reports to the Secretariat (see also section *Activity and Catch Reporting*). The COE and COX are transmitted signifying the start and end of a fishing trip. A 100% coverage would mean that all expected COEs are paired up with all expected COXs. For the purpose of evaluating the coverage, a trip with a missing COE or COX would not account for the number of days of a fishing trip in the NRA.

In Table 6, the number of COE, COX, and CAT, as well as of the fishing trips and fishing effort-day in the NRA, is presented. Ideally, the number of COE and COX should correspond to the number of fishing trips. The higher-than-expected numbers suggest that duplicates and erroneous reports are occasionally sent. The VMS-VTI system features a cancel report (CAN) which allow vessels and FMCs to withdraw or correct previously sent VTI report but this feature is not widely used. Nonetheless, all identified fishing trips had the corresponding COE and COX report, representing 100% coverage (see also Fig. 9).

Table 6. *Fishing effort and VTI statistics in the NRA, 2014.*

Number of fishing trips identified	140
Days Present in the Regulatory Area	4822
Number of Daily Catch Reports (CATs)	4975
Number of Catch on Entry Reports (COEs)	172
Number of Catch on Exit Reports (COXs)	163

In total 4975 CATs were received, more than the total effort of 4822 vessel days. This indicates that vessels which fished in two or more Divisions in a day transmitted multiple reports, consistent with the requirement that fishing vessels shall report daily their catches by species and by Divisions. The CAT reports have proven to be useful in monitoring quota uptakes of the Contracting Parties. In long fishing trips, some vessels which visited Canadian ports not to land but to obtain provisions transmitted COEs and COXs. This account for the higher number of COEs and COXs than the fishing trips.

Port inspection reports

When vessels land their catches, the port inspectors report on the quantity of catches as well as the fishing trip details (see *Port Inspections*). However, a port inspection is not automatically required

for every landing from NAFO fisheries except when the landings include species under a recovery plan such as Greenland halibut (see Art. 43.10).

In evaluating the compliance of port State authorities in conducting inspections, only trips with Greenland halibut onboard were considered. The identification of these trips was done by examining COX reports. Of the 140 fishing trips identified, COXs of 71 fishing trips indicated Greenland halibut on board. Of the 71 fishing trips (3476 days effort), 57 (3099 days effort) have corresponding port inspection reports – an 89% coverage (see Fig. 9).

Observer reports

Under the “traditional” scheme, vessels are required to have an independent observer on board at all times (i.e. 100% coverage) in every fishing trip (NCEM Art. 30.A). Observers in this scheme are committed to deliver within 30 days after their assignment period their observer report, which contains information on date of fishing trip as well as catch and effort.

Since 2007, Contracting Parties have the option of the electronic reporting scheme. Under this electronic scheme, CPs may allow their vessels in a single year to have observers onboard at least 25% of the time the vessels are on a fishing trip (NCEM Art. 30.B). CPs must give prior notification to the Secretariat of which vessels participate in the electronic scheme. Observers under this scheme are required to report daily the catches and discards (OBR) while the fishing master transmits the daily catch reports (CAT) every trip. The CAT and OBR reports are transmitted through the same technology and communication channels as the VMS. In 2014, three (3) vessels participated under this scheme.

In evaluating compliance of observer reports submission, only reports from vessels under the “traditional” scheme were considered. As in the port inspection reports, percentage coverage was computed as the ratio of the fishing days accounted for by the observers and the total fishing days (of the trips under this scheme) in the NRA. In 2014, the percentage was 80%, i.e. only 3797 out of 4763 days were covered by observer reports (Fig. 10).

Catch information in observer reports may be crosschecked with other data sources (e.g. port inspection reports and CATs). According to NCEM Art. 30.A.2.(c), the observers shall record, among others, the catch, effort, and discard information *for* each haul. The Secretariat has noted a vast improvement in this regard. Whereas there were only 12 out of 79 reports contained haul by haul information in 2013; in 2014, 83 out of 87 observer reports received by the Secretariat contained haul by haul information.

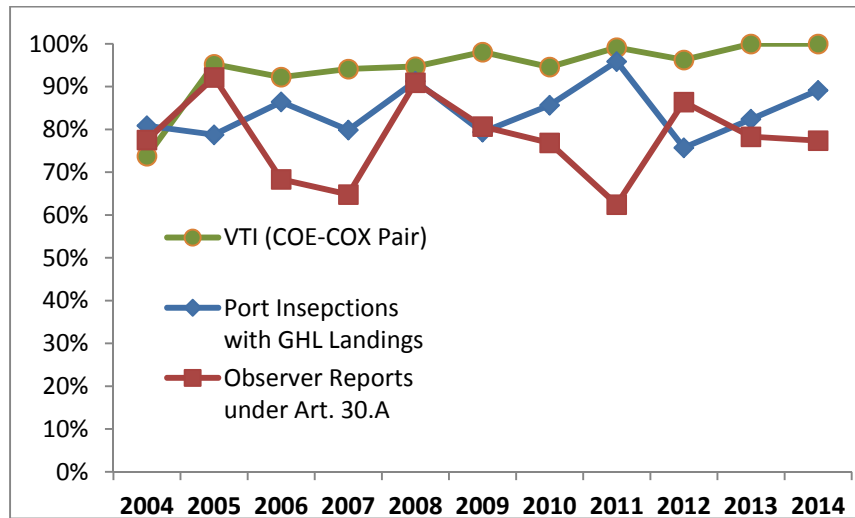


Figure 10. *Percentage coverage of fishing effort by VTI (COE-COX Pairs), Port Inspection and Observer Reports as a measure of compliance to report submission requirements.*

Timeliness of submission of reports

The timeliness of reports submitted to the NAFO Secretariat is an important issue. VMS messages are required to be provided every hour; hail messages at each entry and exit from the NRA as well catch reports on a daily basis; observers and at-sea inspection reports are expected to be submitted within 30 days and port inspection reports (PSC3 forms) should be sent to the Executive Secretary “without delay.” For the purpose of timeliness analysis, PSC 3 forms, as well as at-sea inspection reports received more than 30 days after the date of inspection were considered late. VMS and VTI messages were not included in the timeliness analysis as they are received practically in real time through satellite technology.

Figure 11 shows the timeliness of submission of at sea inspection, observer and port inspection reports. Less than half of the number of observer reports was received on time (22%). Timeliness in the submission of at-sea and port inspection reports was 94% and 48%, respectively.

At-sea and port inspection reports containing citations of infringements were always transmitted to the Secretariat without delay.

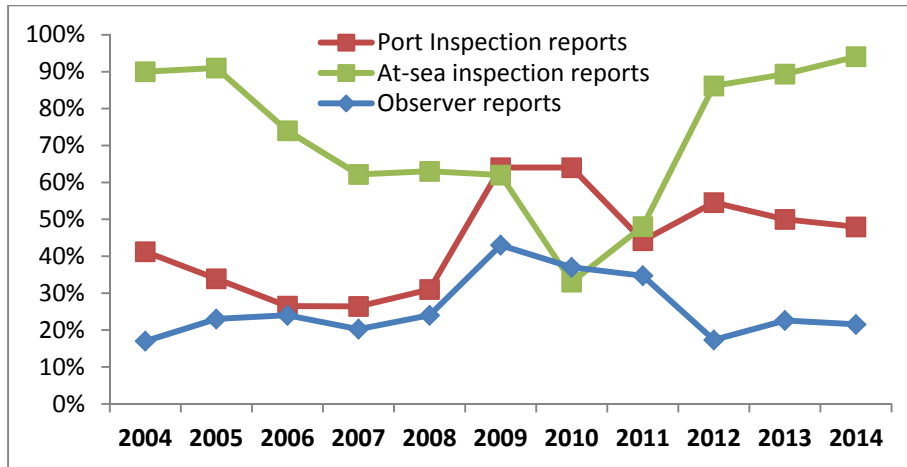


Figure 11. *Timeliness of submission of reports. Reports received 30 days after assignment or inspection are considered late.*

5. Follow-up to infringements

NCEM Art. 39 spells out obligations of a flag State Contracting Party that has been notified of an infringement. It includes taking immediate judicial or administrative action in conformity with their national legislations and ensuring that sanctions applicable in respect of infringements are adequate in severity. In 2014, five (5) citations were issued by at-sea-inspectors. Of the 5 citations, 1 contained a single AI, 2 citations contained 2 AIs, and 1 citation contained 3 AIs. In all 10 AIs were detected by at-sea inspectors. The nature of the AI range from a non-serious case of expired capacity plans to a serious AI involving mesh size or illegal attachments to gears (See Table 5 for details).

In compliance with NCEM Art. 40, the status of each AI case must be reported to the Secretariat annually until the case is resolved. The follow-up actions on AIs detected in 2014 are presented in Table 5. During the review of the follow-up actions by CPs at the STACTIC Intersessional Meeting in May 2014, procedural questions arose with regards to dealing with AIs issued at ports. For example, some port AI citations might have been a violation of domestic port measures rather than an infringement of the NAFO regulations. At the STACTIC Intersessional Meeting in May 2015, questions arose as the provisions in the NCEM are not clear on the reporting obligations of the flag States concerning follow-up actions on vessels issued with AI at port.

It must be noted that legal resolution of AIs may take more than a year. In Table 7, a summary of the status of AI cases in the last five years and their resolution are presented. Pending clarification on follow-up of AIs detected at ports, the statistics for the year 2013 and 2014 includes only AIs detected at sea.

Table 7. *Legal resolution of citations against vessels fishing in the NAFO Regulatory Area by year in which the citations were issued (as of August 2015). A citation is an inspection report (from at-sea or port inspectors) that lists one or more infringements. Inspections carried out for confirming a previous citation are not included. For years 2013 and 2014, only citations at sea are included pending procedural clarifications regarding citations issued by port authorities.*

Year	Number of Reports with AI Citation/s	Resolved cases		Pending cases
		Number	%	
2010	7	7	100%	0
2011	8	8	100%	0
2012	11	10	91%	1
2013	13	13	100%	0
2014	5	3	60%	2
Total	44	41	81%	

6. Trends, Conclusions and Recommendations

General Trends

- From 2004 to 2008 there has been an observed decline in fishing effort, trend that stabilizing in 2009 with ~5000 days of effort since that time. Fishing effort showed a slight increase in 2014 (+ 0.9%) compared with the previous year. Fishing days in the NRA increased from 4779 days in 2013 to 4822 days in 2014. The number of vessels has decreased by 7.8% from 64 vessels in 2013 to 59 vessels in 2014.
- In the 3L shrimp fishery, 2014 only saw 3 vessels operating which is a decrease from 7 vessels in 2013 and the overall fishing effort has reduced a further 64.7% from 190 days in 2013 to just 67 days in 2014.
- The re-emergence of fishing effort for the Pelagic Redfish Fishery (REB) observed in 2012 has continued but on a reduced scale. Comparing the previous two years, vessel numbers operating in this fishery has increased by 25%, with 5 vessels fishing in 2014 compared to 4 in 2013. However, despite an increase in vessel numbers, effort has been reduced by 29.1%, down from 79 days in 2013 to 56 days in 2014.
- Analysis of groundfish activity by water depth shows that about half of all groundfish effort in 2014 was at depths of <400m. Fishing effort in water depths >greater than 700m continue to decline. This is consistent with a reduced effort for deep water fisheries, such as Greenland halibut. Despite a notable decrease in effort, distribution in the shallower depths (0-99 m), there was no significant change regarding the effort distribution by water depth recorded in 2013.
- A considerable amount of both American plaice and cod was caught in 3N, while in comparison a lesser amount of cod was caught in 3O. Both species are under moratoria. Existing analysis did not indicate whether the bycatch of either stocks exceeded existing bycatch limits outlined in Article 6.3. Additional analysis should be developed for the 2015 compliance report to ensure that bycatch is held within existing limits and does not compromise efforts to rebuild these stocks.

Compliance by Fishing Vessels

- • Based on CAT reports the total catches reported by regulated and non-regulated species can be used to identify fishing trends.

- Table 2 of the Compliance Review indicates that PRA were reported without an associated NAFO division in daily catch (CAT) reports submitted by vessel masters. This is a big improvement on 2013 when catches for 8 regulated and unregulated species were recorded. However, it remains that Contracting Parties should ensure that vessel masters are accurately reporting catch of each species by NAFO division in their daily CAT reports.
- Based on VTI reports for 2014, 3M redfish TAC (6500 t) continues to be exceeded, in 2014 by 4%. On 8th July 2014, a 100% TAC uptake notification was sent effective 10th July. By the closure date, and based on VTI reports, the redfish TAC was exceeded by 4% (260 t), this was a significant improvement over 2013, where the TAC was exceeded by 16% (1040 t). However, given that the TAC continues to be exceeded, the Secretariat should consider whether catch projection protocols should include more precautionary (i.e., higher) catch rates when projecting future closure dates.
- Based on 2014 VMS and VTI data, the 3M shrimp fishery moratorium is being respected
- Based on water depth, 3L shrimp fishing vessels continues to comply with a ban of fishing in depths less than 200m.
- Based on VMS reports for 2014, closed areas are being respected.
- Shark species taken in NAFO fisheries are not associated with shark finning practices, and there has never been an incident of shark finning observed in the NRA.
- Reporting of shark captures by species became a requirement in 2012. However about 50% (70% in 2013) of all shark catches were reported as non-specified dogfishes. While this is an improvement in the amount of sharks identified by species compared to 2013, species identification should be improved. Contracting Parties should explore ways to improve species identification of shark species, as required in the CEM.

Inspections and Apparent Infringements

- The number of sea inspections has declined from 169 in 2013 to 135 in 2014 and the corresponding inspection rate has decreased slightly from 3.5% in 2013 to 2.8% in 2014.
- In 2014, 98 port inspection reports were received by the secretariat, 97 of which were associated with landings of groundfish species. Port inspections remain high due to the species subject to 100 percent inspection coverage such as Greenland halibut, which is subject to a rebuilding plan. However despite achieving improvements on the previous year, 2014 data indicates that 100 percent coverage is still not being met. This will require additional investigation. CPs should investigate why it appears the inspection rate for vessels landing Greenland halibut is only 89% (57 of 71 trips).
- For species being landed which are not subject to a recovery plan, the minimum port inspection coverage rate is 15% as required by NAFO CEM Article 43.10. The coverage rate achieved is considerably higher than this 15% requirement, due in large part to the fact that many Port States are reporting on inspections of their own vessels.
- In 2014, 12 Apparent Infringements (AI's) were detected at sea. Of these 10 were associated with violations of the NAFO CEM relating to fishing logbook, CAT reports, mesh size and attachments, stowage plans and labelling. A further 2 were considered as serious AI's in accordance with NAFO CEM Article 38 and were attributed to committing an infringement without an observer and failure to communicate messages.
- In 2014, 11 Apparent Infringements were detected in port, with the majority (45%) associated with misreporting. In 2013, the majority (50%) of AIs in port were associated with product labelling and

capacity plans. This year, only 18% of AIs in port were associated with product labelling and capacity plans.

Reporting Obligations by CPs and Observers

- In 2014, 85% of fishing days were covered by observer reports. This is a significant improvement on the previous year. Additionally, 83 out of 87 observer reports received by the secretariat contained haul by haul information. This is also a positive improvement on the previous year when only 12 out of 79 reports contained haul by haul information. However, the timeliness of submission of reports still needs improvement.
- No analysis is available to determine the observer coverage rate or compliance with the OBR reporting requirements for Contracting Parties employing the electronic reporting protocol under Article 30.B. Additional analysis is necessary to ensure that Contracting Parties are complying with minimum observer coverage levels and submitting the required reports. In 2014 only 3 vessels took part in this scheme compared with 16 vessels in 2013.

Follow-up to infringements

- Contracting Parties have an obligation to resolve reported AIs. In recent years there has been improvement in the reporting of the followup to infringements; however there are still pending cases with little to no additional detail provided on status.
- Timeliness of port inspection reports submitted to the Secretariat needs to be improved.