

Northwest Atlantic Fisheries Organization



**Report of the NAFO Fisheries Commission *Ad hoc* Working Group to
Reflect on the Rules Governing Bycatches, Discards and Selectivity (WG-BDS) in the
NAFO Regulatory Area**

9 August 2016
Dartmouth, Nova Scotia, Canada

NAFO
Dartmouth, Nova Scotia, Canada
2016

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1. Opening

The Fisheries Commission (FC) Chair, Temur Tairov (Russian Federation) opened the meeting at 10:00 hrs on Tuesday, 9 August 2016 via WebEx at the NAFO Headquarters in Dartmouth, Nova Scotia, Canada. He apologized for being unable to join the meeting in-person due to logistical issues.

Don Power (Canada) was elected as acting Chair for the meeting.

The Scientific Council (SC) was represented by the SC Chair, Kathy Sosebee (USA). The Standing Committee on International Control (STACTIC) was represented by the STACTIC Chair, Judy Dwyer (Canada). Representatives from Canada, Denmark (in respect of the Faroe Islands and Greenland), European Union (EU), Japan, Norway, the Russian Federation, and the USA were in attendance. An observer from Ecology Action Centre was also in attendance (Annex 1).

2. Appointment of Rapporteur

Ricardo Federizon (NAFO Secretariat) was appointed Rapporteur.

3. Adoption of Agenda

Under “*Other Matters*”, four sub-items were proposed:

- a. FAO Global Assessment of Fisheries Discards,
- b. Update on the Joint Advisory Group on Data Management,
- c. Update on the Catch Data Advisory Group (CDAG), and
- d. Gear Selectivity Experiments (use of sorting grids) in Division 3M.

The previously circulated provisional agenda was adopted with these insertions (Annex 2).

4. Discussion on the bycatch analysis performed by the SC and the Secretariat

At the 2015 Annual Meeting, the Fisheries Commission adopted two recommendations of the WG-BDS 2015 meeting relating to the analysis of the NAFO fisheries bycatch (Annex 13 of FC Doc. 15/23). SC was requested to examine relative levels of bycatch and discards of 3M cod/redfish, and stocks under moratoria in the different circumstances (e.g. fisheries, area, season, fleet, depth, and timing). The Secretariat was instructed to analyze data for trends, patterns and anomalies:

- a. In cases where bycatch thresholds (NCEM Article 6.3, Annex I.A footnote 21) are exceeded or trends are apparent, the analysis should provide additional information on the associated catch weights for the specific stocks (3NO Cod, 3M American Plaice, 3LNO A. Plaice);
- b. Analysis should consider both historical and current Daily Catch Reports (CATs) (2012 to current);
- c. Trends in reported catch of non-Annex IA species (3M Witch Flounder and 3M Skate).

The SC Chair reported that the haul by haul (H x H) analysis could not be done because the 2015 data contained only the top three species in a haul (as required in the NAFO Conservation and Enforcement Measures (NCEM)). It was noted that for 2016, the H x H data submission requires all species to be reported. SC will conduct the analysis of the 2016 data during its meeting in June 2017.

The Secretariat presented the results of its analysis in PowerPoint (Annex 3). Data from 2012-2015 CATs were analyzed for groundfish catch trends in Divisions 3LMNO, as well as for frequency of bycatch thresholds being exceeded.

Figures presented in Slides 2-5 in Annex 3 revealed the following characteristics of the bycatch in groundfish fisheries in the NAFO Regulatory Area:

- Skates and witch flounder are caught as bycatch in Division 3M (Flemish Cap) ,
- There was significant reduction in the catch of grenadier for the period and current catch was predominantly Divisions 3LM
- No trend was observed with regards to inter-annual variability.

As regards to catch in general, the following characteristics were revealed:

- Cod in the Flemish Cap (3M) represented the most predominant catch in any single division, followed by redfish,
- A major portion of the 3LMNO Greenland halibut catch comes from Division 3L,
- Redfish is a major species caught in all four divisions. In Division 3O it is the most predominant catch and skates is a distant second,
- Fish stocks 3NO skates and 3LNO yellowtail flounder are mostly caught in Division 3N.

To determine the frequency of occurrence of bycatch thresholds being exceeded, the H x H data with complete species reporting is needed. With the unavailability of such data, the 2015 CATs were used as the data source for this analysis. This is a major caveat as a CAT report might contain information from more than one tow in one day. To prevent an overestimation of the frequency of occurrence in the analysis of CAT reports, a bycatch limit in this analysis is considered reached when both the absolute quantity *and* the percentage conditions are satisfied. (According to Article 6.3 of the NAFO Conservation and Enforcement Measures (NCEM), a threshold limit is reached when the absolute quantity *or* percentage condition is satisfied.)

Thresholds values vary depending on the directed fishery and its associated bycatch (Slide 2). According to Article 5.2 of the NCEM, the species which comprises the largest percentage by weight of the total catch in a haul shall be considered as being taken in a directed fishery for the stock concerned. For the purpose of this analysis, the rest of the catch in that haul is considered bycatch. It was noted that the threshold may not apply in all species as a CP may have had a quota for both species during a period when both fisheries were open.

In all, 3,654 CAT reports were individually examined for any incident of a threshold being exceeded. The occurrence frequency of bycatch thresholds being exceeded was presented. 329 of the CATs show that some bycatch limits would have been reached (see Slide 3). Notable from the frequency table are:

- In the Flemish Cap, witch flounder and skates (both “non-Annex I.A species”) bycatch would have exceeded the threshold, if the 1250 kg or 5% threshold limits were applicable to those two species;
- High frequency of cod and redfish bycatch in the Flemish Cap, particularly cod bycatch of the redfish fishery, suggests that at certain times of the year, this fishery is being prosecuted as a mixed fishery;
- As slides 3 and 5 suggest, there is an apparent mixed nature of the 3LNO Thorny skate fishery was also highlighted, in particular the bycatch of moratoria stocks 3LNO American Plaice and 3NO cod;
- It was highlighted that 3LNO American place is also a frequent by-catch in the 3LNO Yellowtail fishery but is generally within the bycatch limit established for this fishery;
- As slide 5 suggests, skate constitutes a major bycatch of redfish in Division 3O in the last three years. The frequency of exceeding the threshold is relatively high.

The presentation of the CAT analysis elicited the following comments or points for discussion:

- The analysis and the results are very informative. However, caution should be exercised in making interpretations due to the major caveat explained above regarding aggregated tows over a day. It was noted that this is an assumption of what catch and bycatch are, and that the absence of catch composition per haul made the analysis particularly challenging.
- More information could be derived in a much finer level, e.g. fisheries behaviour and gear selection, if H x H were available.
- The STACTIC Chair indicated that the Secretariat should continue the analysis of the CAT data as it could inform STACTIC in its task of formulating and evaluating management and enforcement measures relating to bycatch, discards and selectivity. The results of the CAT analysis can be incorporated in the Annual Compliance Review.
- The Scientific Council Chair indicated that, for comparative purposes, the Secretariat also analyzes the 2016 H x H data in a similar approach applied to the CAT data.
- Contracting Parties highlighted the critical importance of resolving outstanding technical issues regarding the submission and utilization of H x H data to enable the completion of a comprehensive bycatch analysis.

5. Action Plan in the management and minimization of bycatch and discards

At the 2015 Annual Meeting, the Fisheries Commission adopted the Action Plan as per recommendation of the WG-BDS 2015 meeting (Annex 13 of FC Doc. 15/23). The Action Plan comprises four key themes: data management, ongoing analysis and monitoring, identification of priorities, and development of management options. It also contains a number of tasks under each of the four themes.

A proposal by EU was tabled to expand on the four key themes (Annex 4). The proposal identified actions, actors (e.g. NAFO bodies), expected results and timeline for each task. It was intended that the details identified in the Action Plan would conclude the work of this *Ad hoc* Working Group (WG).

Due to time constraints, this WG was not able to complete the discussion on all items of the proposal and agreed that an intersessional work would be required to finish the task. In this regard, it was agreed to recommend to the Fisheries Commission the continuation of this Working Group to be able to further develop and finalize the Action Plan by 2017 Annual Meeting. Contracting Parties were encouraged to provide any additional feedback to the EU.

6. Recommendations to forward to the Fisheries Commission

The Working Group **agreed** to forward to the Fisheries Commission the following recommendations for consideration and adoption:

1. **The Fisheries Commission to endorse the continuation of the work by the FC *Ad hoc* WG-BDS to further develop and finalize the Action Plan in time of the 2017 NAFO Annual Meeting;**
2. **The Fisheries Commission to request the Scientific Council, based on analysis of the 2016 H x H data and patterns of fishing activity, to examine relative levels of bycatch and discards of 3M cod/redfish, and stocks under moratoria in the different circumstances (e.g. fisheries, area, season, fleets, depths, timing);**
3. **The Secretariat to continue to analyze data for trends, patterns, anomalies:**
 - **In cases where bycatch thresholds are exceeded or trends are apparent, the analysis should provide additional information on the associated catch weights for the specific stocks (3NO cod, 3M American plaice, 3LNO American plaice);**

- **Analysis should consider both historical and current CATs (2012 to current); and**
- **Trend in reported catch of non- Annex I.A species (3M witch flounder and 3M skate).**

7. Other Matters

a. FAO Global Assessment of Fisheries Discards

The Secretariat informed the Working Group about this FAO initiative and its request for collaboration from the regional fisheries organizations including NAFO (FC BDS-WP 16/02). The WG appreciated the update and recognized the value of the work but due to time constraints it was not able to thoroughly review the request.

b. Update on the Joint Advisory Group on Data Management (JAGDM)

The STACTIC Chair gave an update on JAGDM. The harmonization of Catch-on-Entry and Catch-on Exit reports from NEAFC and NAFO vessels was one of the major agenda items of JAGDM. The recommendations developed were forwarded to NAFO and NEAFC. In 2016, the group met twice.

c. Update on the Catch Data Advisory Group (CDAG)

The SC Chair, co-Chair of CDAG, gave an update on CDAG. It had its face-to-face inaugural meeting in November 2015 and six subsequent meetings via WebEx, the last one being held in July 2016 (FC-SC Doc. 16/2).

A methodology for catch estimation using STACTIC data has been developed. The methodology will be utilized by the Secretariat and the estimates could be considered by the Scientific Council in its fish stock assessment tasks. An important feature of the methodology is the use of the nominal catch data from port inspections in evaluating the integrity of the primary data sources used in the estimation, e.g. CATs and H x H reports.

CDAG decided to meet again in February 2017 to discuss the 2016 catch estimates of priority stocks: 2+3KLMNO Greenland halibut, 3LN0 American plaice and 3M cod.

d. Gear Selectivity Experiments (using sorting grids) in Division 3M

The EU informed the Working Group of its experiment using sorting grids in fishing gears targeting cod in Division 3M (SC WP 16/09) and that, given the promising results, STACREC had encouraged further work in collaboration with SC.

8. Adoption of Report

This report was adopted through correspondence following the meeting.

9. Adjournment

The meeting was adjourned at 18:00 hrs on Tuesday, 09 August 2016.

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Annex 2. Agenda

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Discussion on the bycatch analysis performed by the SC and the Secretariat
5. Action Plan in the management and minimization of bycatch and discards
6. Recommendations to forward to the Fisheries Commission
7. Other matters
 - a. FAO Global Assessment of Fisheries Discards
 - b. Update on the Joint Advisory Group on Data Management (JAGDM)
 - c. Update on the Catch Data Advisory Group (CDAG)
 - d. Gear Selectivity Experiments (using sorting grids) in Division 3M
8. Adoption of the Report
9. Adjournment

Annex 3. Analysis of the Daily Catch Reports (CATs) 2012 - 2015**WG Recommendation 3 (July 2015)**

The Secretariat to analyze data for trends, patterns, anomalies

- In cases where bycatch thresholds are exceeded, the analysis should provide additional information on associated catch weights for specific stocks (**3NO COD, 3M PLA, 3LNO PLA**)
- Analysis should consider both historical and current CATs (2012 to current)
- Trends in reported catch of non-Annex I.A (**3M WIT, 3M SKA**)



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1

Thresholds according to Art. 6.3 – limitations of retention on board

Stock	Thresholds
3M COD	1250 kg or 5% whichever is greater
3LN RED	1250 kg or 5% whichever is greater
3NO COD	1000 kg or 4% whichever is greater
Other stocks in QT where no specific quota is allocated to CP	2500 kg or 10% whichever is greater
Moratorium species or "Others" quota where 100%-uptake is reached	1250 kg or 5% whichever is greater
3M RED between 50% - 100% TAC uptake*	1250 or 5% whichever is greater
3LNO PLA while fishing for 3LNO YEL	15%
3LNO PLA	1250 or 5% whichever is greater

* After 100% TAC uptake, Art. 5.3.c states: *CPs shall ensure that no more 3M RED is retained onboard its vessels after the estimated date when 100% of the 3M RED TAC is taken.*



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2



Estimated Frequency of Exceeding Bycatch Thresholds (Source: 2015 CATs)

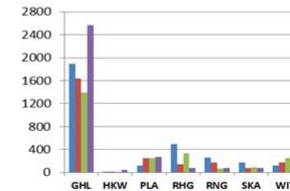
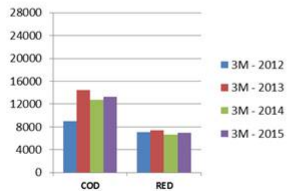
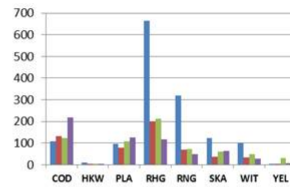
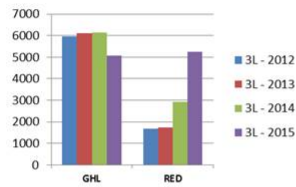
Table 1. Estimated Frequency of Exceeding Bycatch Thresholds (Source: 2015 CATs)

Bycatch/Stock Directed Fishing/Div (f)	3M COD	3NO COD	3M RED	3LN RED	3O RED	3M PLA	3LNO PLA	3M SKA	3LNO SKA	3M WIT
Greenland Halibut 3L (646)				30			4			
Greenland Halibut 3M (295)	3					1		8		13
Greenland Halibut 3N (130)				4					7	
Greenland Halibut 3O (1)										
Cod 3M (639)			12			5				12
Redfish 3M (373)	137									4
Redfish 3L (415)							2		2	
Redfish 3N (141)		2					1		2	
Redfish 3O (522)		10					10		26	
Skates 3L (0)										
Skates 3N (312)		9					12			
Skates 3O (79)		1			8		3			
Yellowtail flounder 3L (0)										
Yellowtail flounder 3N (98)		5		1						3
Yellowtail flounder 3O (3)		1								1



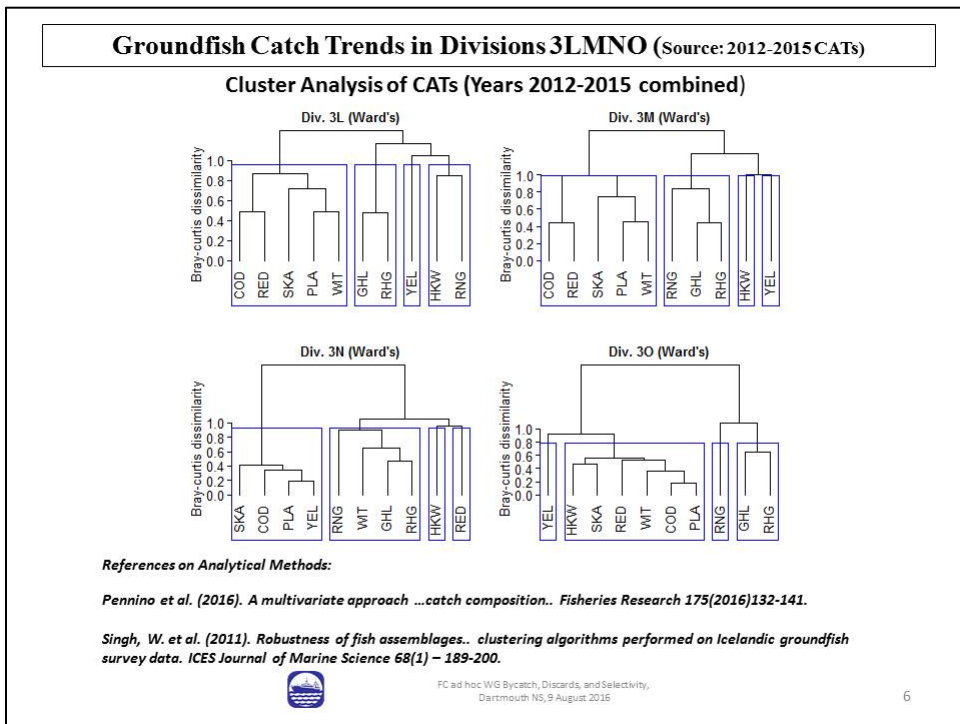
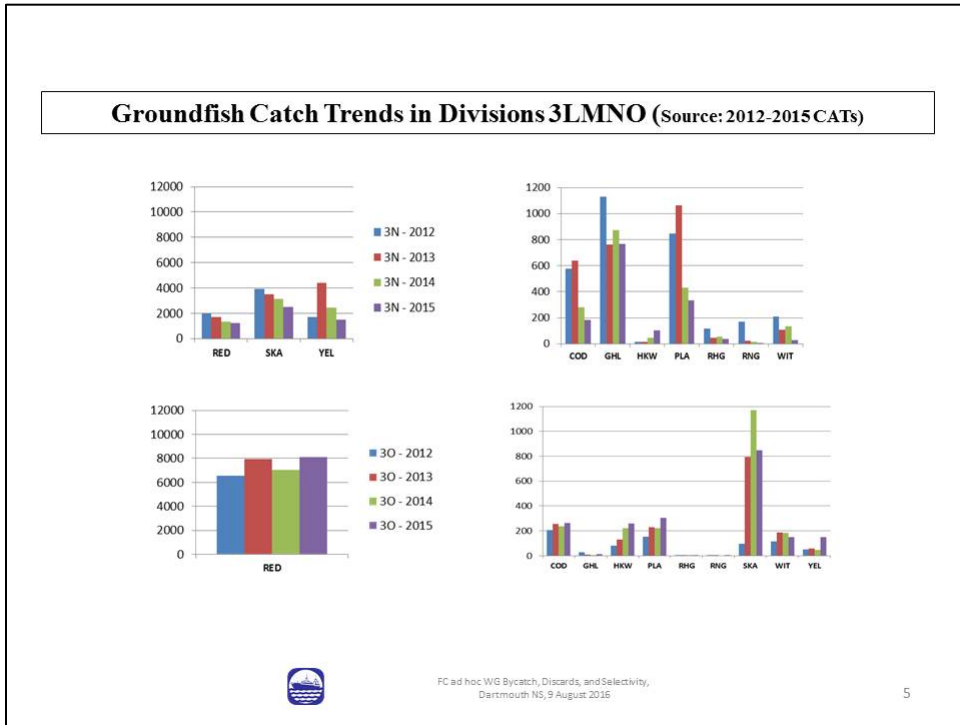
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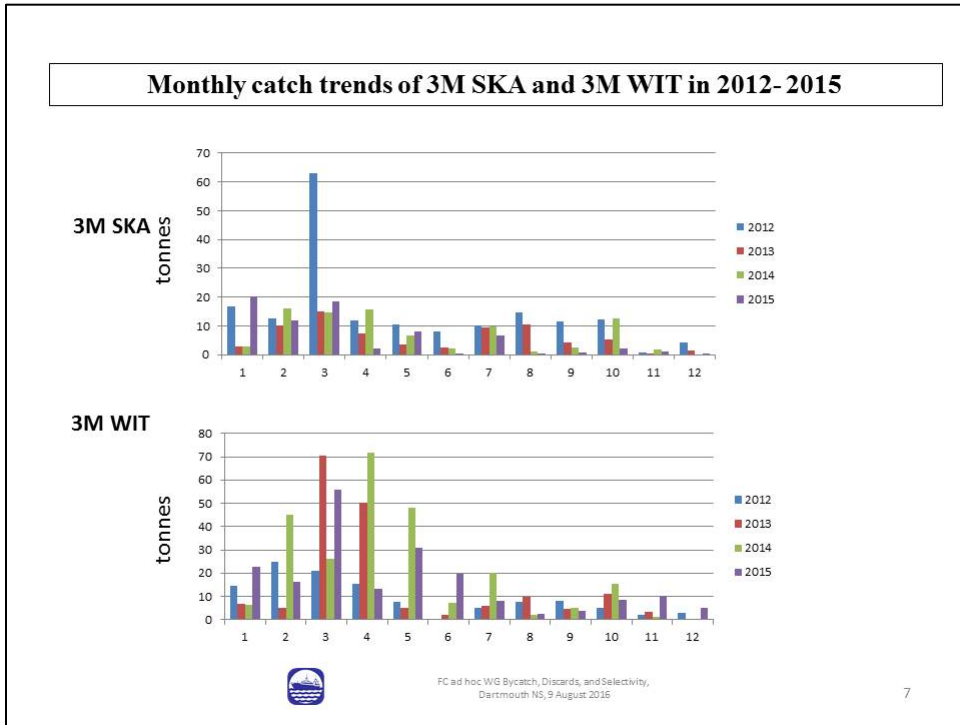
Groundfish Catch Trends in Divisions 3LMNO (Source: 2012-2015 CATs)



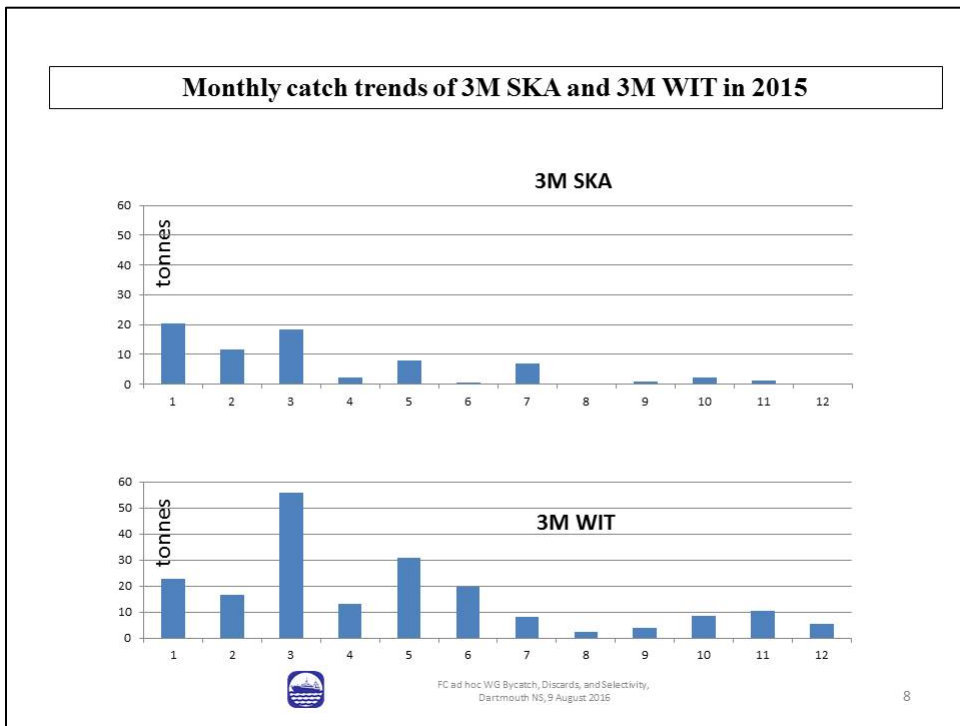
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7



8



Annex 4. Draft NAFO Action Plan on the management and reduction of bycatch and discards (EU proposal)

This Action Plan builds on the version adopted by the NAFO Fisheries Commission in September 2015¹. The Action Plan below, if adopted, will conclude the work of the ad-hoc NAFO WG on By-catch, Discards and Selectivity. However, to supervise the implementation of the Action Plan and if the FC and the SC consider it useful, an ad-hoc operational WG could be convened at any time so as to track progress or perform other tasks.

The scope of the Action Plan would go beyond NAFO stocks to cover, if appropriate, species that are regulated by NAFO but not subject to output limits (Annex I.C NCEM)

The Action Plan will ensure that there is a systematic and horizontal consideration of the overarching objectives set out below across NAFO bodies, at least up to 2019.

A. Overarching objectives

1. To manage and minimize by-catch and discards, and to improve selectivity, in fisheries of the NAFO Regulatory Area, in accordance with FAO's International Guidelines on By-Catch Management and Reduction of Discards.²
2. To improve the accuracy of reporting of target, non-target and incidental catch.
3. To account for total catch (retained and non-retained) in scientific assessments and management measures.
4. To help management measures become more adaptive and address changing fishery conditions over time, or differences among areas and fleets.
5. To help management measures reflect the precautionary and ecosystem approaches to fisheries management.
6. To identify priority areas for by-catch management, in particular areas where there is a risk of causing serious harm to by-catch species.
7. To ensure cooperation and coherence between all NAFO bodies working on by-catch management.

¹ FC Doc. 15/22 Rev. (Annex 13 to the Fisheries Commission report on the 37th NAFO Annual Meeting in 2015).

² <http://www.fao.org/docrep/015/ba0022t/ba0022t00.pdf>

B. Actions, actors, timing

1. Data management

What	Expected result	NAFO body	Timeline
1.1. IT issues and capacity	Ensure cost-effective and efficient IT tools to be used by the Secretariat, in support of this action plan	Secretariat	AM 2017
1.2. Standard formats, data collection and data transmission	<p>Ensure that all forms and data used to report catch and effort (and particularly by-catch) are standardized according to existing NCEM provisions, including observer data.</p> <p>Ensure that new data collection techniques are used (e.g. Electronic Reporting Systems - ERS)</p> <p>Ensure that confidentiality is respected.</p> <p>If appropriate, consider results of the study on catch data collection methodologies whose ToR were endorsed by the SC 2016.</p>	SC, STACTIC, external contractor	AM 2017
1.3. Logbook data	Haul-by-haul data is available for NAFO bodies, with relevant breakdown for by-catches, retained and non-retained	SC	AM 2017
1.4. Data completeness and identification of gaps	Identify gaps in information on by-catch, whether retained or not retained	SC	AM 2017
1.5. Data sharing	Improve information sharing between NAFO and Contracting Parties, including data for NAFO-regulated stocks in the EEZ	FC, STACTIC	AM 2017

2. Ongoing analysis and monitoring

What	Expected result	NAFO body	Timeline
2.1. Trends, patterns and anomalies	A mapping of by-catch in NAFO in the last 10 years which is possibly to be updated every year afterwards (ideally, an IT tool that can receive, integrate and analyze new data inputs).	Secretariat, SC	AM 2017
2.2. Specific issues by time, area, depth, fleet and fishery	An external study as a complement to action 2.1, possibly focusing on specific issues identified as such in the work under 2.1. Identification of unavoidable levels of discards ("de minimis") by stock and Division Identification of species under NAFO catch or effort limits with high survivability rates.	Secretariat (with contractor)	AM 2017
2.3. Identification of best practices	On the basis of actions 2.1 and 2.2, guidelines on best practices to avoid by-catch per time, area, depth, fleet and fishery.	FC	AM 2017

3. Identification of priorities

What	Expected result	NAFO body	Timeline
3.1. Moratoria species	Consider priority moratoria species which should recover quickly and are prevented from doing so by excessive by-catch and/or discards	WG EAFFM, SC	AM 2018
3.2. Areas where there is a risk of causing serious harm to by-catch species	Consider priority areas where by-catch and discards are more harmful, notably to moratoria species under 3.1. Survivability of NAFO species should be considered (see task 2.2). Risk assessment procedures should be developed in order to help prioritize areas.	WG EAFFM, SC	AM 2018
3.3. High rates of discards	Establish which NAFO fisheries are less selective, according to criteria to be defined	WG EAFFM, SC, Secretariat	AM 2018

4. Development of management options

What	Expected result	NAFO body	Timeline
4.1. Time-area management	Assess the need for (and, if appropriate, establish) time-area management measures for NAFO fisheries identified as priorities under Action group 3 above, possibly by means of real-time area closures.	FC, WG EAFFM, STACTIC	AM 2019
4.2. Fishery-specific solutions	Assess the need for (and, if appropriate, establish) fishery-specific measures for NAFO fisheries identified as priorities under Action group 3 above. Analysis of possible ways to identify, in real-time, atypical catch compositions and new ways to tackle them (e.g. beyond the current move-on rule of Article 6.6 NCEM)	FC, WG EAFFM, STACTIC	AM 2019
4.3. Incentives to avoid by-catch and discards	Adopt new measures or modify existing ones in order to create selectivity incentives and full utilization of catch. Consideration could be given to multi-national training programs organized by NAFO.	FC, WG EAFFM, STACTIC	AM 2019

5. Review

No later than 2019, this Action Plan should be reviewed and assessed, if appropriate by including it expressly in the scope of a NAFO Performance Review.