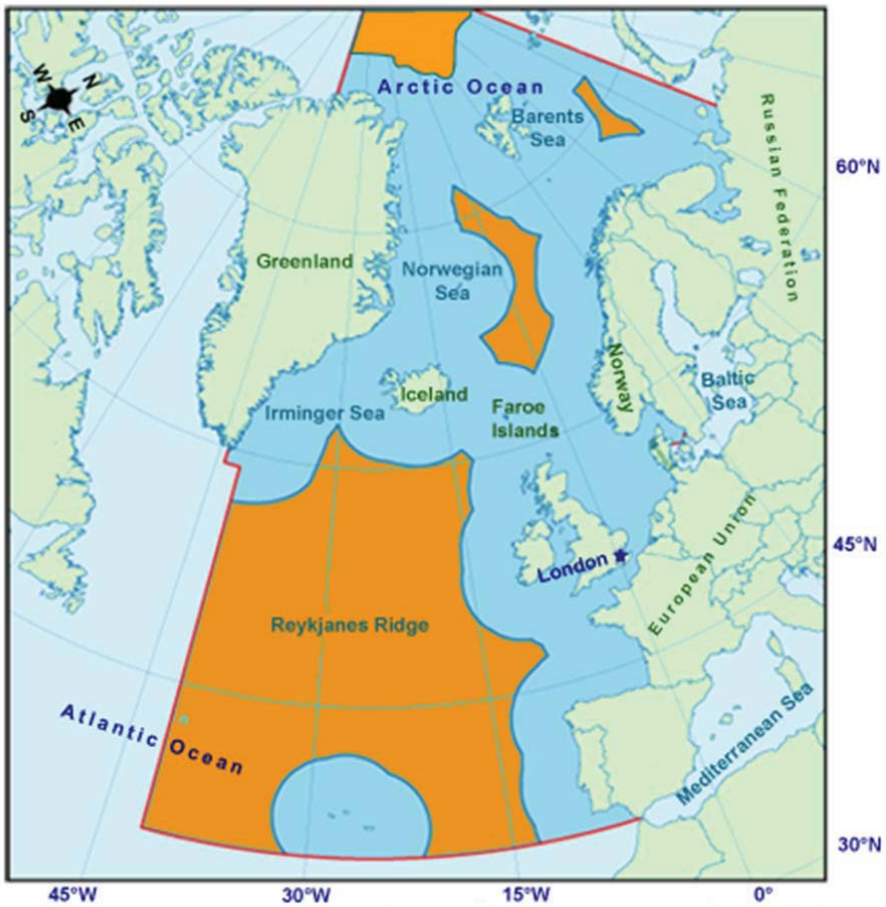
NORTHEAST ATLANTIC FISHERIES COMMISSION
MANAGING FISHERIES IN THE NORTHEAST ATLANTIC

Report of the Performance Review Panel

2014

Northeast Atlantic Fisheries Commission (NEAFC)



October, 2014

Forward

Regional fishery management organizations (RFMOs) such as the North East Atlantic Fisheries Commission ('NEAFC') are critical to attaining the goals of the UN Fish Stocks Agreement, and more importantly to sustaining the ocean's bounty of sustainable seafood production and for protecting marine ecosystems. Over the past eight years, beginning with NEAFC's performance review conducted in 2006, all of the major global RFMOs have now been reviewed once at least. The goals of these reviews have been to look at the various institutional arrangements upon which the RFMOs are based, and to evaluate performance with respect to their stated goals for conservation and management.

The current review follows a similar effort conducted for NEAFC in 2006 by expert panelists Michael Arbuckle, Bruce Atkinson, and Valentina Germani. That thorough review of NEAFC's performance not only set a high bar for the current update, but set the standard for the subsequent reviews of other RFMOs. Given the previous 2006 review of NEAFC, one of the purposes of the current review was to measure progress in the eight years since the previous evaluation, and to comment on progress in areas previously considered deficient or in need of strengthening.

In our review, we respond to specific Terms of Reference provided by NEAFC. Further, we explicitly comment, were appropriate, on issues raised by the previous review panel. It is clear that in the intervening years NEAFC has made considerable progress in strengthening administrative, and management approaches and performance. For example, it has addressed emerging issues concerning the vulnerable deep water resources and habitats that occur in the NEAFC regulatory area. That being said, there remain significant areas for improvement, including finding a solution to stop the continuing failure to reach agreements on quota allocations and thereby to prevent overfishing of some resources.

The Panel's deliberations were significantly aided by assistance of the staff of the Commission, including the development of 23 working papers spelling out how the organization works, and updating scientific advice and management procedures followed by NEAFC. We are deeply appreciative of the staff of the organization, the national delegations, whom we interviewed, and the chairs of various standing and *ad hoc* committees who explained how the committees work and who offered many suggestions for strengthening the organization. We appreciate the openness to confront head on the issues faced by the Commission, and valuable suggestions offered for improving effectiveness.

As one of the premier RFMOs, comprised of some of the most technically sophisticated fishing nations in the world, NEAFC should exhibit a high level of performance in meeting sustainability goals. We appreciate the opportunity to evaluate the performance of this notable organization and to contribute, in a small way, to meeting the global challenge of securing sustainable, productive fisheries and healthy ocean environments for the future.

October 27, 2014

Dr. Kevern Cochrane (South Africa), proposed by FAO
Dr. Steven Murawski (USA), proposed by ICES
Mr. Andre Tahindro (Madagascar) proposed by UNDOALOS.

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Abbreviations and Acronyms

COFI	Committee on Fisheries, FAO
CP	Contracting Parties to the Northeast Atlantic Convention
CNCP	Cooperating Non-Contracting Parties
CWP	The Coordinating Working Party on Fishery Statistics, FAO
EU	European Union
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of the United Nations
FIGIS	Fisheries Global Information System, FAO
FIRMS	Fishery Resources Monitoring System (part of FIGIS)
FMC	Fishery Monitoring Center
ICP	Informal United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (former UNICPOLOS)
IUU fishing	Illegal, Unreported and Unregulated Fishing
MCS	Monitoring, Control and Surveillance
NCP	Non-Cooperating Parties
NGO	Non-Governmental Organisation
PSC	Port State Control
RA	Regulatory Area
REIO	Regional Economic Integration Organisation
RFMO/A	Regional Fisheries Management Organization and Arrangement
VME	Vulnerable Marine Ecosystem
VMS	Vessel Monitoring System
UN	United Nations
UNDOALOS	United Nations Division for Oceans Affairs and the Law of the Sea
UNFSA	The 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (Fish Stocks Agreement)
UNCLOS	The 1982 United Nations Convention on the Law of the Sea

NEAFC Committees and Working Groups

PECCOE	Permanent Committee on Control and Enforcement This Committee is comprised of representatives from all the Contracting Parties. It is responsible for advising the Commission on issues relating to fishing controls and the enforcement of the Scheme.
PECMAS	Permanent Committee on Management and Science The Permanent Committee on Management and Science takers care of the contacts with ICES, the International Council for the Exploration of the Sea, which provides science based advice to NEAFC. It advises the Commission on measures related to area management (areas closed to fisheries)
FAC	Finance and Administration Committee This Committee is comprised of representatives drawn from different Contracting Parties, with all Contracting Parties represented. It is responsible for advising the Commission on all aspects of the Commission's annual budget. The Committee also advises the Commission on staffing and administrative matters.
JAGDM	Joint Advisory Group on Data Management This is a joint body with NAFO. In 2014 it replaced the Advisory Group on Data Communication, which was formally a NEAFC body although it was open to participation by other RFMOs.
WGStats	Working Group on Statistics
WGFN	Working Group on the Future of NEAFC
WGBW	Working Group on Blue Whiting

Regional Fisheries Bodies and Regional Seas Programmes

CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
GFCM	General Fisheries Commission for the Mediterranean
IATTC	Inter-American Tropical Tuna Commission
IBSFC	International Baltic Sea Fishery Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
IOTC	Indian Ocean Tuna Commission
IPHC	International Pacific Halibut Commission
NAFO	Northwest Atlantic Fisheries Organization
NARFMO	North Atlantic Regional Fisheries Management Organization
NASCO	North Atlantic Salmon Conservation Organization
NAMMCO	North Atlantic Marine Mammal Commission
NEAFC	North East Atlantic Fisheries Commission
OSPAR	Convention for the Protection of the Marine Environment
SEAFO	South East Atlantic Fisheries Organization
SIOFA	South Indian Ocean Fisheries Agreement
SPRFMO	South Pacific Regional Fisheries Management Organization
SWIOFC	South West Indian Ocean Fisheries Commission
WCPFC	Western and Central Pacific Fisheries Commission

Executive Summary

At its 31st Annual Meeting in 2012, the NEAFC agreed that a second performance review should be conducted to assess the performance of the organization since 2006 against the objectives set out in the Convention on Multilateral Cooperation in the North East Atlantic and any other relevant international instruments addressing the conservation and management of living marine resources, duly noting the objectives reflected in the amendments to the Convention adopted by NEAFC in 2006. Such review should give also consideration to the developments in fisheries and ocean management that have taken place during the period covered by the review. To this end, NEAFC adopted a proposal submitted by Denmark (in respect of the Faroe Islands and Greenland), Iceland, the European Union and Norway to initiate the conduct of an independent performance review, the terms of reference which, were spelled out in document 2012-87[1]. This independent review was intended also to evaluate progress in meeting the intended goals of the Commission, following-up on its first progress review, which was completed in 2006.[2]

NEAFC agreed that the Review Panel shall be composed of three external experts in fisheries and oceans management, fisheries science, and law of the sea matters, as proposed by FAO, ICES and UNDOALOS, respectively. These experts shall not have participated in the work of NEAFC, nor shall they be nationals of any NEAFC Contracting Party. The Panel was invited to assess the performance of the NEAFC and its Contracting Parties against fisheries governance principles provided in the NEAFC Convention and under relevant international fisheries instruments, using a set of criteria spelled out in the Terms of reference for the Performance Review.

During the 32nd Annual Meeting of NEAFC, which was held from 11 to 15 November 2013, the Panel conducted interviews with the Heads of delegations of NEAFC Contracting Parties, as well as the Chairpersons of Committees and Working Groups of NEAFC, to collect their views on the performance of NEAFC and on ways and means to improve such performance. In addition, the Panel held two meetings at the NEAFC Headquarters in order to discharge its mandate, as set out in the Terms of Reference for the second Performance Review. The first meeting took place from 29 to 31 October 2013, while the second meeting was held from 6 to 8 July 2014. To assist in this process, NEAFC Secretariat provided the Panel with a set of background reports based on the criteria set out for the Performance Review.

The Panel is satisfied that following the adoption of various measures since 2006, such as relevant amendments to the NEAFC Convention, the consolidation of the Scheme of Control

[1] PROPOSAL FROM DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND), ICELAND, THE EUROPEAN UNION AND NORWAY FOR TERMS OF REFERENCE FOR A NEAFC PERFORMANCE REVIEW, NEAFC Document AM 2012-87.

[2] Performance Review Panel Report of the North East Atlantic Fisheries Commission, NEAFC, 6 November, 2006, 106 pp.

and Enforcement (the Scheme) with the non-Contracting Party Scheme, the agreement on a comprehensive port State control system and its subsequent harmonization with the FAO Agreement on Port State Measures, as well as the adoption of new decision-making procedures and mechanisms for the settlement of disputes in 2013, NEAFC has now the necessary legal and institutional framework to ensure effective conservation and sustainable use of fishery resources under its purview. The Panel noted also that effective implementation of fishery regulations provided under the Scheme of Compliance and Enforcement, has allowed NEAFC to abate Illegal, Unreported and Unregulated (IUU) Fishing of Non Contracting Parties in the Regulated Area. All these positive developments have now shifted attention on the need for Contracting Parties to ensure implementation of all fishery regulations established under the Scheme and to agree on measures to ensure the "long-term conservation and optimum utilization of fishery resources in the Convention Area..."[3] including agreement on annual resource allocation keys for the Regulatory Area. Indeed, no matter how comprehensive fisheries regulations are in place for the whole Convention Area, they are only as effective as they are thoroughly implemented by all Contracting Parties.

In line with its mandate, the Panel has provided a number of suggestions to improve the performance of NEAFC. Some suggestions are intended to ensure consistency of some provisions of the Scheme with relevant international fisheries instruments and with best practices of other regional fisheries management organizations. Other suggestions are aimed at improving compliance by Contracting Parties with NEAFC conservation and management measures. In so doing, the Panel has kept in mind the objectives of NEAFC set out in Article 2 of the NEAFC Convention.

[3] NEAFC Convention, Art.2.

1. INTRODUCTION

1.1 The Panel

The review panel membership was chosen in accordance with the stated requirements in the proposal[1].

1.1.1 Panel Composition

According to the accepted proposal[1], the Review Panel shall be composed as follows:

- Three external experts in fisheries and oceans management, fisheries science, and law of the sea matters, as proposed by FAO, ICES and UNDOALOS, respectively. These experts shall not have participated in the work of NEAFC, nor shall they be nationals of any NEAFC Contracting Party.

The external panel members thus selected were:

Dr. Kevern Cochrane (South Africa), proposed by FAO
Dr. Steven Murawski (USA), proposed by ICES
Mr. Andre Tahindro (Madagascar) proposed by UNDOALOS.

- The Secretary of NEAFC or his representative shall act as a resource person to the Panel.

1.1.2 Administration

- The President of NEAFC shall contact ICES, FAO and UNDOALOS after the 31st Annual Meeting requesting nominees for the NEAFC Performance Review Panel.

- Meeting(s) of the Review Panel shall be held at NEAFC Headquarters in London.

- The Secretariat shall provide administrative assistance to the Panel.

- The travel costs of the experts shall be reimbursed and they shall receive a per diem to cover their accommodation and subsistence costs. In addition the experts may receive a fee for the work undertaken.

1.2 Objectives and Terms of Reference for the Review

1.2.1 Objectives

The objectives of the work to be carried out by the Review Panel shall be:

- To assess the performance of NEAFC since 2006 against the objectives set out in

the Convention on Multilateral Cooperation in the North East Atlantic and any other relevant international instruments addressing the conservation and management of living marine resources, duly noting the objectives reflected in the amendments to the Convention adopted by NEAFC in 2006.

- Consideration should also be given to the developments in fisheries and ocean management that have taken place during the period covered by the review.

1.2.2 Terms of Reference

The Review shall be conducted on the basis of the criteria provided in the Annex to the proposal[1]. These review criteria are stated in Table 1 below:

Table 1. Review Criteria used for the NEAFC Performance Review

	Area	***General criteria***	***Detailed criteria***
1.	*The NEAFC Convention*	Effectiveness in meeting the objective of the Convention	• Assess the NEAFC Convention in relation to the objective set out in Article 2, having due regard to Articles 5 and 6.
2.	*Conservation and management*	Status of living marine resources	• Status of living marine resources under the purview of NEAFC in relation to maximum sustainable yield or other relevant biological standards. • Trends in the status of those resources. • Status of species that belong to the same ecosystems as, or are associated with or dependent upon, targeted living marine resources. • Trends in the status of those species.
		Ecosystem approach	• Extent to which NEAFC decisions take account of and incorporate an ecosystem approach to fisheries management.
		Data collection and sharing	• Extent to which NEAFC has agreed formats, specifications and timeframes for data submissions, taking into account Annex 1 of the 1995 UN Fish Stocks Agreement. • Extent to which applicable NEAFC rules ensure that Contracting Parties collect and share complete and accurate data concerning living marine resources and other relevant data in a timely manner, including analysis of trends in fishing activities over time. • Extent to which fishing and research data and

			fishing vessel and research vessel data are gathered by NEAFC and shared among Contracting Parties. • Extent to which NEAFC is addressing any gaps in the collection and sharing of data as required.
		Quality and provision of scientific advice	• Extent to which NEAFC receives the best scientific advice relevant to the living marine resources under its purview, as well as to the effects of harvesting, research, conservation and associated activities, on the marine ecosystem.
		Adoption of conservation and management measures	• Extent to which NEAFC has adopted conservation and management measures based on the best scientific advice available to ensure the long-term conservation and sustainable use of living marine resources. • Extent to which NEAFC has applied a precautionary approach as set forth in Article 6 of the 1995 UN Fish Stocks Agreement, including the application of precautionary reference points. • Extent to which consistent/compatible management measures have been adopted as set out in Article 7 of the 1995 UN Fish Stocks Agreement. • Extent to which NEAFC successfully allocates fishing opportunities consistent with the NEAFC Convention and Article 11 of the 1995 UN Fish Stocks Agreement. • Extent to which NEAFC has moved toward the adoption of conservation and management measures for previously unregulated fisheries, including new and exploratory fisheries. • Extent to which NEAFC has taken due account of the need to conserve marine biological diversity and minimize harmful impacts of fishing activities and research on living marine resources and marine ecosystems. • Extent to which NEAFC has adopted measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target living marine resources, and impacts on associated or dependent species through measures including, to the extent practicable,

			the development and use of selective, environmentally safe and cost-effective fishing gear and techniques. • Extent to which NEAFC has adopted and is implementing effective rebuilding plans for depleted or overfished stocks including guidance for stocks under moratoria.
		Capacity management	• Extent to which NEAFC has identified fishing capacity levels commensurate with the conservation objectives of the NEAFC Convention. • Extent to which NEAFC has taken actions to prevent or to eliminate excess fishing capacity and effort. • Extent to which NEAFC monitors the levels of fishing effort, including taking into account annual notifications of participation by Contracting Parties.
3.	*Compliance and enforcement*	Flag State duties	• Extent to which NEAFC has established flag State duties as set out in international instruments, including, inter alia, the 1982 Law of the Sea Convention, 1995 UN Fish Stocks Agreement and the 1993 FAO Compliance Agreement, as applicable. • Extent to which these measures are effectively implemented.
		Port State measures	• Extent to which NEAFC has adopted measures relating to the exercise of the rights and duties of its Contracting Parties as port States, as reflected in the 2009 FAO Port State Measures Agreement. • Extent to which these measures are effectively implemented.
		Monitoring, control and surveillance (MCS)	• Extent to which NEAFC has adopted integrated MCS measures (e.g. required use of boarding and inspection schemes, VMS, observers, catch documentation and/or trade tracking schemes, and restrictions on transshipment). • Extent to which these measures are effectively implemented.
		Follow-up on infringements	• Extent to which NEAFC and its Contracting Parties follow up on infringements to conservation and management measures.

		Cooperative mechanisms to detect and deter noncompliance	• Extent to which NEAFC has established adequate cooperative mechanisms to both monitor compliance and detect and deter non-compliance (e.g. compliance committees, vessel lists, sharing of information about non-compliance). • Extent to which these mechanisms are being effectively utilised.
		Market-related Measures	• Extent to which NEAFC has adopted measures relating to the exercise of the rights and duties of NEAFC Contracting Parties as market States for living marine resources under the purview of NEAFC, to combat IUU fishing. • Extent to which these measures are being effectively utilised.
4.	*Decision-making and dispute settlement*	Decision-making	• Efficiency of NEAFC meetings in addressing critical issues in a timely and effective manner. • Extent to which NEAFC has transparent, consistent and adequate decision-making procedures that facilitate the adoption of conservation and management measures in a timely and effective manner.
		Dispute settlement	• Extent to which NEAFC has established adequate mechanisms for resolving disputes.
5.	*International cooperation*	Transparency	• Extent to which NEAFC is operating in a transparent manner, taking into account, inter alia, Article 12 of the 1995 UN Fish Stocks Agreement. • Extent to which NEAFC decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion.
		Relationship with non-Contracting Parties	• Extent to which non-Contracting Parties have undertaken fishing activities in the NEAFC Regulatory Area. • Extent to which NEAFC facilitates cooperation with non-Contracting Parties, including encouraging non-Contracting Parties to become Contracting Parties or to implement NEAFC conservation and management measures voluntarily. • Extent to which NEAFC provides for action in accordance with international law against non-

			Contracting Parties undermining the objective of the Convention, as well as measures to deter such activities.
		Cooperation with other international organisations	• Extent to which NEAFC cooperates with regional fisheries management organisations and other relevant international organisations.
		Special requirements of developing States	• Extent to which NEAFC recognises the special needs of developing States and cooperates with developing States, taking into account Part VII of the 1995 UN Fish Stocks Agreement. • Extent to which NEAFC provides relevant assistance to developing States as reflected in Article 26 of UN Fish Stocks Agreement.
6.	*Financial and administrative issues*	Availability of resources for activities	• Extent to which financial and other resources are made available to achieve the aims of NEAFC and to implement NEAFC's decisions.
		Efficiency and cost effectiveness	• Extent to which NEAFC is efficiently and effectively managing its human and financial resources, including those of the Secretariat. • Extent to which the schedule and organization of the meetings could be improved.

1.3 Conduct of the Review

The Panel agreed to follow the same methodology and approach as those adopted by the first Review Panel in 2006 for the conduct of this second review of the performance of NEAFC. These consist in the review of legislative information available for each criterion and the review of the state of implementation of rules and regulations under the established legal framework, before making comments and suggestions to improve the overall performance of Contracting Parties. To assist in this process, the NEAFC Secretariat provided the Panel with background reports and other material relevant to each criterion. These documents were very useful and informative, and have provided valuable assistance to the Panel in the conduct of its work.

In addition, the Panel conducted interviews of the Heads of delegations of NEAFC Contracting Parties, as well as the Chairpersons of Committees and Working Groups of NEAFC during the 32nd Annual Meeting of NEAFC, to collect their views on the performance of NEAFC and on ways and means to improve such performance.

Finally, the Panel held two meetings at the NEAFC Headquarters in order to discharge its mandate, as set out in the Terms of Reference. The first meeting took place from 29 to 31

October 2013, and the second meeting was held from 6 to 9 July 2014.

1.3.1 Report of the Review Panel

The Chairman of the Panel presented a preliminary report of the Performance Review Panel to the 32nd Annual Meeting of NEAFC in 2013. The Final Report shall be presented to the Contracting Parties at the 33rd Annual Meeting of NEAFC in 2014. It shall subsequently be made public on the website of NEAFC.

1.3.2 Acknowledgements

The review panel members thank the Secretary, Mr. Stefán Ásmundsson, Mr. João Neves, Monitoring Control and Surveillance Officer and the administrative staff of NEAFC including Ms. Kate Partridge and Ms. Diane Hacker for facilitating the work of the panel and preparation of this report. The work of the review panel was made much more efficient by the development of 22 working papers describing various aspects of the Commission's work, and by the able assistance of Ms. Ekaterina (Katia) Belous, who was seconded to NEAFC from the Russian Federation during the summer of 2013 to prepare various technical syntheses cited in this report.

2. The NEAFC Convention

2.1 Effectiveness in Meeting the Objective of the Convention

Goal: Assess the NEAFC Convention[4] in relation to the objective set out in Article 2, having due regard to Articles 5 and 6.

As stated in the "new" Convention, the overarching objective of NEAFC is to: "ensure the long-term conservation and optimum utilisation of the fishery resources in its Convention Area, providing sustainable economic, environmental and social benefits".

Catches of species regulated by NEAFC (including portions within national EEZs) amount to well over 2 million tonnes per year over their full area of distribution, with a first-sale landings value of over £1.5 billion (Figure 1). Since 2004, landings of key species have declined from about 4 million to about 2.5 million tonnes, primarily as a result of declining catches of blue whiting and Norwegian spring spawning (Atlanto-Scandian) herring (Figure 1) in order to comply with scientific advice as provided through ICES. The species regulated under the NEAFC convention include primarily, by volume, a number of pelagic schooling species (herring, mackerel, blue whiting) as well as a variety of demersal species including redfishes, haddock on the Rockall Bank, and other deep sea demersal species (Figure 2).

[4] Text of the "**NORTH EAST ATLANTIC FISHERIES COMMISSION "New" Convention", Office of the Commission,** 22 Berners Street, London W1T 3DY February 2007, 14 pp.

Importantly, and as noted in the 2006 panel review of NEAFC, although the stated objective (Article 2) of the Convention includes "….providing sustainable economic, environmental and social benefits", the Commission does not explicitly consider economic and social issues when setting regulatory measures, other than those of individual member countries when developing measures and negotiating allocations. We shall not consider attainment of optimal yields in the context of economic and social benefits in this review, other than noting that the strong emphasis of the Commission on resource conservation consistent with species-by-species quota setting is somewhat inconsistent with the breadth of stated Commission objectives and that NEAFC could consider a more proactive and strategic approach to fulfilling its objective of optimum utilization (see Panel Comments under 3.5.1).

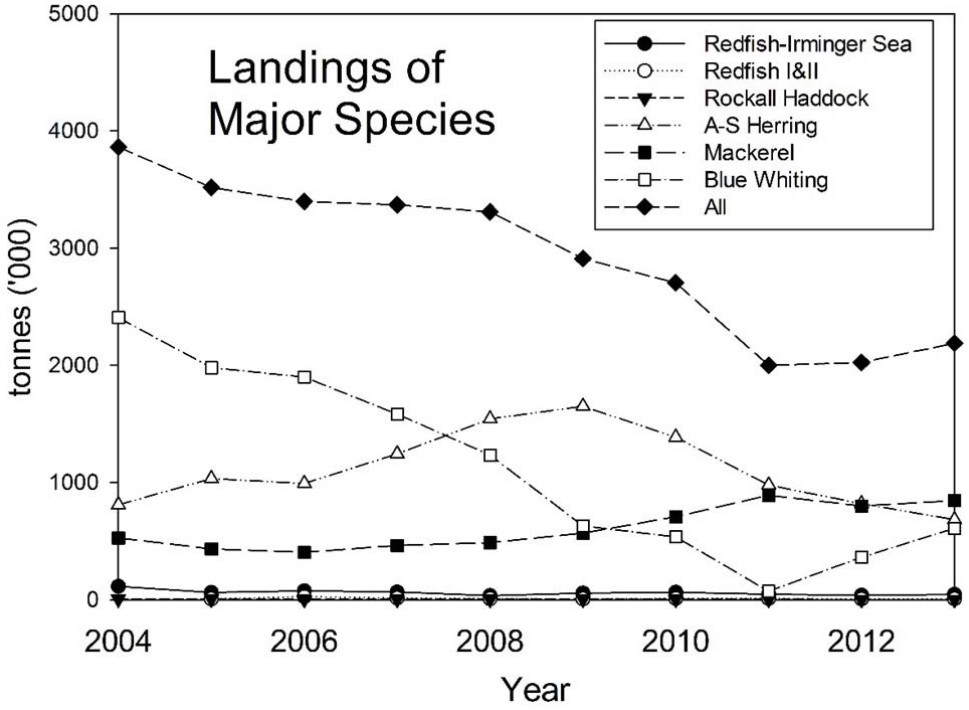

Figure 1. Landings of key species regulated under NEAFC, 2004-2013.

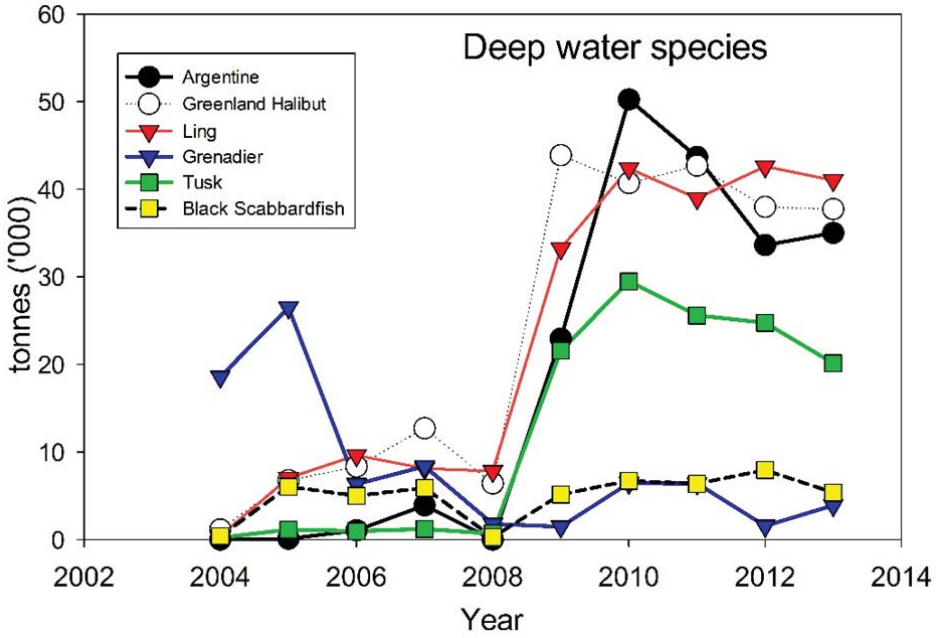

Figure 2. Changes in landings of selected deep water species as reported to NEAFC, 2004-2013.

Fishery resources, as referred to in the objective of NEAFC, refers to fish, mollusks, crustaceans and sedentary species within its area of competence, excluding, in so far as they are dealt with by other international agreements, highly migratory species and anadromous stocks.

When making recommendations on the management of the above resources, NEAFC shall ensure that such recommendations are based on the best scientific evidence available, apply the precautionary approach, take due account of the impact of fisheries on other species and marine ecosystems and of the need to conserve biological diversity.

To that end, NEAFC cooperates with the International Council for the Exploration of the Sea (ICES), applying to ICES for information and advice on biology and population dynamics of fish species concerned, the state of fish stocks, the effect of fishing on those stocks and measures for their conservation and management. NEAFC itself does not conduct any scientific activity, thus separating the scientific work within a highly respected international scientific organisation.

The setting of management measures for fisheries is the core activity of NEAFC. Other tasks generally revolve either around supporting the management measures (e.g. control measures) or controlling the effects of the fisheries on the other parts of the marine ecosystem (e.g. measures on bottom fishing).

Although this second NEAFC performance review looks at the period from 2006, this report looks at the period from 2003. This is to provide the necessary context, and to ensure that trends are appropriately reflected.

Biological standards

The ICES approach to fisheries advice integrates three frameworks for the provision of management stock status: (1) the precautionary approach (PA), (2) maximum sustainable yield (MSY) and where appropriate, advice relative to agreed management plans (MPs). The latter occur for some stocks that are included in formal rebuilding plans.

The precautionary approach as set out in the 1995 UN Fish Stocks Agreement (UNFSA) stresses the importance of conservation or limit reference points and management or target, reference points. The precautionary approach is interpreted as setting up reference points to avoid the spawning stock biomass being reduced to levels where the probability of good recruitment is significantly reduced. Annex II of the UNFSA stresses the use of precautionary reference points. Limit reference points set boundaries which are intended to constrain harvesting within safe biological limits within which the stocks can produce maximum sustainable yield. Target reference points are intended to meet management objectives.

ICES proceeds from the assumption that from the stock/recruitment relationship it should be possible to determine the spawning stock biomass level below which recruitment, and thereby productivity, of the stock is reduced. When an assessment indicates that the spawning stock biomass (SSB) is below B_{pa} ICES classifies the stock as being "outside safe biological limits".
If SSB is above B_{pa}: "having full reproduction capacity."
If SSB is below B_{pa} but above B_{lim}: "being at risk of reduced reproductive capacity."
If SSB is below B_{lim}: "suffering reduced reproductive capacity." or "at a level where the stock dynamics is unknown and therefore risking reduced reproductive capacity".

Fisheries management cannot control SSB, it can only influence it through fishing mortality (F), which thereby serves as an indicator showing how much fish is removed from the stocks. It follows that it is necessary to relate fishing mortality to the limit reference points for the spawning stock.
If F is below F_{pa} : the stock is "harvested sustainably."
If F is above F_{pa} but below F_{lim}: "at risk of being harvested unsustainably."

Limiting reference points are applied by ICES for biomass and fishing mortality as follows:
B_{lim} - SSB below which there is risk of impaired recruitment
F_{lim} - Fishing mortality which will drive SSB below B_{lim}

Maximum sustainable yield is a broad conceptual objective aimed at achieving the highest possible yield over the long term, being intended to make the best use of the ecosystem productivity, while the precautionary approach is a risk-averse concept intended to avoid

unproductive situations. Populations need to be maintained within safe biological limits according to a precautionary approach to make MSY possible.

Basic reference points for the MSY approach are:
F_{MSY} – fishing mortality generating the highest production
B_{MSY} – average biomass expected if the stock is exploited at F_{MSY}
$B_{trigger}$ – biomass that triggers advice on a reduced fisheries mortality relative to F_{MSY}. It is a biomass reference point that triggers a cautious response to allow a stock to rebuild.

In general, F_{MSY} should be lower than F_{pa} and MSY $B_{trigger}$ should be equal to or higher than B_{pa}. This is appropriate since a precautionary approach is a necessary boundary to ensure sustainability, but not sufficient, condition for achieving the maximum sustainable yield implied by the MSY framework[5].

Management plans developed by ICES establish reference points and harvest control rules (HCR). HCRs define how the target F should change with SSB.

The MSY framework for fisheries advice was introduced by ICES in 2010. There is general agreement that fisheries on the stocks for which ICES is requested to provide advice should be managed according to an MSY approach by 2015, but the transition should be gradual. ICES provides catch options by direct application of the ICES HCR to give catch for F_{msy} and where necessary catch options consistent with the MSY transition scheme. During the transition period (for advice in 2011–2015) where F is above F_{MSY} and/or current biomass is below MSY $B_{trigger}$, ICES applies a stepwise transition to reach F_{MSY} by 2015.

Significant progress has been made in recent years developing and implementing precautionary management plans[6]. Long-term management plans exist for mackerel, Norwegian spring-spawning (Norwegian spring spawning (Atlanto-Scandian)) herring and blue whiting. For other stocks, including redfish and Rockall haddock, management plans are being developed.

In providing scientific advice, ICES is attempting to consider its findings as elements consistent with a broader ecosystem approach to fisheries (EAF). This will be implemented incrementally as more information relative to ecosystem-level considerations is developed (see section 3.2 of this report) so that any information on the interactions between fisheries, the fish stocks and the marine ecosystem is considered and incorporated in the advice as it becomes available. The ecosystem approach includes area management for which NEAFC seeks specific advice.

[5] http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2013/2013/1.2_General_context_of_ICES_advice_2013_June.pdf
[6] General context of ICES advice.
http://www.ices.dk/community/Documents/Advice/General_context_of_ICES_advice_2012.pdf

Further information on the work of ICES in this context, including the relevant internal processes, can be found in report PRP Inf.-05, and on the ICES website (http://ices.dk/Pages/default.aspx).

Fish stocks for which NEAFC receives scientific advice

In the context of NEAFC recommendations, the main fish stocks which ICES provides advice on are as follows: redfish (*S.mentella* of the Irminger Sea and in ICES Subareas I and II), widely distributed and migratory stocks (blue whiting, Norwegian spring-spawning (Norwegian spring spawning (Atlanto-Scandian)) herring and mackerel), Rockall haddock, some shark species (basking shark, spurdog, porbeagle, and deep-sea sharks) and some deep-water species (orange roughy, alfonsinos, roundnose grenadier, ling, blue ling, tusk, etc). ICES has started to apply new procedures for assessing and managing data limited stocks.

Advice is normally provided for each calendar year. However, for stocks where measurement precision is low compared to the expected magnitude of changes in stock size advice may be provided at intervals greater than each year. For short-lived species and highly seasonal fisheries the timing of the advice is adapted as appropriate.

A full list of NEAFC regulated resources that ICES provides advice on can be found at http://www.neafc.org/system/files/ices_mou_2007.pdf.

Summary – Use of Scientific Advice

NEAFC bases its management measures on scientific advice from ICES. The scientific advice is therefore clearly separated from the political process of making management decisions, and comes from a source that is internationally respected as a highly competent scientific organisation.

Knowledge about the status of resources managed by NEAFC is variable depending on specific stocks, species and their habitats, data collection procedures and the information and advice received from ICES.

The major stocks regulated by NEAFC are data rich with sufficient survey coverage and historical data series. Estimates of such stocks are based on analytical assessments. Long term management plans or at least reference points are applicable. Information on their status is updated on a regular basis.

Other stocks, especially deep-sea species, are data-limited ones, sometimes with only catch/landings data available, which poses considerable difficulties in terms of fisheries management. The advice from ICES takes account of the uncertainties, applying the precautionary approach.

With the exception of some deep-sea species, the stocks managed by NEAFC are not classified by ICES as depleted. Some of the stocks like herring or Rockall haddock are on the decline primarily thought to be the result of natural fluctuations in recruitment.

Long-term management plans are in place for the three pelagic stocks (herring, blue whiting, and mackerel). Harvest control rules are being evaluated for Rockall haddock, and the work on management plans for redfish is underway.

A management framework currently exists for all major stocks regulated by NEAFC. There have in recent years been applicable NEAFC measures for herring, blue whiting, mackerel, redfish in the Irminger Sea and in ICES Subareas I and II, Rockall haddock (area closure), some sharks and deep-sea species.

However, in some cases the adoption of fully comprehensive management measures is complicated by the Contracting Parties' failure to reach an agreement. In some cases, there is no consensus regarding ICES advice, as is the case with the Irminger Sea redfish. In other cases the Contracting Parties agree on a TAC that is consistent with the ICES advice, but there is a dispute concerning quota allocation. For example, only four of the five Contracting Parties agreed on the 2013 management measure for herring. A concern in this context is also the absence of an agreed management regime for the North-East Atlantic mackerel, where a disagreement on quota allocation persists. The applicable NEAFC measure for 2013 for this species is not comprehensive and was primarily adopted to avoid unregulated mackerel fisheries in the NEAFC Regulatory Area.

New deep-water fisheries that evolved in recent years also made it necessary to develop specific conservation and management regulations. Several recommendations were adopted by NEAFC in 2006-2012 to manage deep-water stocks and protect deep-water habitats from harmful effects of bottom fishery. A new approach by ICES for data poor stocks has resulted in NEAFC currently addressing the issue of deep sea management.

NEAFC has clearly demonstrated the ability to set management measures for the responsible management of the fish stocks for which it has competence. The main stumbling block for full success in adopting comprehensive management measures for all the relevant fish stocks is the inability of the Contracting Parties and primarily the Coastal States in some cases to agree on an allocation key. In other words, while they usually agree on how much should be caught, the Coastal States and Contracting Parties sometime disagree on how to share that catch among themselves.

Other factors are also relevant, e.g. a disagreement on stock structure for redfish in the Irminger Sea and a lack of quantitative advice for deep-sea species (until very recently). However, the issue of allocation keys is noticeably the most prominent stumbling block on the way to comprehensive management, and it has affected most of the fish stocks NEAFC manages at some point during the period being looked at.

Panel Comments

The panel developed information on the recent history of managed stocks, including reported catches, TAC recommendations from ICES advice, and TACs adopted by NEAFC (Figures 3-7). Based on these data, the track record of NEAFC following requested scientific advice on catch levels is decidedly mixed (Figures 3-7). While for some stocks, and particularly in recent years (e.g., herring, Rockall haddock, etc.) the adopted TACs have been consistent with those advised by ICES, for others, and especially mackerel, there have been no agreed global TACs, and thus the recommended catch levels have been consistently exceeded. As noted below, despite these quota overruns, several of the exploited stocks still remain relatively healthy. However, consistently exceeding recommended quota levels is inherently risk-prone and will ultimately result in declining stocks and in the extreme, lower landings and potentially fishery closures. Given the fact noted above that many of the stocks in question are considered "data-rich", the lack of agreement on allocation keys resulting in exceeding advised TACs cannot be blamed on the dearth of timely or accurate scientific information. The reasons for the lack of agreement on resource sharing are many and complex. Quota allocations are influenced by historical participation in fisheries, environmental effects on the distribution and abundance of stocks and other factors. However, these issues are neither unique to NEAFC nor unresolvable. The contracting parties participating in NEAFC are some of the most sophisticated in the world in terms of fishing capacity, control and enforcement, administration, and scientific expertise. Thus, it is inexcusable that these contracting parties cannot come up with workable solutions that result in catches consistent with the advice they seek from independent experts (see also Panel Comments under 3.5.1).

3. Conservation and Management

3.1 Status of Living Marine Resources

The discussion above provides the scientific basis for management decision making, including the basis for biological reference points (minimum biomass levels and maximum target fishing mortality rates) resulting in sustainable fisheries. Scientific data for the main fisheries are collected and analyzed annually, and stock assessments are peer reviewed by ICES. For the main exploited stocks, the condition of the stock over time can be plotted in a quadrant format including stock biomass and F over time (Figures 8-10). There are a number of candidate biological reference points, (e.g., pa, mp, and MSY-based) that can be included in such plots to provide sign posts of how the stocks and fisheries change relative to sustainability benchmarks [note for the purposes of this review, we plot MSY-based reference points but others provide equivalent assessments].

For mackerel (Figure 9), recent strong year classes have pushed the stock substantially above Bmsy. Similarly, the stock is well above the "trigger" level of 2.2 million tonnes. Current (2013) fishing mortality is below Fmsy, but is slightly higher than the target F of 0.2-0.22. Thus, as with the herring stock, there is little buffer for uncertainty or for accounting for ecosystem impacts. The migrations of mackerel to coastal waters of several of the contracting parties has resulted in catches by some nations exceeding historical levels (Figure 4), contributing to the failure to agree on NEAFC allocations.

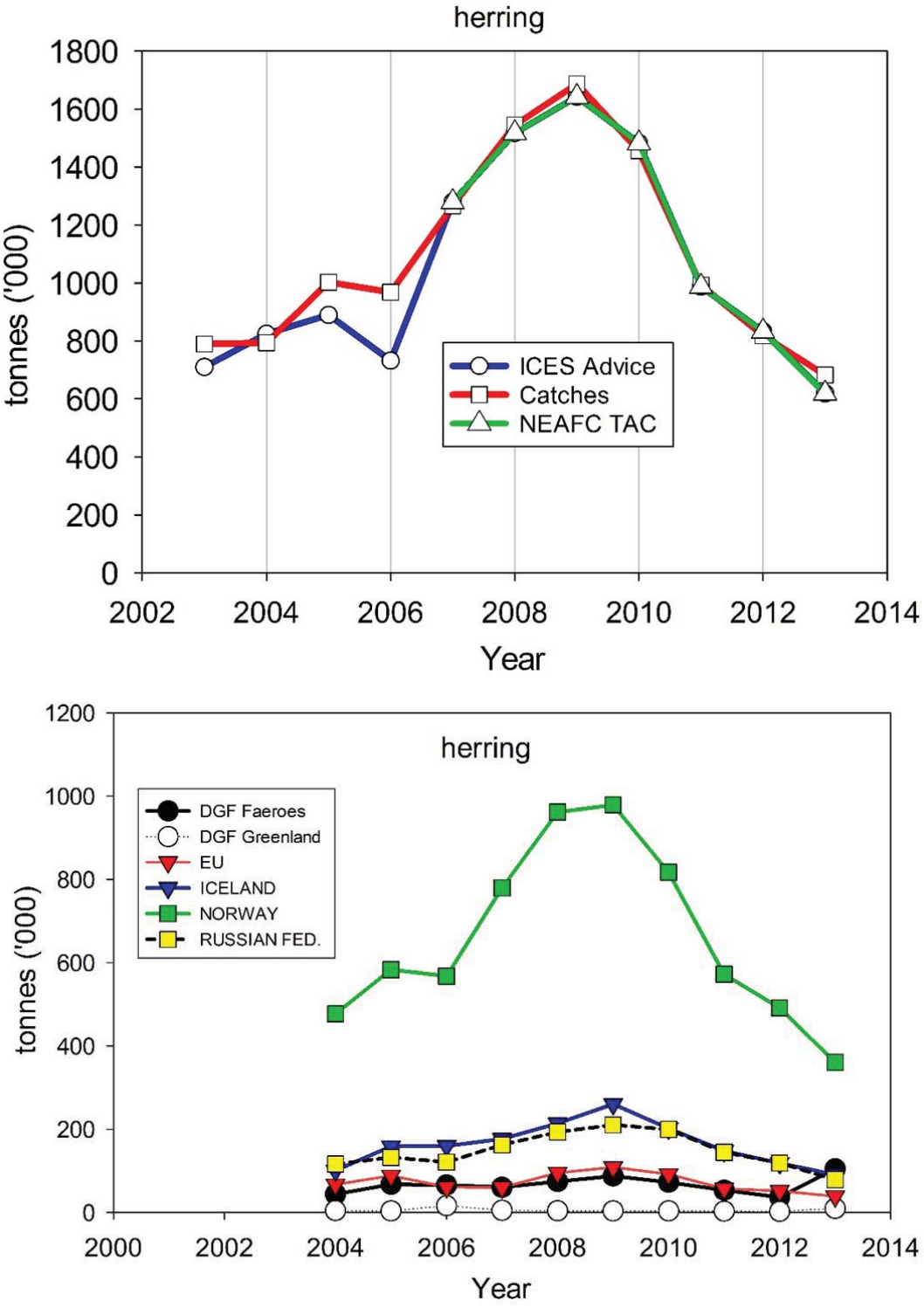

Figure 3. Catches (tonnes), agreed TACs and ICES advice for Norwegian spring spawning (Atlanto-Scandian) herring, 2003-2013 (above), and landings by nation (bottom panel).

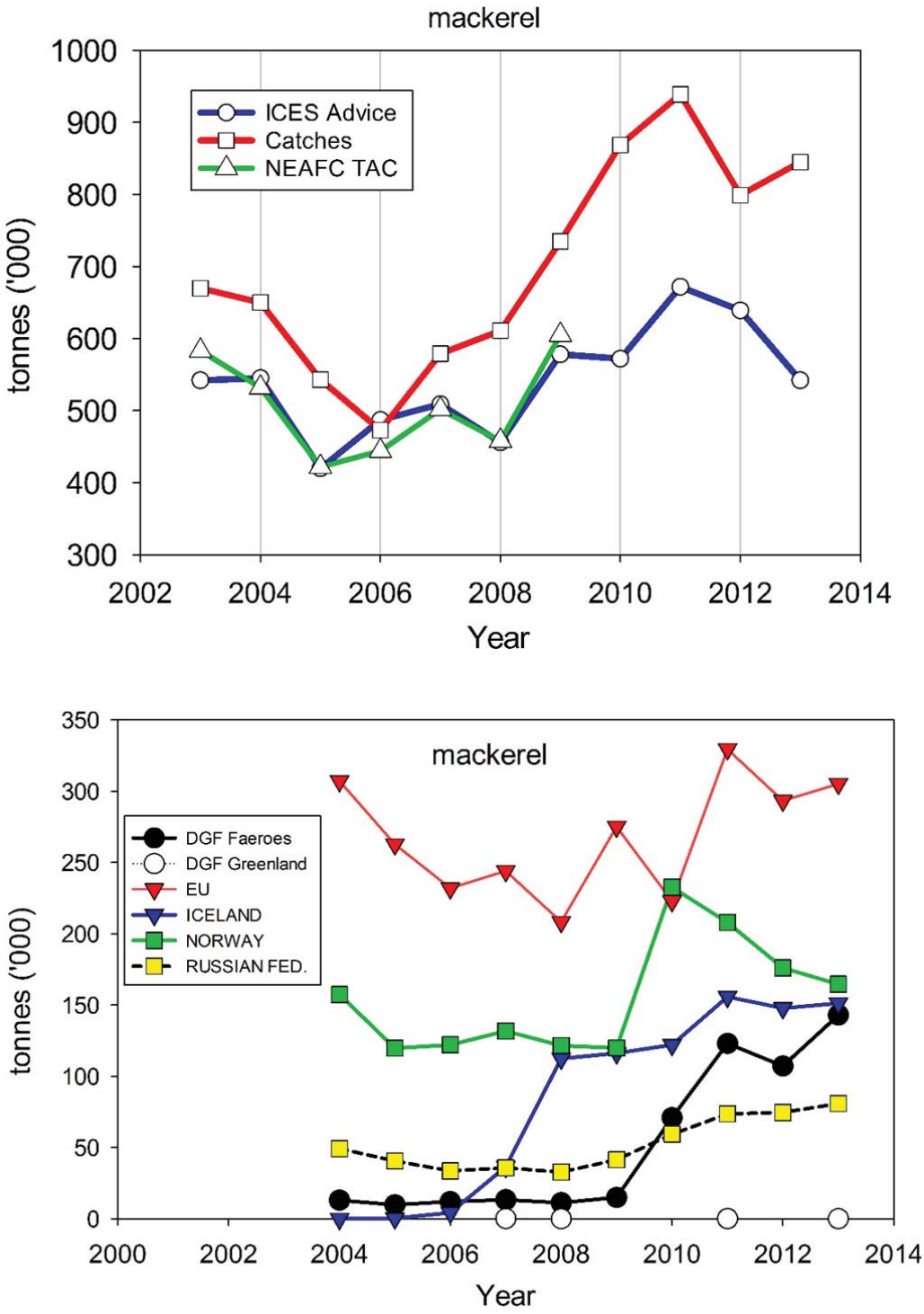

Figure 4. Actual catches and advised TACs for the mackerel stock, 2003-2013 (above), and national catches, 2004-2013 (below).

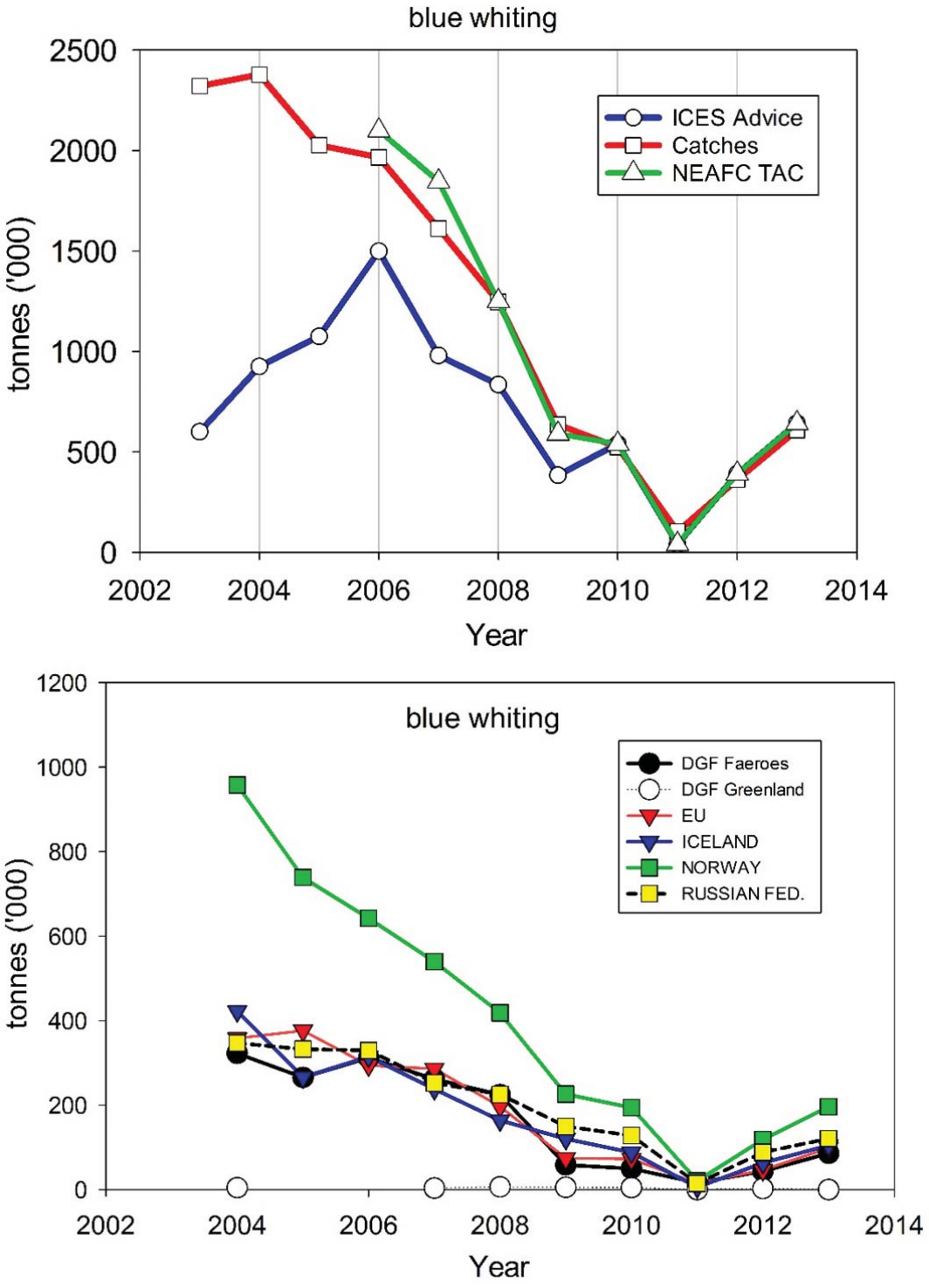

Figure 5. Actual catches and advised TACs for the blue whiting stock, 2003-2013 (above), and national catches, 2004-2013 (below).

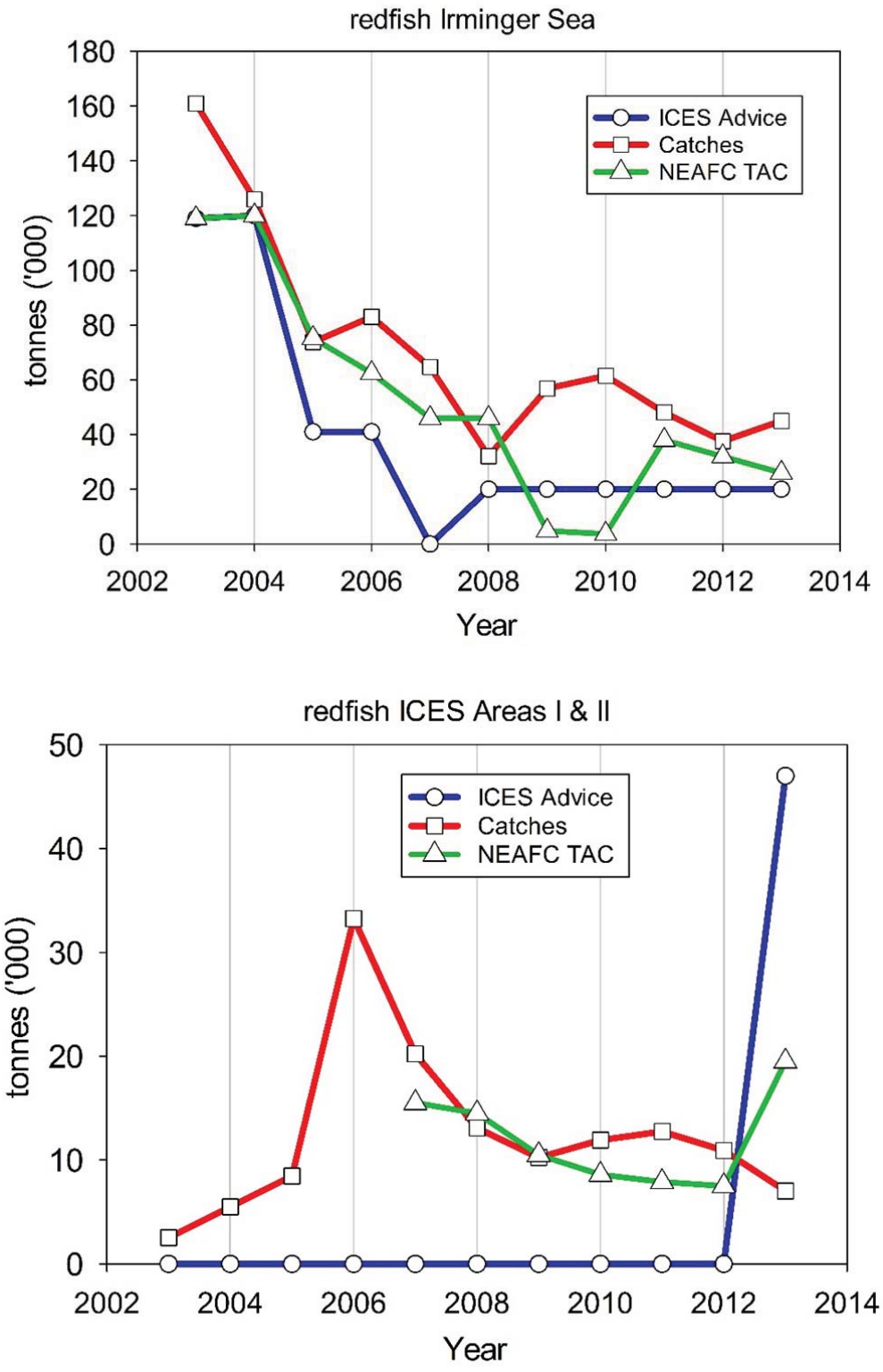

Figure 6. Annual catches, scientific advice from ICES and NEAFC-established TACs for two stocks of redfish: Irminger Sea (above), and ICES areas I & II (below).

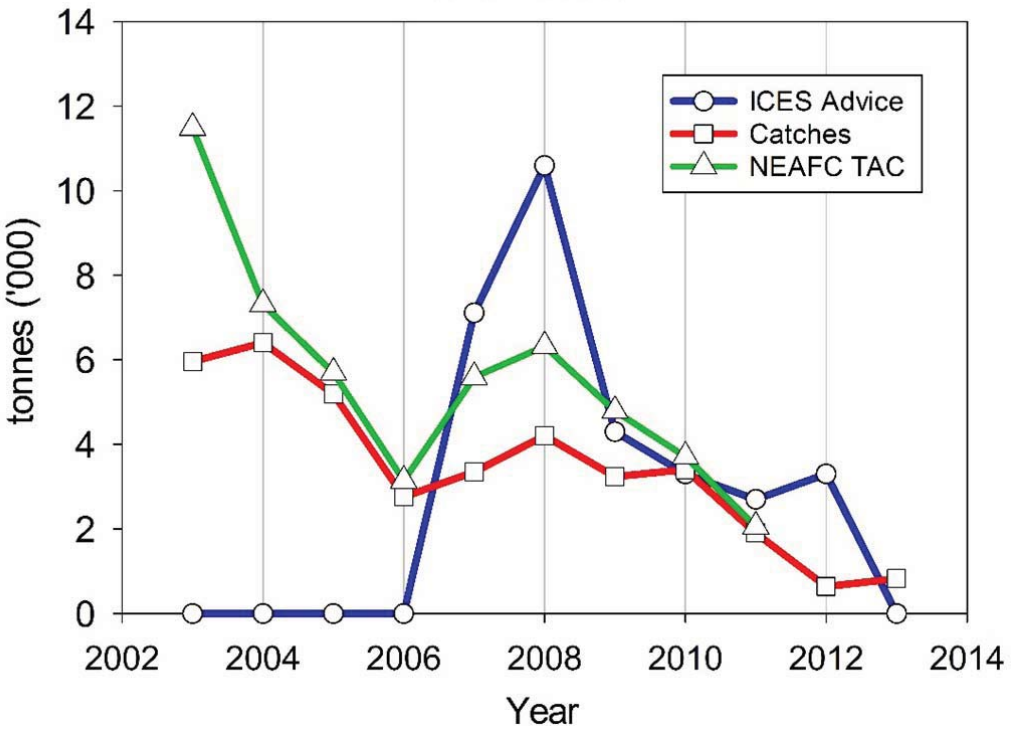

Figure 7. Changes in catches, ICES advice and NEAFC TACs for Rockall Haddock, 2003-2013

For the Norwegian spring spawning (Atlanto-Scandian) herring stock (Figure 8), fishing mortality exceeded Fmsy for most years since 2000, and is almost exactly the Fmsy level in 2013. Because of favorable recruitment levels in the past decade, spawning biomass exceeded Bmsy for the last decade as well. In the most recent years (2012-2013) both F and SSB are very close to reference levels. If one considers the pa (precautionary approach) reference point (Fpa=0.125) then catches result in fishing mortality rates above guidance. While the annual catch of herring generally comports with ICES guidance, fishing so close to reference levels leaves no buffer for scientific uncertainty, ecosystem dependencies (see the next section of the report) or implementation uncertainty. Thus, while the stock remains relatively "healthy" managers should consider their levels of precaution and risk carefully as the stock is managed so close to safe biological limits.

Blue whiting stocks declined precipitously from 2003 to 2009 (Figure 10), in the face of fishing mortality rates substantially in excess of safe biological limits. Reductions in fishing mortality in recent years have coincided with a partial recovery of biomass since 2010. Fishing mortality rates in 2010-2013 appear to be well below reference point levels, but are increasing as catches have increased since 2010. Recruitment has improved in recent years, but not to levels that supported the relatively stock biomass as seen in the early 2000s. The relatively recent development and subsequent over-exploitation of this fishery has provided contrasts that inform the setting of safe biological limits advising fisheries management.

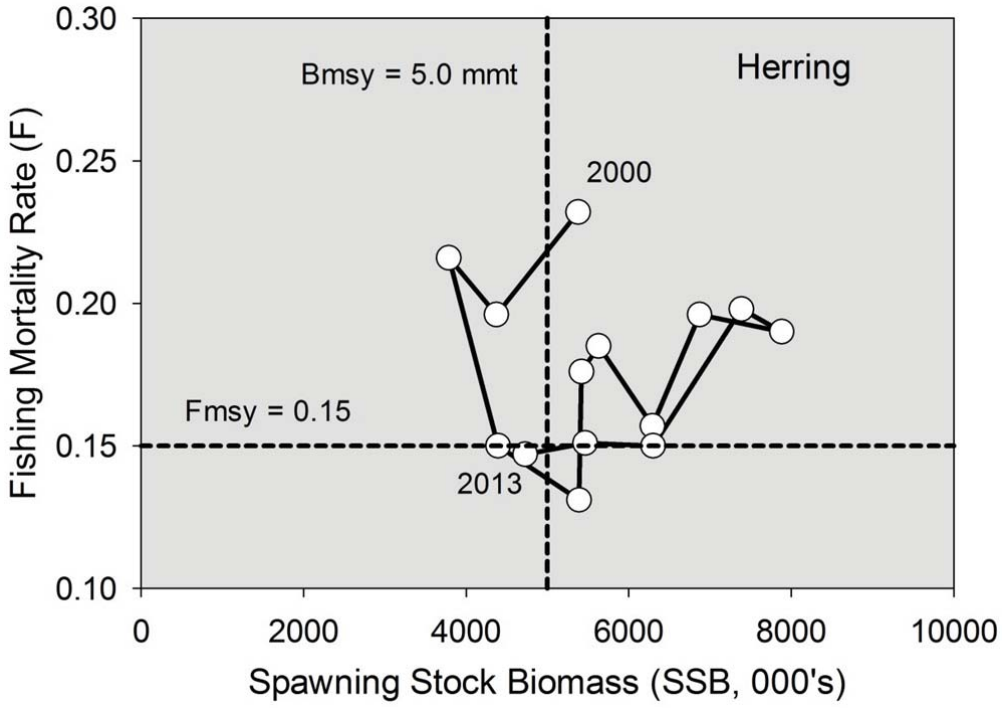

Figure 8. A "Kobe" plot of the trajectory of spawning stock biomass and instantaneous fishing mortality rate (F) for Norwegian spring spawning (Atlanto-Scandian) herring, 2000-2013. Data were derived from 2014 science advice for the stock provided by ICES. Dashed lines indicate the level of biomass and F reference points associated with MSY. ICES advice includes the location of multiple sets of reference points, including those associated with the management plans (mp), and the precautionary approach (pa).

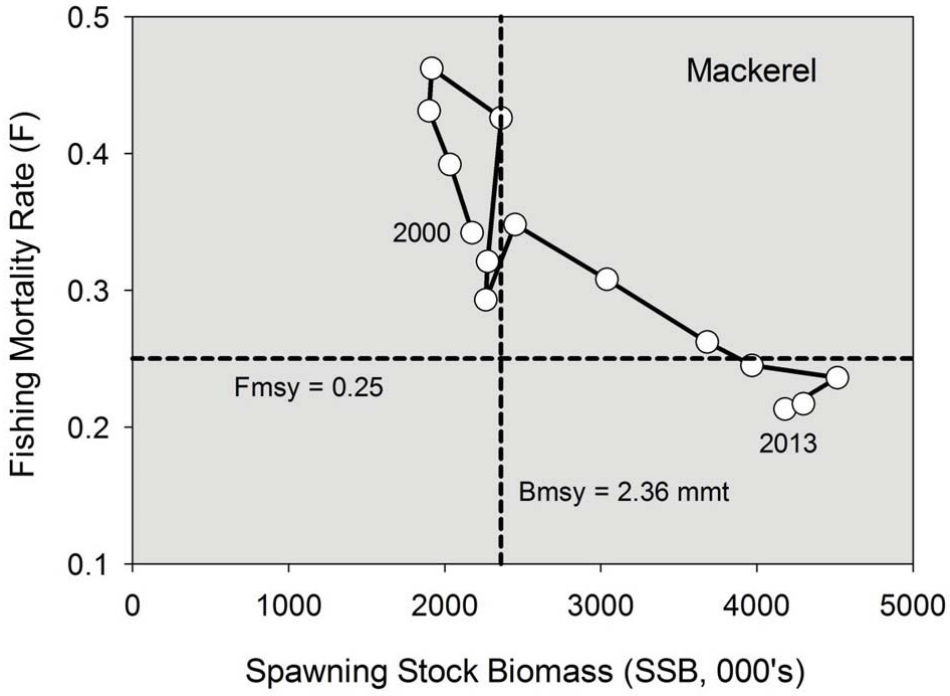

Figure 9. A "Kobe" plot of the trajectory of spawning stock biomass and instantaneous fishing mortality rate (F) for Northeast Atlantic mackerel, 2000-2013. Data were derived from 2014 science advice for the stock provided by ICES. Dashed lines indicate the level of biomass and F reference points associated with MSY. ICES advice includes the location of multiple sets of reference points, including those associated with the management plans (mp), and the precautionary approach (pa).

Other Stocks

Apart from the "big three" small pelagic species, NEAFC regulates the catches of a variety of demersal and semi-pelagic species including redfishes, Rockall haddock and deep sea bony fishes and sharks. In the case of the ICES area I &II redfish and the shallow and deep components of the redfish stock in the Irminger Sea, landings and stock sizes (and landings) are very low as compared with the historical record. There is considerable uncertainty regarding the stock structure of redfishes, but nevertheless, in all cases the stocks declined from relatively high levels of abundance and catch exhibited in the 1980s. The same applies to Rockall haddock.

Partially as a result of declines in TACs for redfish and other species, there has been a dramatic rise in the cumulative and species-specific catches of a number of deep demersal species including Greenland halibut, ling, tusk and argentine (Figure 2). Importantly, in all cases, ICES classifies these species as "data poor" stocks and only provides notional management advice on them. Because these species are likely to be long lived, and relatively slow growing, the panel is concerned that shifting effort to these species may result in unsustainable fishing rates which may have implications for future yields.

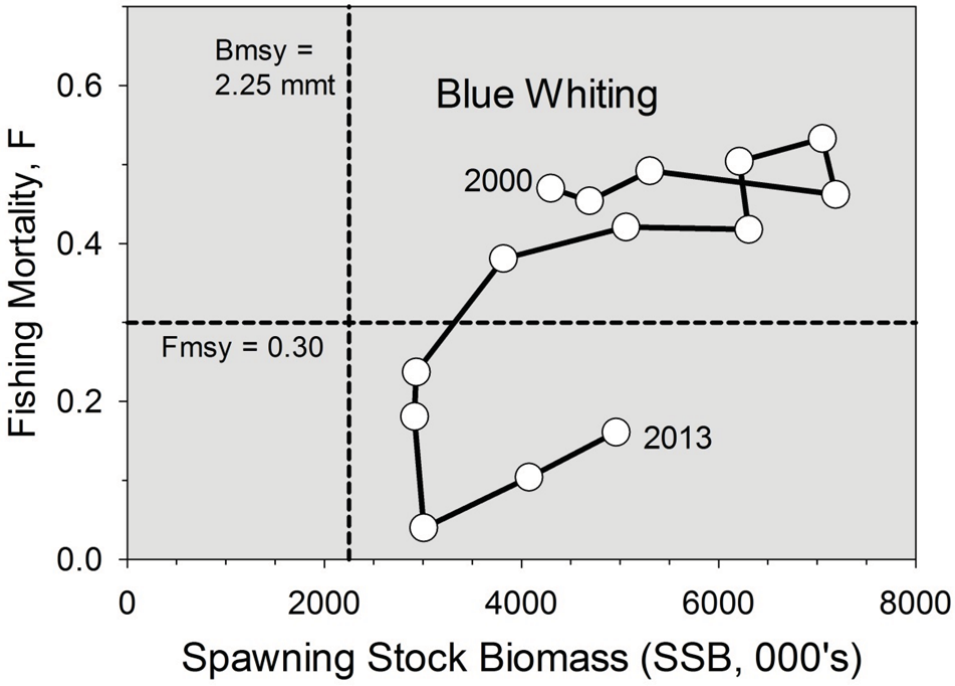

Figure 10. A "Kobe" plot of the trajectory of spawning stock biomass and instantaneous fishing mortality rate (F) for blue whiting, 2000-2013. Data were derived from 2014 science advice for the stock provided by ICES. Dashed lines indicate the level of biomass and F reference points associated with MSY. ICES advice includes the location of multiple sets of reference points, including those associated with the management plans (mp), and the precautionary approach (pa).

Panel Comments

The primary pelagic stocks regulated by NEAFC are considered to be in relatively good shape and/or recovering from overexploitation. This is fortuitous and in spite of catch overages relative to scientific advice, in several instances. Resultantly, managers have some flexibility with these stocks to reduce fishing to sustainable levels without incurring severe economic impacts, at least in the short run. With redfishes, the status of the stocks is somewhat uncertain, but certainly the stocks are much reduced from historical levels when landings of several hundred thousand tonnes were produced. Precaution in fishing these resources as well as the deep sea complex of demersal fishes, upon which much recent effort has been focused seems advisable, especially in light of the "data poor" status of many of them. Most importantly, the panel recommends that the Commission find ways to constrain catches of managed stocks to within catch levels advised by ICES, including catches in the RA and in national jurisdictions.

3.2 Ecosystem Approach

The overarching principles of ecosystem approaches to fisheries (EAF) are an extension of the conventional principles for sustainable fisheries development to cover the ecosystem as a whole. They aim to ensure that, despite variability, uncertainty and likely natural changes in the ecosystem, the capacity of the aquatic ecosystems to produce fish food, revenues, employment and, more generally, other essential services and livelihood, is maintained indefinitely for the benefit of the present and future generations. The FAO Technical Guidelines[7] on the ecosystem approach to fisheries define EAF as follows[8]: "An ecosystem approach to fisheries strives to balance diverse societal objectives, by taking into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries."

In general, the tools and techniques of EAF will remain the same as those used in traditional fisheries management, but they will need to be applied in a manner that addresses the wider interactions between fisheries and the whole ecosystem. For example, catch and effort quotas, or gear design and restrictions, will be based not just on sustainable use of the target resources, but on their impacts on and implications for the whole ecosystem. The FAO Code of Conduct for Responsible Fisheries, the 5th Conference of the Convention on Biological Diversity (CBD), the 2001 Reykjavik Declaration, the FAO Technical Guidelines on EAF and on other instruments dealing with the subject

EAF addresses a number of concepts, sometimes referred to as “principles” that have been expressed in various instruments and conventions, and in particular in the Code of Conduct for Responsible Fisheries (see Annex 5 to this document). These principles generally underpin the high-level policy goals assigned to fishery management at a national or regional scale. In brief, recognizing that fisheries have the potential to alter the structure, biodiversity and productivity of marine ecosystems, and that natural resources should not be allowed to decrease below their level of maximum productivity, fisheries management under EAF should respect the following principles:

- fisheries should be managed to limit their impact on the ecosystem to the extent possible;
- ecological relationships between harvested, dependent and associated species should be maintained;
- management measures should be compatible across the entire distribution of the resource (across jurisdictions and management plans);

[7] Putting into practice the ecosystem approach to fisheries. Rome, FAO. 2005. 76p. http://www.fao.org/docrep/009/a0191e/a0191e00.htm

[8] Garcia, S.M.; Zerbi, A.; Aliaume, C; Do Chi; Lasserre, G. The ecosystem approach to fisheries. Issues, terminology, principles, institutional foundations, implementation and outlook. FAO Fisheries Technical Paper No. 443, Rome, FAO. 71 p.

- the precautionary approach should be applied because the knowledge on ecosystems is incomplete; and
- governance should ensure both human and ecosystem well-being and equity.

In the context of management measures adopted by NEAFC, EAF concepts are important because they frame many of the issues that have emerged in the past few years, including bycatches of species in directed fisheries, impacts of fishing gears on vulnerable marine ecosystems (VMEs), the development of marine protected areas (fishery closures), predator-prey interactions among target species, and impacts of climate change on the distribution and productivity of species. Below we consider the record of NEAFC in addressing ecosystem considerations, and opportunities for future work.

NEAFC consideration of other parts of the marine ecosystem than the target species

Traditionally, the focus of NEAFC management measures has been on the target species. While maintaining an emphasis on the target species of any fishery, the development in NEAFC has very clearly been in the direction of managing the effects of the fisheries on the other parts of the marine ecosystem.

A big step in this development was taken in 2004, when large areas were closed to bottom fishing to protect vulnerable marine ecosystems (VMEs). This was before the UN General Assembly Resolution 61/105 from 2006 and the FAO Guidelines from 2008.

To remove any possible doubt regarding NEAFC's legal competence, the NEAFC Convention was amended in 2006 (http://archive.neafc.org/reports/annual-meeting/am_2005/docs/2005-16_proposal-final.pdf). The amendments have not yet entered into force, but as the fourth NEAFC Contracting Party has now formally accepted the amendments the new convention will enter into force later this year. However, the Contracting Parties have been implementing the 2006 amendments since they were agreed on, in accordance with the "London Declaration" of 2006 (http://neafc.org/system/files/london-declaration.pdf).

Following the original closures in 2004, various other measures have been introduced, including general measures (i.e. not only measures for a specific area) for protecting VMEs, which were intended to be consistent with the relevant UNGA resolutions and FAO Guidelines. In 2011, the text of six different Recommendations regarding bottom fishing was consolidated into one Recommendation (http://neafc.org/system/files/Consolidated_bottomfishing_regs_as_ammended_by_rec_12_2013.pdf).

This Recommendation was then the subject of a review. As a part of the review, several specific requests were made to ICES, and both PECMAS and PECCOE made significant contributions. In particular, PECMAS did extensive work. PECMAS held an open symposium in June 2012, where various organisations were invited to take part, submit written contributions and/or make presentations. All the documents that were presented at the symposium are available on the NEAFC website (http://neafc.org/pecmas/symposium).

The conclusions document of PECMAS (http://neafc.org/system/files/PECMAS-conclusion-final-rev1.pdf) became the main basis for the review of the bottom fishing regulation at the Annual Meeting in 2012. There, the main conclusions of PECMAS were accepted, some amendments were done to the Recommendation, and conclusions were reached on further work by PECMAS and PECCOE which is intended to result in formal proposals for amendments to NEAFC's regulation of bottom fisheries at the 2013 Annual Meeting.

The main substantive points that are being worked on will be elaborated on in a later chapter in this report. However, it should be noted that the main conclusion of PECMAS, which was accepted by the 2012 Annual Meeting was the following (paragraph 6 of the conclusion paper):

> *PECMAS has reached the conclusion that the NEAFC bottom fishing regulation is in general consistent with the UNGA resolutions and the FAO Guidelines. However, PECMAS also recognises a need for addressing some elements of the regulation and the associated provisions. Furthermore, the current interim protocols must be reviewed and transformed into permanent regulations.*

In other words, the conclusion was that what NEAFC is already doing is consistent with the UNGA resolutions and the FAO Guidelines, but that some improvements were nevertheless appropriate.

NEAFC's management of bottom fisheries

All this led to the adoption of a new Recommendation on the protection of VMEs which replaces the previous ones (Recommendation 19:2014). It can be found on the NEAFC website (http://neafc.org/system/files/Rec19-Protection-of-VMEs_0.pdf)

The definition of "bottom fishing" used by NEAFC is the one used in the FAO Guidelines.

"New" and "existing" areas

The basic approach used in the regulation is to separate the Regulatory Area into two types of areas: "existing bottom fishing areas" and "new bottom fishing areas". An area is considered as being a "new" bottom fishing area unless it has been established that bottom fishing was conducted there in at least in two years within a reference period of 1987 to 2007.

Bottom fishing in "new" areas can only take place in accordance with the Exploratory Bottom Fisheries Protocol (see below). In practice, no such exploratory fisheries have taken place.

Bottom fishing in "existing" areas is authorised, but subject to an encounter protocol and move-on rule (see below). Furthermore, if there is a significant change to the conduct or technology of existing bottom fisheries, they must be assessed by PECMAS before they can go ahead.

The rationale behind this classification is *inter alia* that in areas where there is no recent experience of bottom fisheries ("new" areas) there is little or no data on the possible occurrence of VMEs. It is therefore appropriate to apply greater caution there than in areas where there is recent experience and more available data on the possible occurrence of VMEs

("existing" areas). However, even in "existing" areas where the occurrence of VMEs has not been considered likely, such occurrence cannot be ruled out and appropriate measures must therefore also be in place there.

A map showing the "existing" areas can be found on the NEAFC website (http://neafc.org/page/existingfishingareas). All areas not explicitly defined as "existing bottom fishing areas" are defined as "new" areas.

Closed areas

It is common to present the different categories of areas in NEAFC as three: "new", "existing" and "closed" areas. However, formally speaking, closed areas are not a separate third category, but a different type of area designation which can be superimposed on either "new" or "existing" areas. This means that both "new" and "existing" areas can be closed, and that if a closure is lifted (e.g. when the exact delimitation of an area is changed on the basis of new information) the area will revert to being either "new" or "existing".

No bottom fisheries are authorised in closed areas. In practice, areas have been closed for two separate reasons. Firstly, closures based on explicit information regarding specific VMEs. The delimitation of the closed area is then based on the information on the exact location of the VMEs, with an appropriate buffer zone, as advised by ICES. Secondly, precautionary closures based on the likely occurrence of VMEs in particular areas, without explicit information, as advised by ICES. These are in some cases very large areas, e.g. on the Mid-Atlantic Ridge. A map showing all closures can be found on the NEAFC website (http://neafc.org/page/closures).

It should be pointed out that several "existing" areas have been closed. The closures therefore prevent fishing activities that would otherwise take place. The map showing the closures also shows the "existing" areas, and by zooming in on Hatton and Rockall Banks, one can clearly see where large portions of "existing" areas have been closed.

Most of the areas are closed for a fixed period, resulting in NEAFC having to review the appropriateness of the closures regularly. However, the possibility of open-ended closures is now being considered. Rather than having ICES regularly revise the closed areas (or regularly consider suggesting new closures), a part of the recurring requests for advice from ICES is to have new advice whenever new information (or reassessment of previous information) is available. This results in regular new advice from ICES, including this year (http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2013/Special%20requests/NEAFC_Vulnerable_deep-water_habitats.pdf).

In practice, bottom fisheries in the Regulatory Area only take place in areas that have been classified as "existing" areas, which have not been closed. This constitutes a small overall proportion of the Regulatory Area.

Assessments of bottom fisheries

Consistent with the UNGA resolutions and the FAO Guidelines, the NEAFC regulation includes the possibility of continued bottom fishing in areas where VMEs occur or are likely

to occur, provided that appropriate mitigation measures are adopted. In practice, NEAFC has not done such assessments, as it has opted to close areas where VMEs occur or are likely to occur, rather than allow them to continue in accordance with mitigation measures.

The relevant assessment that has been done is to assess where VMEs occur or are likely to occur. The parts of "existing" areas that are assessed as not being likely to include VMEs are open to bottom fishing (subject to encounter protocol and move-on rule).

There have not been any exploratory bottom fishing in new bottom fishing areas, but when they will take place their results will be assessed to determine if bottom fishing will be authorised in the area that was being explored.

Exploratory Bottom Fisheries Protocol

In the new Recommendation on the protection of VMEs, the issue of the protocol is addressed and more details are added to the process of exploratory fisheries.

No Contracting Party has yet implemented the Exploratory Bottom Fishing Protocol, as none of them has initiated exploratory fisheries in "new" areas.

According to the rules, in addition to the protocol itself, the Contracting Party intending to authorise a vessel flying its flag to undertake exploratory fisheries must provide an initial assessment of the known and anticipated impacts of its bottom fishing activities on VMEs.

The existing Exploratory Bottom Fishing Protocol states that exploratory bottom fisheries may commence only when the following information has been provided to the Secretary by the relevant Contracting Party:

Harvesting plan: Outlines target species, dates and areas. Area and effort restrictions shall be considered to ensure fisheries occur on a gradual basis in a limited geographical area.

Mitigation plan: Includes measures to prevent significant adverse impact to VMEs that may be encountered during the fishery.

Catch monitoring plan: Includes recording/reporting of all species caught.

A sufficient system for recording/reporting of catch, detailed to conduct an assessment of activity, if required.

Data collection plan: To facilitate the identification of VMEs.

Plans for monitoring of bottom fishing activities using gear monitoring technology, including cameras if practicable.

Monitoring data obtained pursuant to Article 6.1 of the Recommendation.

Vessels conducting exploratory fisheries must have a scientific observer on board who shall: monitor any set for evidence of VMEs; record various information; collect, if required, representative samples from the entire catch; and provide samples to the scientific authority of the Contracting Party.

Contracting Parties that authorise exploratory fisheries must promptly report the results of the activities. On the basis of that report, and other relevant information, NEAFC shall decide after two years of exploratory fisheries whether to allow regular bottom fisheries in the relevant area or to close the area. The rules do not envisage exploratory fisheries lasting several years in the same area. After two years, a decision should be made on either opening or closing the area. If the conclusion is to authorise bottom fisheries in the area, this may be subject to appropriate mitigation measures.

Exploratory bottom fisheries shall only commence after having been assessed by PECMAS and approved by the Commission.

Encounters protocol and the move-on rule

All vessels conducting bottom fisheries in the Regulatory Area that encounter evidence of a VME shall without delay cease bottom fishing activities and report the encounter. This applies both to exploratory fisheries in "new" areas and regular bottom fisheries in "existing" areas.

If an encounter is discovered in connection with the hauling of a trawl gear, the fishing vessel shall cease fishing and move out of an area defined as a 2 nautical mile wide band (polygon) on both sides of the "track" of the trawl haul during which an encounter occurred. The "track" is defined as the line joining consecutive VMS positions, supplemented by more exact information, between the start and the end of the tow, extended by 2 nautical miles at both ends.

If an encounter is discovered in connection with other bottom fishing gears the fishing vessel shall cease fishing and move away at least 2 nautical miles from the position that the evidence suggests is closest to the exact encounter location. The master shall use his or her best judgment based on all available sources of information.

The master shall report the incident, including the "track" or position, without delay to its flag state, which shall forward the information to the Secretary immediately. Contracting Parties may if they so wish also require their vessels to report the incident directly to the Secretary.

The Secretary shall immediately inform all Contracting Parties, and ICES, and archive the information received, and shall at the same time implement a temporary closure in the areas identified.

An encounter is defined as:

(a) for a trawl tow, and other fishing gear than longlines: the presence of more than 30 kg of live coral and/or 400 kg of live sponge of VME indicators; and

(b) for a longline set: the presence of VME indicators on 10 hooks per caught per 1000 hook segment or per 1200 m section of long line, whichever is the shorter.

Other measures aimed at minimising the impact on other parts of the ecosystem

In addition to the regime regarding bottom fisheries, NEAFC has a number of measures relating to biodiversity and ecosystem considerations.

Measures to minimise the harmful impacts of fisheries

NEAFC measures to minimise adverse impact of fisheries include the following:

Area management regulations In addition to the areas that have been closed to bottom fishing to protect VMEs, as discussed above, there are other area closures, such as the so-called haddock box which is used in the management of Rockall haddock.

Seasonal closures

NEAFC has closed certain fishing areas to protect juveniles or spawning aggregations, in particular, NEAFC has adopted a seasonal closure for blue ling fisheries in a specified area south of Iceland. Since 2010, all fishing for blue ling by bottom contacting gear is prohibited in that area in the period from 15 February to 15 April (http://www.neafc.org/system/files/Rec5_Blue_ling_Proposal_by_EU.pdf).

Prohibitions to fish with certain fishing gear

These include *inter alia* the prohibition to deploy gillnets, entangling nets and trammel nets in the NEAFC Regulatory Area (http://www.neafc.org/system/files/rec-3_deep-water-gillnet-.pdf) in any position where the charted depth is greater than 200 metres. This prohibition has been in force since 2006.

Biodiversity

Much of what is described in this report are measures that are aimed at protecting biodiversity, as the measures to protect VMEs are a part of biodiversity protection. Since even before an agreement was reached to amend the NEAFC Convention in 2006, protection of biodiversity has been one of the issues NEAFC focuses on.

Additionally, NEAFC works with OSPAR and CBD on the issue of biodiversity. This includes cooperation and coordination to ensure that measures adopted by one organisation do not undermine measures adopted by another, and also includes cooperation regarding Ecologically and Biologically Significant Marine Areas (see report PRP Inf.-20).

Minimising the impacts of research

NEAFC recommendations contain only general provisions obliging Contracting Parties intending to conduct scientific research in the areas closed to protect VMEs to notify NEAFC of their intended research programmes. In advance of the proposed research programmes, the NEAFC Secretariat shall make the proposed plans available to the NEAFC Contracting Parties.

However, Article 10 of the NEAFC Convention provides that, when adopting recommendations, the Commission shall determine whether, and under which conditions, those recommendations shall apply to fishing operations conducted solely for the purposes of scientific investigation carried out according to relevant principles and rules of international law. So far, NEAFC has not adopted any specific actions to minimise the impacts of research as there has been no suggestion of relevant adverse impacts associated with scientific

investigations. However, if the need to set measures to control scientific research should arise, Article 10 ensures that there is a legal competence for NEAFC to do so.

Pollution

NEAFC as a RFMO is not mandated to adopt measures against pollution and therefore does not have any such measures. The NEAFC Contracting Parties are bound by various anti-pollution measures adopted outside NEAFC, including both national measures and internationally adopted measures.

Waste, catches of non-target species, impacts on associated or dependent species and discards

NEAFC has adopted measures regarding catches and discards. All catches of regulated resources, including those taken for scientific purposes, must be counted against quotas (regardless of what is the target species). The Scheme of Control and Enforcement obliges all Contracting Parties' vessels to keep an accurate record of catches and discards in their logbooks. Misreporting or failure to provide such data will entail penalty measures prescribed by the Scheme.

Since 2010 a discard ban has been in force in NEAFC, pursuant to which each Contracting Party shall ensure that its fishing vessels operating in the Regulatory Area are prohibited from discarding or releasing catches of any of the species listed in Annex I A) of the Scheme of Control and Enforcement. This means that discards are prohibited for redfish, Norwegian spring-spawning (Norwegian spring spawning (Atlanto-Scandian)) herring, blue whiting, mackerel and Rockall haddock:

(http://www.neafc.org/system/files/rec16_ban_on_discards_neafc_ra.pdf).

Due to incompatibility with national regulations, one Contracting Party objected to the discard ban and is consequently not bound by it.

NEAFC places a special emphasis on minimising discards in fisheries where they have historically been high. In particular, the long-term management plan that is now being developed for the Rockall haddock will focus on reducing discards.

The obligation to collect catch statistics applies to species managed by NEAFC. NEAFC does not collect statistics on the catches of unregulated resources, and therefore does not have in its own statistics a good overview over the effects of fisheries on non-target species or their impact on associated or dependent species. NEAFC relies on ICES for advice on the effects of fisheries on other parts of the marine ecosystem.

Catches by lost or abandoned gear

Measures dealing with catches by lost fishing gear are primarily contained in the NEAFC Scheme of Control and Enforcement. Article 7b of the Scheme provides that vessels fishing with fixed gear shall have equipment on board to retrieve lost gear and attempt to retrieve such fishing gear as soon as possible. If lost gear cannot be retrieved, the vessel shall notify the competent authorities of its flag State of the details of the vessel, the type of gear and the

position where the gear was lost, and the flag State shall notify the Secretary of NEAFC thereof. All Contracting Parties shall undertake on a regular basis to retrieve lost gears.

Additionally, the potential impact of lost or abandoned gear is dealt with in the prohibition of using entangling and trammel nets, as described above.

Panel comments

It is clear from the evidence reviewed by the panel that many of the common elements of EAF (e.g., bycatches, low productivity fish stocks, and VMEs) have been addressed through management measures adopted by NEAFC. The organization has sought advice from ICES and national governments on the existence of benthic communities vulnerable to common fishing methods such as trawling and demersal long lining. To the extent that such data are available, they have been used in designing fishery closed areas. With the adoption of Recommendation 19:2014, NEAFC has what is likely an effective regime in place to address the issue of the protection of VMEs.

Similarly, the organization has addressed bycatch and discards by adopting various standards and regulations.

Several important areas regarding ecosystems considerations need to be addressed more fully in the future. As noted in section 3.1, the vast majority of fish catches under NEAFC purview are small pelagic species. These species form the base of a food chain supporting complex ecosystems throughout the Northeast Atlantic and surrounding seas. Because several of these species (mackerel, herring and blue whiting) are widely distributed, when available, they support a wide variety of commercial and non-commercial fish species, sea mammals and bird communities. While the single-species biological reference points for these species are generally being met through traditional measures (e.g., F-based quota control), the multispecies implications of managing these stocks have not explicitly been considered by NEAFC. The precautionary approach to fisheries should dictate a cautious approach to the direct harvest of species upon which so many other marine resources depend. In order to explicitly consider predator-prey impacts of harvesting these prey species, multispecies approaches need to be developed (see also Panel Comments on consideration of 'optimum utilization' of the fishery resources in Section 3.5.1). However, while there have been investments in multispecies models and related data collections for some areas (e.g., the North Sea, Barents Sea, Icelandic territorial waters) there is no organized science effort to develop multispecies models for use by NEAFC in understanding effects of the fisheries it considers. The panel recommends that NEAFC begin requesting multispecies advice for the main species it regulates and further that science programs supported by member states collaborate to provide data and models sufficient to this task.

In addition to multispecies effects, the impacts of climate change and variability are generally considered a central tenet of EAF. Many of the species regulated by NEAFC appear to be sensitive to climate effects, not only in recruitment variability but species distributions and species overlaps. For example, controversies regarding changing

spatial distributions of migratory species stem in part from fishes responses to climate variations. Understanding if these distribution shifts are permanent or periodic is central to the development of equitable allocation keys. The panel recommends that climate effects be considered more explicitly in developing it management programme and that the scientific basis for such considerations be improved.

3.3 Data Collection and Sharing

The various national data systems operated in support of NEAFC colllect, syhthesize and make available fishery-dependent information supporting monitoring, control and surveillence (MCS) activities (section 4.3 of this report). In a separate process, catch statistics are gathered to provide information necessary for management decision support (section 5), and stock assessment (section 3.4). NEAFC does not collect information directly, but relies on the Contracting Parties to provide such information on a timely basis. Fishery data coming from vessels and port-side monitoring activities of the various participating parties (and primarily the coastal states) are digitized and maintained in fishery data centers (FMCs) that report periodically to NEAFC headquarters.

While current processes provide reasonably precise and timely information for most purposes, there are a number of persistent issues with these systems whiich if addressed could improve the effectiveness of MCS, management decision making and stock assessments.

First, while not usually large, there are and have been discrepancies in the catch numbers provided by various states to different entities (e.g., NEAFC, ICES, EU, etc.). For example, catches of some species may be different when nations report catches for the NEAFC regularory area (RA) and outside, vs. aggregate catches. Surely some of these discrepancies come from imprecise proration to area-disaggreated catches. Some of these inaccuracies may stem from imprecise positioning data reported by vessels, and some may come from deliberate mis-reporting, depending on the degree of control excercised for area-based measures. Solving these issues is complex but requires more consistent reporting at the vessel and firm level, and more consistency in procedures by the relevant states. In the case of area pro-rations, this could include re-training of vessel captains, use of independent data systems (e.g., VMS) in conjunction with electronic reporting of catch positions, and in general more attention to the details of fishery data assembly.

The second significant issue raised with respect to data collection activities is the very uneven rates of timeliness of submissions to NEAFC headquarters. Some nations have, periodically, been delinquent in timely submissions, which, in particular, makes effective MCS activities extremely difficult. This includes timely updating of licenses and permissions, as well as submissions of catch logs, access to VMS and quota reporting. In order for NEAFC to effectively carry out its duties consistent with provisions of the convention, it is imperative that coastal states and the contracting parties provide timely, accurate and precise fishery-

independent data to NEAFC. This should be considered a priority for improving the effectiveness of the Commission.

The third significant issue concerning data sharing is the roles that NEAFC has and should play synthesizing information for the various stated purposes. Because data generally come from vessels fishing both in the RA and in national jurisdictions, there is often confusion about the origins of fish being landed and the quantities involved, often even long after fishing trips are completed. Part of this stems from the fact that national agencies are busy providing data to be compliant with a number of authorities and may not have the resources or time to specifically monitor for compliance or discrepancies within the NEAFC RA. One solution to this is potentially to upgrade the role of the NEAFC secretariat in providing near real time monitoring of catches from the RA. This could be accomplished by first strengthening the capacity within the Secretariat to rapidly analyze data from the various parties, and second by the various coastal states and contracting parties allowing access to primary data feeds from its vessels on a more timely basis. By dedicating such efforts specifically to activities within the RA, more effective MCS actifvities, including identification of of discrepancies and detection of illegal activities will likely occur. In this regard, the panel feels strongly that more collaborative, real-time data analysis, with a more proactive role for the Secretariat is warranted.

Panel Comments

Timely and accurate submissions of fishery-dependent catch and effort data underpin the effectiveness of NEAFC in terms of monitoring, control and survellance (enforcement) activities, and support effective decision making based on accurate stock assessments. While generally providing accurate data, in some cases these data are not timely and may have inconsistencies, particularly with respect to area and volume of catch. More effective catch reporting systems and procedures are clearly warranted. To this end, the panel encourages NEAFC members to consider a more proactive role for the Secretariat in data monironing. Having dedicated personnel constantly monitoring data feeds from the RA would surely improve accuracy, increase enforcement effectiveness, and result in relatively rapid discrepancy resolution. In order to undertake such an activity, there would need to be both revisions to data permissions and feeds from the national data centers as well as augumented staffing in the Secretariat.

3.4 Quality and provision of scientific advice

The preamble to the NEAFC "New" Convention notes the desire of the Contracting Parties to:

> '… promote the long term conservation and optimum utilisation of the fishery resources of the North-East Atlantic area, and in doing so to safeguard the marine ecosystems in which the resources occur, and accordingly to encourage international cooperation and consultation with respect to these resources.'

Those desires led to the objective of the Convention "to ensure the long-term conservation and optimum utilisation of the fishery resources in the Convention Area providing sustainable economic, environmental and social benefits." An assessment of the quality and provision of scientific advice needs to be done within the context of these desires and objective.

Further, paragraph 2 of Article 4 states:

> 2. When making recommendations in accordance with Article 5 or 6 of this Convention the Commission shall in particular:
>
> a) ensure that such recommendations are based on the best scientific evidence available;
>
> b) apply the precautionary approach;
>
> c) take due account of the impact of fisheries on other species and marine ecosystems, and in doing so adopt, where necessary, conservation and management measures that address the need to minimise harmful impacts on living marine resources and marine ecosystems; and
>
> d) take due account of the need to conserve marine biological diversity.

Article 14 refers to the cooperation between NEAFC and the International Council for the Exploration of the Sea and specifies that:

> 1. In the interest of the optimal performance of the functions set out in Articles 4, 5 and 6, the Commission shall seek information and advice from the International Council for the Exploration of the Sea. Such information and advice shall be sought on matters related to the Commission's activities and falling within the competence of the Council, including information and advice on the biology and population dynamics of the fish species concerned, the state of the fish stocks, the effect of fishing on those stocks, and measures for their conservation and management.

In accordance with Article 14, NEAFC does not undertake research of its own but looks to ICES for scientific advice to enable it to fulfil its functions and responsibilities. The relationship between NEAFC and ICES is described in a Memorandum of Understanding (MoU) between the two organizations that includes information on the nature of the advice to be provided by ICES, the timing of the provision of advice and related administrative details.

The Review Panel was advised by the Secretariat[9] that the current MoU between NEAFC and ICES was adopted in 2007 at the Extraordinary Meeting of NEAFC, replacing the previous

[9] Unless stated otherwise, all information from the Secretariat referred to in this section 2.4 was obtained from 'Providing scientific advice. A note by the NEAFC Secretariat for the Performance Review Panel', which was provided to the Panel in 2013.

MoU that had been implemented in 2004. The 2007 MoU was based on a proposal submitted by ICES to NEAFC that was reviewed and amended by the NEAFC Permanent Committee on Management and Science (PECMAS) prior to adoption by NEAFC. The Secretariat reported that the changes in the MoU were required to address amendments to the NEAFC Convention that referred to the use of the precautionary and ecosystem approaches (Article 4, para. 2). The MoU regulates relationships between ICES and NEAFC regarding:

- the types of advice provided by ICES;
- ecosystems and stocks for which advice is given;
- procedures for data provision;
- data quality considerations;
- financial and administrative arrangements between NEAFC and ICES.

The MOU requires ICES to provide NEAFC 'with scientific information and advice, which is independent and free from political influence and subject to best international quality procedures for research and research based advice. The technical basis for the advice and the process through which it is produced will be transparent and the quality of the technical basis is ensured through internal and external peer review' (para 1). The advice includes:

- 'annual standard "recurring" advice on the state and management of the main commercial stocks in the NEAFC convention area listed in Annex 1 and the state of the marine ecosystem according to the form established in Annex 2. In particular, ICES will focus on resources in NEAFC regulatory area as set out in list A in Annex 1'; and
- 'non-recurring advice" as may be agreed between NEAFC and ICES in response to requests from NEAFC' (para 4).

Annex 1 of the MoU lists the NEAFC regulated resources for which ICES is required to provide advice. These consist of four pelagic species (redfish, Norwegian spring spawning herring, blue whiting and mackerel), one demersal species (haddock), 49 deep-sea fish species of which 48 are fish and one, deep-water red crab, is an invertebrate, and five 'Other species' (golden redfish, anglerfish, capelin, cod and hake).

Annex 2 describes the recurring advice required from ICES. This will include:

'information on the state of marine ecosystems and human impacts including historical developments in main parameters and information on the present state and recent development of stocks. The recurrent advice shall provide information on state of stocks and fisheries including - when available - historical developments in spawning stock biomass, total stock biomass, fishing mortality, landings and discards.'

Further:

'The advice shall be based on an ecosystem approach. This will be implemented incrementally so that any information on the interactions between fisheries, the fish

> stocks and the marine ecosystem is considered and incorporated in the advice as it becomes available; specifically, taking ecosystem and environmental considerations into account when providing the recurring advice mentioned above,'

Ecosystem considerations to be addressed in the ICES advice are to include: fishing disturbances of marine ecosystems; provision of any new information of fisheries impacts on other components of the ecosystem such as marine mammals, sea birds and sensitive habitats; information on external factors and imbalances in ecosystem structure that may affect commercially valuable stocks; and proposals for reference points for management in an ecosystem context.

Advisory process

The process for provision and consideration of scientific advice commences with a request from NEAFC to ICES. According to the Secretariat, the requests are normally developed by PECMAS and approved at NEAFC Annual Meetings, but that extraordinary requests can be developed at other times without going through the NEAFC Annual Meetings, subject to agreement by the Contracting Parties. Recurring advice consists of the routine, typically annual, advice on the state and management of the main commercial stocks in the NEAFC Convention Area and on the state of the marine ecosystem. Non-recurring advice is requested to address particular issues that may arise within NEAFC. Two recent examples of non-recurring advice referred to by the Secretariat include requests to evaluate modifications of the management plans for herring and blue whiting developed by the coastal States and to provide advice on various elements that arose through the review of NEAFC's bottom fishing regulation. Information from the Secretariat indicated that from 2006 to 2012, NEAFC asked ICES for non-recurring advice on 27 questions, some of which included multiple sub-questions. No requests for non-recurring advice were tabled at the 2013 Annual Meeting[10].

PECMAS provides the interface between NEAFC and ICES. The terms of reference for PECMAS are attached to this report as Annex 1 and include that it shall 'draft requests for advice under the Memorandum of Understanding with the International Council for the Exploration of the Sea'. According to the Secretariat, proposals for requests for non-recurring advice can be made by NEAFC Contracting Parties or be jointly developed (e.g. the joint proposal on EBSAs by NEAFC and OSPAR). All such proposals either must first be approved by PECMAS or be made directly by Members and a final decision is taken by the Commission at NEAFC Annual Meetings. After that Meeting, NEAFC sends a formal request to ICES. The process followed by ICES to prepare the advice requested by NEAFC is not relevant to this review but details can be found on the ICES website[11]. The formal advice from ICES is normally released before the meetings of the coastal States to enable them to take it into account in their decisions on management measures and is presented to NEAFC by the ICES Advisory Committee at the Commission's Annual Meeting of NEAFC.

[10] Report of the 32nd Annual Meeting of the North-East Atlantic Fisheries Commission. 11-15 November 2013. http://www.neafc.org/system/files/AM-2013-report-FINAL.pdf, accessed 19/06/2014

[11] http://www.ices.dk/community/Advisory-process/Pages/default.aspx

The assessment of the Panel is that there is good information and hence good advice for the major commercial species but less so for other species and ecosystem indicators. Deep-sea species are particularly problematic and there are also some concerns about the advice related to broader ecosystem impacts. Examples of potential problems in the available scientific advice include, for example, the allegation at the 2013 Annual Meeting that the encounter threshold for the move-on rule has no scientific foundation and the difference of opinion between ICES and the Russian Federation concerning pelagic *Sebastes mentella*. In relation to the thresholds for the move-on rule, the Panel notes and welcomes that in June 2014, NEAFC adopted Recommendation 19:2014 - Recommendation on the protection of vulnerable marine ecosystems in the NEAFC Regulatory Area, in which the thresholds for trawl tows had been halved from those previously recommended to 30 kg of live coral and/or 400 kg of live sponge of VME indicators. This is in line with ICES advice in 2012 to reduce those thresholds by between 30 and 70%. Recommendation 19 also stipulates threshold levels for longline gear (the presence of VME indicators on 10 hooks per caught per 1000 hook segment or per 1200 m section of long line, whichever is the shorter). It therefore appears that that particular problem has been resolved and, with the adoption of Rec. 19 2014, considerable progress made in NEAFC measures to protect VMEs in general.

There seemed to be widespread agreement that the arrangement between NEAFC and ICES was generally good or very good and no suggestions were heard for any major change in that arrangement. There were nevertheless some criticisms of the way in which it was being implemented and some suggestions for possible improvements. Some delegates expressed dissatisfaction with the current functioning of PECMAS including that currently it was not working as well as it did, some members were not delegated enough authority, PECMAS was not able to make the decisions it should be making, and there was too much variability in participants from meeting to meeting. It was suggested in discussions with the Panel by one delegate to the 2013 Annual Meeting that PECMAS doesn't analyse ICES advice and doesn't analyse different management options and therefore doesn't add much to the process. This delegate added, however, that PECMAS had done a good job in relation to VMEs.

The comments received by the Panel indicated that there was general satisfaction with the advice received from ICES, notwithstanding a comment that it was sometimes not received in time. It was suggested that delays in receiving advice were typically either a result of difficulties in timing or because there was insufficient information to produce the advice. Occasional problems in communication between NEAFC and ICES were also noted. A more substantive comment from one delegate was that, in their opinion, ICES tended to emphasise the uncertainties in its advice, providing opportunity for the fishing industry to counter that advice. In the opinion of that delegate, it would help if ICES demonstrated more confidence in their advice. An additional comment was that NEAFC sometimes misused the relationship by asking questions that could not be answered and by adding to the already high burden of ICES by not being sufficiently focused in its questions to the Council, while another delegate suggested that scientific advice could be improved if NEAFC was more consistent in formulating its requirements.

3.4.1 Comments on this Topic by 2006 Performance Review Panel

Section 3.3.2.1 of the report of the 2006 Review Panel addressed the 'Quality and provision of scientific advice'. That panel noted the positive role of the advice on mackerel and herring in assisting NEAFC to fulfill its responsibilities for those species but noted that high variability in the scientific advice on redfish and blue whiting had been a problem.

Commenting on a tendency for NEAFC requests for advice to be ad hoc, it recommended that there would be benefit in implementing a more formal and planned approach to developing such requests and suggested that NEAFC should develop a multi-year research program to assist in establishing management objectives for the fisheries and ecosystems in the Convention Area. It also concluded that, although ICES was providing advice in accordance with the (previous) MoU, there was no or only limited continuing interaction between NEAFC and ICES on matters of common interest.

The 2006 Panel welcomed the establishment of PECMAS and expected it to lead to improvements in the status quo through helping to formulate more effective questions to be addressed and in selecting priorities for research and analyses. It suggested that PECMAS could potentially be a vehicle to strengthen the links between the Commission and ICES and also between scientists and managers in the Commission.

Panel Comments

In the opinion of this Panel, the position on the quality of scientific advice remains broadly consistent with that at the time of the 2006 Performance Review.

The existing relationship with ICES is generally working well and the Panel considers it the most appropriate approach for generation of scientific advice for NEAFC. Recommendations for improving the efficiency and implementation of the arrangements are:

- **NEAFC could facilitate the quality and timeousness of the advice by ensuring that its requests to ICES are focussed and clearly expressed. As far as possible, NEAFC should endeavour to avoid giving short notice on non-recurring requests. This Panel reiterates the recommendation of the 2006 Panel that NEAFC should consider the development of a multi-year research programme that includes the programme for ICES contributions aimed at addressing the Comission's priorities for scientific information and advice. Such a multi-year programme could give particular attention to addressing some of the most important gaps and limitations in existing information, for example the disagreements over redfish stock structure, the status of key deep-sea species and improved management approaches for those species.**
- **Consideration should be given to strengthening the scientific role and, as necessary, capacity of PECMAS to review, evaluate and comment on and add**

value to the scientific advice received from ICES. This would not be intended to replace the current role of ICES but to improve the existing interface with ICES, both through ensuring requests to ICES are focused and comprehensive and by strengthening the interpetation and application of the advice in NEAFC. In order to implement an ecosystem approach fully, NEAFC requires more holistic and strategic advice, in addition to the current largely tactical advice. A strengthened PECMAS would be able to frame and request this advice to reflect NEAFC's needs. Better interpretation of the advice from ICES could include, for example, analysis by PECMAS of the management recommendations from ICES and, where appropriate, attempts to assess and prioritise the options to assist the Annual Meeting in coming to its decision. It is noted that this role would be consistent with function 2b of the terms of reference for PECMAS.

- **As a contribution to strengthening the scientific capacity of PECMAS, NEAFC may wish to consider recruiting a scientific officer to join the Secretariat. A scientific officer would provide important support to PECMAS and NEAFC, helping to ensure that NEAFC asked for, received and applied the advice necessary for it to fulfil its objectives, and also enabling the Commission to take greater ownership of that advice than currently appears to be the case.**

3.5 Adoption of conservation and management measures

3.5.1 Extent to which NEAFC has adopted conservation and mangement measures based on the best scientific advice available to ensure the long-term conservation and sustainable use of living marine resources.

Notwithstanding the generally good scientific advice received and considered by NEAFC, the Commission is clearly experiencing some significant problems in the adoption of conservation and management measures that are consistent with that advice (see Section 2.1, including Figures 3 -7). In his opening address to the 2013 Annual Meeting, the President of NEAFC alluded to some of those problems. He reported that "But, without negotiated agreements on the major shared stocks; herring, mackerel, redfish here and there, blue whiting and other, NEAFCs relevance can be questioned, and with that the question about it's, and others in similar situation, pure existence." These concerns and others related to the adoption of suitable conservation and management measures were also expressed by a number of delegates to the 2013 Annual Meeting in interviews with the Review Panel. Some examples of divergences between the scientific advice and the adoption of conservation and management measures encountered at the 2013 Annual Meeting include:

- The failure to reach agreement on a TAC for pelagic *Sebastes mentella* in the Irminger Sea and the objection to them by the Russia Federation, meaning that that Party is not bound by them;
- The failure of the coastal States to reach agreements on TACs for blue whiting , Norwegian spring-spawning (Norwegian spring spawning (Atlanto-Scandian))

herring and mackerel by the time of the 2013 Annual Meeting and the resulting inability of NEAFC to adopt management measures for the stocks (the subsequent agreement in March 2014 on measures for blue whiting (Rec. 18:2014) and herring (Rec. 17:2014) are noted);

- Recognition by NEAFC that the current management measures for deep-sea species are not satisfactory and the inability of the Parties to agree on a new approach;
- Failure to reach agreement on a prohibition of fishing on orange roughy, as recommended by the ICES scientific advice;

From discussions with delegates at the 2013 Annual Meeting, it is clear that the current two-step process in which the coastal States need to reach agreement on a TAC and allocations before the matter can be discussed and decided by NEAFC adds to the problems faced by NEAFC in deciding on management measures for straddling stocks.

With reference to conservation and management measures related to wider impacts on the ecosystem, it was commented at the 2013 Annual Meeting that no notifications of encounters with VMEs had been received by the Secretariat and that there were still important differences in the views of Parties on improvements to the existing measures for protection of VMEs. The Panel notes the agreement by NEAFC at the 2013 Annual Meeting that significant progress had been made in reaching agreement on revision of the bottom fishing regulations, although it had not been possible to reach agreement on all aspects. PECMAS was instructed to attempt to resolve the differences. NEAFC is of the opinion that the current regulations are consistent with the relevant UN General Assembly resolutions and the FAO Guidelines. The panel also notes that following an agreement within PECMAS, a new recommendation on the protection of VMEs (recommendation 19:20114) was adopted in 2014 through a written procedure. This issue therefore seems to have been resolved.

NEAFC was able to adopt management measures for Rockall haddock and roundnose grenadier that were consistent with management advice. According to a media report[12] and information from the Secretariat, there has been some progress towards an agreement between the coastal states on a TAC and allocations for mackerel. However, the agreed TAC for 2014 of 1.24 million tonnes exceeds the ICES advice for a TAC of 889,886 tonnes and, in addition, Iceland was not a part of the agreement.

3.5.1.1 Comments on this Topic by 2006 Performance Review Panel

The 2006 Panel reported that it is assumed by NEAFC that the management plans developed by the coastal States, where they exist, address the objectives for optimal utilization objectives. The Panel suggested that this does not leave scope for NEAFC to undertake its own management (and presumably to set its own objectives). The only recommendation from the 2006 Panel was that NEAFC could consider implementation of its own solutions for its Regulatory Area, even when the coastal States had failed to reach agreement. The Panel

[12] (http://www.seafoodsource.com/en/news/environment-sustainability/25710-agreement-signed-to-settle-faroes-mackerel-fight?utm_source=Informz&utm_medium=Email&utm_campaign=Insert+Campaign+Name+here

pointed out that any approaches adopted by NEAFC under such circumstances should be consistent with a precautionary approach.

Panel Comments

The situation that was prevailing at the time the current Review Panel prepared its report is clearly unsatisfactory and, for reasons including some beyond and some within the capability of NEAFC, the Convention was not at this time satisfactorily fulfilling key aspects of its mandate.

The challenges facing the coastal States and NEAFC in reaching agreement are not unique and other international bodies and arrangments have had and sometimes continue to have similar problems. NEAFC may wish to examine cases where improved allocation mechanisms have been found to see whether there are approaches that could be adapted for use with the key stocks in the NEAFC RA and adjacent EEZs. Two such examples the Panel considers could be useful for NEAFC are the stocks on the Georges Bank shared between Canada and the USA[13] and the Pacific Salmon Treaty Agreement between the same two countries[14]. While both these examples include only two countries, and the same two countries, the manner in which they have addressed changes and trends in the distribution of resources across national boundaries is relevant to NEAFC's challenges in allocations.

Possible means of improving the performance of NEAFC in timeous adoption of responsible conservation and mangement measures could include:

- **Amalgamating the existing two steps in decision-making on straddling stocks into a single step in which coastal States and other contracting Parties meet simultaneously to determine allocations within and beyond areas of national jurisdiction. Article 6 of the Convention makes allowance for this to be done within NEAFC if agreed to by all coastal States. Bringing all fishing States together from the start of discussions would not in itself help to resolve the existing differences but would simplify the process, eliminate the delay before NEAFC can start discussing allocations beyind national jurisdiction and reflect the fact that the stocks are both shared and straddling.**
- **The disputes over allocations of mackerel and herring demonstrate insufficient flexibility in the current perspectives and allocation arrangements. As demonstrated by recent shifts in distribution of herring and mackerel, the distribution of many fish stocks is dynamic over a range of time scales and Parties to NEAFC should be able to respond to such changes rapidly and**

[13]See e.g. Gavaris, S. and S.A. Murawski. 1004. The role and determination of residence proportions for fisheries resources across political boundaries: the Georges Bank example. In Management of Shared Stocks eds. Payne, A.I.L., C. O'Brien and S. Rogers. Blackwell, Oxford. Pp261-278..

[14] See e.g. Miller, K.A., G. Munro, R. McKelvey, and P. Tyedmers, 2001: Climate, uncertainty and the Pacific Salmon Treaty: Insights on the harvest management game. In: Microbehavior and Macroresults: Proceedings of the Tenth Biennial Conference of the International Institute of Fishery Economics and Trade (IIFET), 10-15 July 2000, Corvallis, OR. Compiled by R.S. Johnston and A.L.Shriver, IIFET, Corvallis, OR..

smoothly. The Panel recommends that NEAFC should base allocations on clear, pre-agreed criteria. The criteria to be applied should be considered and decided on through a process that is independent of decisions on the forthcoming TACs to avoid short-term perspectives dominating the negotiating positions of Contracting Parties. Two key criteria that NEAFC would probably need to take into account are i) historical participation and catch or effort levels in the fishery and ii) the distribution at the time of setting allocations of the stock under consideration in relation to national EEZs and areas beyond national jurisdiction. The time periods to be considered in application of each criterion and the relative weighting to be given to each would need to be decided by the Commission.

- **NEAFC would also need to consider the period of application of a specific criteria-based allocation key. In principle criteria-based allocation keys could be recalculated for every annual decision or could be revised at intervals of e.g. 5, 10 or even more years. The most dynamic variable is likely to be stock distribution. Shorter time periods would allow changes in distribution to be reflected more rapidly in allocations but with disadvantages in the form, particularly, of cost and uncertainty (see Table 2).**
- **It may take some time for NEAFC and the coastal States to develop and agree on a more effective, criteria-based approach. While this is being negotiated or if the coastal States are not willing to combine the existing two steps into a single step, NEAFC may wish to consider the adoption of interim allocation keys for the Regulatory Area in years in which the coastal States fail to reach agreement on a TAC and allocations (see Panel Comments on Section 5.1.1).**
- **PECMAS should be instructed to review the scientific and management advice from ICES rigorously and to advise the Annual Meeting accordingly, including providing NEAFC with recommendations on preferred management options where appropriate. In the view of the Panel, this would be consistent with tasks 2 c. and d. of the PECMAS Terms of Reference. NEAFC may also wish to consider creating a scientific working group within PECMAS to enable scientific scrutiny of advice to take place first, independently of the managers and likely political influences, prior to being discussed in PECMAS as a whole.**
- **The Panel supports the recommendation of the 2006 Review Panel that NEAFC could consider a more proactive and strategic approach to fulfilling its objective of 'optimum utilisation' than is currently the case. This could entail an assessment of what 'optimum utilization' of the fishery resources available to NEAFC entails and whether that goes beyond the current primary basis used by ICES in recommending TACs of maximizing average long-term yield and safeguarding against low spawning stock biomass[15] (see also Panel Comments on multi-species approaches in Section 3.2 Ecosystem Approach). Additional**

[15] Annex G. ICES advice for 2014. Presentation to the 32st Annual meeting of NEAFC. Report of the 32nd Annual Meeting of the North-east Atlantic Fisheries Commission, 11-15 November 2013. Volume II – Annexes.

considerations that NEAFC may want to consider include, for example, economic factors such as catch rates and the impact of ecosystem interactions such as predator-prey relationships on optimal yields. The value of such long-term planning would be greatly enhanced if it could encompass the whole stock, both within and beyond areas of national jurisdiction.

Table 2. Advantages and Disadvantages of Short and Longer-term Allocation Keys that Include Consideration of Stock Distributions

Attribute	**Short-term (e.g. annually)**	**Longer-term (e.g. 5-10 years)**
Flexibility	High	The longer the time period, the lower the flexibility.
Response to changes in distribution	Rapid and direct.	Averaging distribution over years will result in less direct responses.
Data demands	High. Requires new assessment of distribution at each change in allocation key. As distribution of catches does not necessarily reflect distribution in stock abundance, the only reliable means of getting new estimates of stock distribution each year may be through fisheries independent surveys, which will be expensive.	Lower. Longer time periods between assessments of distribution will mean that more data are available from the fishery, which should result in greater information about actual stock distribution (although still not as reliable as fisheries independent surveys).

Accuracy and variability in distribution estimates.	There is frequently considerable variability in observed distribution from year to year, caused by a combination of short-term environmental changes and uncertainty in estimates. This short-term variability does not necessarily reflect sustained shifts in population distributions and sites of production. In addition, high variability in national allocations from year to year could create economic and planning problems for the industry.	Averaging distributions over time will smooth out short term variability that taken in isolation could lead to inappropriate and highly variable allocation keys. However, averaging over time may also mask trends, which could also lead to inappropriate allocations especially after several years of application.
Potential redundancy	High. Changes in distribution are often gradual or marked by periods of stability followed by rapid change. If there has been little change in distribution from one year to the next, the costs of estimating distribution and revising would not have been efficient use of funds.	Reduced risk of redundancy the longer the time period.

3.5.2 Extent to which NEAFC has applied a precautionary approach as set forth in Article 6 of the 1995 UN Fish Stocks Agreement, including the application of precautionary reference points.

Article 4, para. 2 b) of the NEAFC Convention requires the Commission to apply the precautionary approach when making recommendations on fisheries, and the advice received from ICES is based on application of the precautionary approach as interpreted by that body, including specification of precautionary reference points. However, as presented in sections 2.1 and 3.5.1, the Commission has experienced problems in implementing the scientific advice for a number of the most important fisheries under its mandate. Those problems have inevitably resulted in failures to implement the precautionary approach as accomodated in the scientific advice.

3.5.2.1 Comments on this Topic by 2006 Performance Review Panel

Section 3.3.4.1 of the 2006 Panel report addressed the precautionary approach. The only comment made by that Panel was that NEAFC could examine possible solutions for the Regulatory Area even if the coastal States had not reached agreement and that these should be consistent with a precautionary approach.

Panel Comment

The Panel comments for Section 3.5.1 apply to the application of the precautionary approach too. The unilateral action by States when there has been a failure to reach agreement on management measures or allocations undermines the application of the precautionary approach. Progress made in adoption of conservation and mangement measures based on the best scientific advice available would intrinsically lead to progress in application of a precautionary approach.

3.5.3 Extent to which consistent/compatible management measures have been adopted as set out in Article 7 of the 1995 UN Fish Stocks Agreement.

Article 7 of the UN Fish Stocks Agreement is included in this report as Annex 2. It addresses the requirements for compatibility in conservation and measures within and beyond areas under national jurisdiction for straddling and highly migratory stocks in order to ensure conservation and management of those stocks in their entirity. Paragraph 2 captures the core aspects of the Article and requires that conservation and management measures established for the high seas and those adopted for areas under national jurisdiction shall be compatible and encompass straddling fish stocks and highly migratory fish stocks in their entirety. As such, coastal States and States fishing on the high seas are obliged to cooperate in order to achieve compatible measures.

The Panel was advised by the Secretariat that NEAFC Contracting Parties regularly inform the Commission of any measures they adopt within their EEZs.[16] This is consistent with the observations by the Panel and comments received from delegates to the 13th Annual meeting, none of which suggested that there were any major problems being experienced in communication of measures or incompatible measures once an agreement had been reached by coastal States on TACs and allocations. There is, however, a fundamental problem of compatibility in those instances in which coastal States have not been able to reach agreement and one or more countries implement their own limits for the portion of the stock occurring within their EEZ. This problem was addressed in Section 3.5.1.

3.5.3.1 Comments on this Topic by 2006 Performance Review Panel

[16] PRP Inf.-06. Management measures by Contracting Parties in areas within their EEZs. A note by the NEAFC Secretariat for the Performance Review Panel, July 2013.

The 2006 Panel reported that it was satisfied that Articles 5 and 6 indirectly require NEAFC to ensure consistency between measures adopted by coastal States in their EEZs and the measures adopted for the Regulatory Area, and are in conformity with Article 7 of the Fish Stocks Agreement. The Panel commented that there was no established mechanism to ensure that the Contracting Parties kept the Commission informed on their national measures and decisions in order to keep the Commission informed, and therefore that updated information on coastal States' regulatory measures was not available to the Panel. The Panel encouraged NEAFC to put such a mechanism in place. The Panel also expressed concern that the consistency of management measures for blue whiting, herring and mackerel could only be assured when the coastal States had agreed on a TAC and its allocation. Without such an agreement, coastal States unilaterally set their own catch levels which were not necessarily compatible across the full distribution of the stock.

Panel Comments

The concerns raised by the 2006 Panel that there was no mechanism in place for communication by coastal States of their management measures appears to have been resolved and this Panel was provided with an up-to-date list of management measures implemented by coastal States.

The problem of failures by the coastal States to reach agreement on compatible measures 'with a view to ensuring conservation and promoting the objective of optimum utilization of such stocks throughout the region' (Article 7 of the UN Fish Stocks Agreement) for those portions of the stocks that occurred in their individual EEZs remains, however, and requires urgent solutions. The Panel comments included in Section 3.5.1 are directly relevant to this problem.

3.5.4 Extent to which NEAFC successfully allocates fishing opportunities consistent with the NEAFC Convention and Article 11 of the 1995 UN Fish Stocks Agreement.

Article 11 of the UN Fish Stocks Agreement is included in this report as Annex 3. It deals with participatory rights for new members of or participants in subregional or regional fisheries management arrangements. The Panel was advised that there have been no new members to NEAFC during the period being considered by this review. Guidelines for States considering becoming Contracting Parties are available on the NEAFC website.[17] Amongst other information, these advise prospective new members that "Non Contracting Parties of NEAFC should be aware that presently and for the foreseeable future, stocks regulated by NEAFC are fully allocated, and fishing opportunities for new members likely to be limited to new fisheries (stocks not currently allocated)".

The NEAFC Convention addresses the subject of allocation in general in Article 7, where it is

[17] http://neafc.org/becomingacp accessed on 24 June 2014.

written that "In the exercise of its functions, as set out in Articles 5 and 6, the Commission may consider inter alia measures for:….. (e) the establishment of total allowable catches and their allocation to Contracting Parties, (f) the regulation of the amount of fishing effort and its allocation to Contracting Parties." These issues are that the core of the biggest challenges being faced by NEAFC: agreement by coastal States on compatible measures for shared and straddling stocks.

The Secretariat advised the Panel that allocation is often the most difficult aspect of management on which to reach an agreement.[18] The Secretariat also briefed the Panel on the current (as of July 2013) state of allocations. This can be summarised as: blue whiting – agreed allocations in place, including accomodation of States that were not recognized as coastal States in the original 2006 key; herring – no comprehensive agreement from 2013; redfish in the Imminger Sea – ad hoc arrangements agreed by four Contracting Parties but not accepted by the fifth, the Russian Federation; mackerel – no allocations agreed from 2010 onwards. At that time, redfish in Areas I and II were managed through an overall catch limit and an Olympic 'race to fish' system but that discussions were underway to implement an allocation system.

The process for reaching agreement on allocations is clearly problematic and in need of improvements to faciltate more rapid agreement by all coastal States and, for the NEAFC Convention area, any other Contracting Parties.

3.5.4.1 Comments on this Topic by 2006 Performance Review Panel

The 2006 Panel Report addressed fishing allocations in Section 3.3.8. It noted that NEAFC does not lead the allocation process, which is dealt with primarily by the coastal States. It also commented on the lack of success in agreeing on allocations in some instances. The Panel expressed the view that 'lack of resolution on how to deal with the stock issue has been a key road block preventing the development of successful allocation agreements in recent years' and that ensuring successful allocations is an essential prerequesite for effective management. It recommended that 'the highest priority for NEAFC should be to encourage consistency and certainty into this process across all fisheries in the Convention Area', while acknowledging that the responsibility for achieving this was largely that of the coastal States rather than NEAFC.

Panel Comments

The Panel has considered this task as consisting of two separate considerations: the question of allocations between CPs, as addressed in the NEAFC Convention, and that of allocation to new members as covered by Article 11 of the UNFSA.

With reference to the NEAFC Convention, the Panel concurs with the conclusions of the

[18] Ibid – Footnote 10.

2006 Review Panel that the failure by coastal States to reach agreement has been a key problem, unquestionably the single biggest problem, confronting NEAFC during the review period. The Panel notes that considerable progress has been made during 2014 towards resolving the allocation issues for the major stocks but the underlying weaknesses in the system and their implications for achieving NEAFC's objectives persist and are likely to recur unless satisfactorily addressed.

The Panel recognizes that the problem rests mainly with the coastal States but because those States are also Contracting Parties to NEAFC, the responsibility extends into the Convention. The Panel considers it regretable that some of the leading fishing nations and entities in the world have been unable to come up with a process and mechanism that leads to timeous and just agreements. The Panel comments under 3.5.1 are also relevant here, in particular that:

- **The coastal States and NEAFC should consider combining discussions on allocations for the coastal States and within NEAFC into a single process, possibly making use of Article 6 of the Convention.**
- **The process for determining allocation keys needs to be improved through: setting explicit criteria for determining allocations and then applying those criteria consistently and objectively as proposed in the Panel comments to 3.5.1.**
- **The scientific role and capacity of PECMAS should be strengthened in order to provide NEAFC with scientific advice and evaluation to complement that received from ICES. In terms of allocations, PECMAS could be mandated to provide advice to NEAFC on the scientific criteria for allocations, for example in evaluation of the contributions of different coastal State areas and areas beyond national jurisdiction to the productivity of the stocks under consideration.**

In terms of Article 11 of the UNFSA and allocation to new members, at present this does not appear to be an issue for NEAFC (see also Panel Comment in Section 6.2.2).

3.5.5 Extent to which NEAFC has moved toward the adoption of conservation and management measures for previously unregulated fisheries, including new and exploratory fisheries.

The Secretariat informed the Panel that from 2006 to 2013 there were some significant changes in the ranges of species being managed by NEAFC and in the scope of the regulatory measures.[19] These included implementation of management measures for beaked redfish *S.mentella* in ICES Subareas I and II in response to, first, increasing bycatches of the species and subsequently the development of a directed fishery for the species in 2006. A system was

[19] PRP Inf.-08. Management of previously unregulated fisheries and new and exploratory fisheries. A note by the NEAFC Secretariat for the Performance Review Panel.

put in place in 2007 whereby the directed fishery is managed through a TAC distributed through an Olympic system during a designated fishing season. This was accompanied by a bycatch limitation in other fisheries in which redfish is taken as bycatch. While work is underway to improve upon this approach, according to Rec 01 2014: "Redfish in ICES I and II, as amended", this approach remains in force in 2014[20].

There have also been changes in the management of redfish *S.mentella* in the Irminger Sea, including splitting the resource into two management units as a result of changes in understanding of the stock structure in the area. The Secretariat reported that there had been agreement among four of the five Contracting Parties on reducing the TAC for these management units to the level proposed by ICES, but at the time of writing this report, that was still being disputed by the Russian Federation.

Substantial changes have been made in management of deep-sea fisheries in response to concerns as the fisheries for these species have developed since the late 1990s. A key management measure was the agreement in 2005 to reduce fishing effort to 70% of the effort being applied at that time and, in 2007, agreement on a new target of 65% of the 2005 effort. However, the opening statement of the European Union at the 2013 Annual Meeting complained that implementation of this measure was not being monitored and there is no control over how the Parties interpret their historical fishing effort. Implementation of this measure may therefore be a problem.

Since 2007, NEAFC has agreed on recommendations for measures for management of particular deep-sea stocks including, for example, prohibitions on directed fisheries for several shark species, a seasonal closure for blue ling and restrictions on fishing for orange roughy. As reported in the report of the 2013 Annual Meeting, discussions are underway to develop a new and improved approach to management of these fisheries.

Rec. 19 2014 'Recommendation on the protection of vulnerable marine ecosystems in the NEAFC Regulatory Area' provides the rules and processes for exploratory bottom fisheries. Contracting Parties considering undertaking exploratory bottom fishing are required to present the data necessary in order for PECMAS and ICES to assess the proposed exploratory fisheries, and to send a Notice of Intent to undertake exploratory bottom fishing to the Secretary at least six months in advance accompanied by detailed information on all aspects of the fisheriesfor review (Article 6). PECMAS is required to assess the proposal and advise the Commission on whether the proposed fisheries should be approved or, in the event of likely significant adverse impacts on VMEs, the mitigation measures to prevent such impacts, for subsequent decision by the Commission.

In addition to these measures, the Secretariat reported that NEAFC has developed and implemented measures to regulate the extension of deep-sea fisheries into new areas. Articles

[20] http://www.neafc.org/system/files/14-33_letter-vote-on-Redfish-I-II_proposed-amendment-by-EU_0.pdf accessed 27/06/2014.

6 and 7 of NEAFC Recommendation 19:2014 prescribe the steps that need to be undertaken by a Contracting Party that intends to undertake any exploratory fishing, and how the proposal will be dealt with by NEAFC.

3.5.5.1 Comments on this Topic by 2006 Performance Review Panel

The topic of new and exploratory fisheries was not addressed by the 2006 Panel.

Panel Comments

NEAFC has made good progress in the adoption of conservation and management measures for previously unregulated fisheries, including new and exploratory fisheries. The Panel commends NEAFC for the adoption of Rec. 19 2014 'Recommendation on the protection of vulnerable marine ecosystems in the NEAFC Regulatory Area'. The Commission is urged to reinforce its efforts to gain consensus on the formulation for guidelines for the management of deep-sea species, including management measures for individual deep-sea species where appropriate, and to implement those guidelines.

3.5.6 Extent to which NEAFC has taken due account of the need to conserve marine biological diversity and minimize harmful impacts of fishing activities and research on living marine resources and marine ecosystems.

The fisheries operating in the NEAFC area that could be expected to have the most serious impacts on biological diversity and marine ecosystems are the bottom fisheries, including those targetting deep-sea species. In this regard, the adoption this year by NEAFC of Rec. 19 2014 'Recommendation on the protection of vulnerable marine ecosystems in the NEAFC Regulatory Area' is a positive development. The objective of the recommendation is '..to ensure the implementation by NEAFC of effective measures to prevent significant adverse impacts of bottom fishing activities on vulnerable marine ecosystems known to occur or likely to occur in the NEAFC Regulatory Area..' The recommendation includes the adoption of conservation and management measures to prevent significant adverse impacts on VMEs (Article 3), allowance for area closures including the designation of 10 areas in which bottom fishing activities are prohibited (Article 5), regulations concerning exploratory fishing (Articles 6 and 7) and rules to be applied in the event of encounters with possible VMEs (Articles 8 and 9).

Notwithstanding the emphasis given to addressing the ecosystem impacts of bottom fishing, the pelagic species targetted by NEAFC are also part of an ecosystem and impacts of fishing on the target stocks will inevitably also have impacts on other species dependent on those species as prey or otherwise associated with them through foodweb and possible other ecosystem interactions. The scientific advice provided by ICES for these species is based on single-species approaches that consider only the productivity of each stock as estimated from conventional stock assessment techniques. This is an appropriate approach to serve as the foundation of scientific advice for management of those species, but there would be value in

undertaking an assessment, for example through a comprehensive management strategy evaluation (MSE), of the implications of different harvest rates on other species and the ecosystem as a whole. This could be undertaken within the context of taking a more proactive approach to fulfilling the NEAFC mandate to 'promote the long term conservation and optimum utilisation of the fishery' discussed in Sections 3.2 and 3.5.1.

Rec 19 2014 also addresses research and requires that 'Within the areas defined in paragraph 2[21] Contracting Parties intending to conduct scientific investigations, which shall exclude exploratory bottom fishing pursuant to Article 6, shall notify the Secretary of their intended research programmes, taking account of Article 206 of the 1982 UN Convention on the Law of the Sea…'

3.5.6.1 Comments on this Topic by 2006 Performance Review Panel

The 2006 Panel addressed this topic in Section 3.3.6, with the exception of consideration of harmful impacts of research, which has been added in the terms of reference of this 2014 Panel. The previous Panel was of the opinion that the major fisheries occurring within the NEAFC area are pelagic fisheries and have little or no bycatch and are not considered to have negative impacts on the benthic habitats or on bycatch species, with the possible exception of shark species. The Panel referred to the ecological role of Norwegian spring-spawning herring in the food web, particularly as food of top predators including cod, seabirds and marine mammals. It warned that excessive fishing on herring could therefore have ecological impacts on other species.

The Panel cautioned that bottom trawling could be occurring on sensitive habitats on Rockall Bank and on the possibility of ghost fishing by lost gillnets. It acknowledged the steps taken by NEAFC to reduce impacts of some fishing practices, such as gear restrictions, establishment of closed areas on Rockall Bank and the creation of precautionary closed areas in deep-sea grounds.

Panel Comments

NEAFC has made considerable progress since the 2006 Review Panel in terms of its actions and measures to conserve marine biological diversity and minimize harmful impacts of fishing activities and research on living marine resources and marine ecosystems. The greatest needs at this time are related to ensuring agreement on outstanding recommendations including the allocations for the major pelagic fisheries. The reports at the 2013 Annual Meeting that no notifications of encounters with VMEs had been received by the Secretariat could indicate that adherence to recommendations is lagging behind their adoption but, on the other hand, could indicate that the measures adopted by NEAFC for protection of VMEs are being adhered to and are working. An observer programme would be the best way to establish the contributions of each of

[21] i.e. Designated areas in which bottom fishing activities have been prohibited.

these two explanations to the absence of notifactions.

3.5.7 Extent to which NEAFC has adopted measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target living marine resources, and impacts on associated or dependent species through measures including, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques.

The Panel is not aware of any issues relevant to NEAFC concerning pollution or waste. Similarly, catch by lost or abandoned gear does not appear to be a problem in the convention area. The 2006 Panel did raise a concern about possible ghost fishing by lost gill nets but this has not been raised as a problem during this review period.

There are, however, issues related to discards, bycatch and impacts on associated and dependent species. Recommendation 16:2010[22] requires each Contracting Party to prohibit its fishing vessels operating in the Regulatory Area from discarding or releasing catches of any of the species listed in Annex I A) of the Scheme of Control and Enforcement (redfish, Norwegian spring spawning herring, blue whiting, mackerel, haddock). Further to this recommendation, in its statement to the 2013 Annual Meeting, the Russian Federation referred to ongoing cooperation between it and the EU in development of harvest control rules for the Rockall haddock stock, with a special emphasis on avoiding discards. PECMAS had also discussed discarding in this fishery at its meeting in October 2013, where it was reported that if discards were not reduced, the maximum TAC would need to be reduced from 1,620 tonnes to 980 tonnes or less. Discards in this fishery are currently banned by NEAFC but the EU is not bound by this ban at present. ICES recommendations for protecting juveniles of haddock in this area included an increase in mesh size, adoption of selective devices such as square mesh panels, and avoidance of areas and times with high juvenile concentrations. ICES anticipated that the future ban of discards by the EU would encourage fishing vessels to avoid small fish.

Also at the 2013 Annual Meeting, the representative of ICES expressed concern about the lack of reporting on discards and that there was both insufficient observer coverage and a bias in the existing coverage. Referring to the 2014 advice for Northeast Atlantic mackerel, he reported that discarding was known to occur in the fishery but that it could not be accurately quantified.

Bycatch was raised as a concern for deep-sea fisheries by the NGO Deepsea Conservation Coalition in their opening statement at the 2013 Annual Meeting, where they called on NEAFC to establish management measures to minimize or avoid the bycatch of stocks or species of concern. In this regard, some relevant Recommendations include:

- Bycatch is addressed in Rec. 19:2014 which requires that assessments of exploratory fisheries should include consideration of potential bycatch species (Annex 4);

[22] http://www.neafc.org/system/files/rec16_ban_on_discards_neafc_ra.pdf accessed 30/06/2014.

- Recommendation 4:2014 on the conservation and management of roundnose grenadier requires Contracting Parties to submit all data on the fishery to ICES, including bycatches and discards;
- Recommendations 5 and 6:2012 on conservation and management of spurdog *Squalus acanthias* and Porbeagle *Lamna nasus* respectively require that any incidental catches of the species shall be released promptly and unharmed;

3.5.7.1 Comments on this Topic by 2006 Performance Review Panel

In Section 3.3.1 of their report, the 2006 Panel reported that there were substantial bycatches of blue whiting and some non-assessed species such as grey gurnard in the Rocktail haddock fishery. It recommended that NEAFC could consider asking ICES to verify the assumption that there are only minimal bycatches in the redfish, blue whiting and mackerel fisheries, as well as examination of the possible impacts of bottom trawling for Rockall haddock and deep-sea species. The Panel commented that discards are not considered a problem in the pelagic fisheries for pelagic redfish, herring and blue whiting but that discards of species of little commercial value in the deep-sea fisheries are widespread but that little information on these was available.

In Section 3.3.6.1, the Panel acknowledged the recent implementation of data collection protocols for by-catch and urged the Commission to continue to contribute to collection of information on bycatches.

Panel Comments

NEAFC is to be commended on the broad suite of recommendations addressing bycatch and discards that it has adopted. The lack of systematic information on the effectiveness of implementation does, however, make it difficult to judge whether these measures are having the desired results. There are two primary areas of potential concern: discards in the Rockall haddock fisheries and bycatch in deep-sea fisheries, while the comments from ICES about possible discarding in the mackerel fishery should also be considered. The Panel recommends that NEAFC considers reinforcing its efforts to make certain that i) all Contracting Parties ensure that their vessels provide complete and accurate reports on discards and bycatches and ii) all existing regulations on bycatch and discards are adhered to.

Scientific observers can provide the most reliable information on discards and bycatch and NEAFC is encouraged to implement an observer programme with participation by all CPs, and CNCPs as required, that will provide reliable information to supplement and validate existing data and information. The adoption in 2006 of amendments to the NEAFC Convention to take into account the impact of fishing activities on other species and marine ecosystems reinforces the need for implementation of an observer programme (see also Panel Comments in Section 4.3.1). In this regard, the Panel notes

with some concern the comment by ICES that 'It has proven difficult to get allowance from fishers to have scientific observers (for sampling discards, by-catches, and information on slipping) on-board pelagic fishing vessels recently'.[23]

3.5.8 Extent to which NEAFC has adopted and is implementing effective rebuilding plans for depleted or overfished stocks including guidance for stocks under moratoria.

The NEAFC Secretariat provided the Review Panel with a table listing the stocks estimated by ICES to be depleted (defined as being below the limit reference point in each case) and summarising the ICES advice and NEAFC measures for each (Annex 4). The list shows that none of the major stocks managed by NEAFC are estimated to be depleted and orange roughy is the only important targeted resource that is considered to be below its limit reference point. The Secretariat pointed out that the biomass of orange roughy is not known and that ICES considered it impossible to establish management objectives for the resource. A proposal to prohibit directed fisheries for orange roughy was not adopted at the 2013 Annual Meeting with three Contracting Parties voting in favour and two against. NEAFC has therefore not been able to reach agreement to comply with the ICES scientific advice that there should be no fishing on orange roughy.

Basking shark, spurdog and Porbeagle occur in the Convention Area and are estimated by ICES to be depleted but there are currently no directed fisheries for these stocks in the NEAFC area and Recommendations 4:2012 (basking shark), 5: 2012 (spurdog) and 6:2012 Porbeagle stipulate that there shall be no directed fishery for them in the Convention Area from 2012-12014.

Blue ling and red (blackspot) seabream are estimated to be depleted in some areas and deep-sea sharks are estimated to be depleted. Management measures are in place for blue ling and deep-sea sharks but not for red (blackspot) seabream.

There is considerable uncertainty about the status of many of the stocks that are being caught in the NEAFC area, whether targetted or bycatch. The following list summarises the information from the ICES's advice to the 2013 Annual Meeting of NEAFC[24]:

- Beaked redfish (Deep pelagic stock) – No assessment of status. No change in perception of the stock, precautionary consideration, catches reduced to less than 20 000t and management plan developed
- Beaked redfish (Shallow pelagic stock) - No assessment of status. 2013 acoustic biomass index indicates that the stock has declined to less than 5% of the estimates

[23] Letter dated 22-09-13 from Anne Christine Brusendorrf, General Secretary of ICES, responding to a request for information from the Secretary of NEAFC on behalf of the Review Panel.
[24] ICES advice for 2014. Presentation to the 32nd Annual meeting of NEAFC. Annex g in Vol. II Annexes of the Report of the 32nd Annual Meeting. http://www.neafc.org/system/files/VOL_II_Annexes-complete%28reduced%29.pdf accessed 01/07/2014.

at the beginning of the survey time-series in the early 1990s; no directed fishery, bycatch kept to a minimum;

- Beaked redfish (in Subareas I and II) – No assessment of status and reference points not available;
- Blue whiting – stock above B_{pa} and MSY $B_{trigger}$ (see SSB figure);
- Norwegian spring-spawning herring – stock declining but close to MSY $B_{trigger}$ and well above B_{lim} (see SSB figure);
- Mackerel – no analytical assessment is possible at present but catches stable and biomass apprears to be increasing;
- Rockall haddock – SSB at B_{lim}.
- Deep-sea species – Updated advice was not given at the 2013 Annual Meeting as advice on these stocks is only given biannually. At the 2012 Annual Meeting[25], the ICES report did not indicate any overfished deep-sea stocks, other than those referred to earlier in this section as being depleted.

The only stock that is classified as being overexploited, but not depleted, is therefore Rockall haddock, but the true status of a number of deep-sea species is unknown. For Rockall haddock NEAFC has adopted management measures consistent with scientific advice, although discards of juvenile haddock remain a concern.

3.5.8.1 Comments on this Topic by 2006 Performance Review Panel

The 2006 Panel did not address this topic in a consolidated manner and any comments on rebuilding depleted and over-exploited stocks was included in other sections.

Panel Comments

The comments made elsewhere in this report about NEAFC measures and actions for those species assessed as being depleted or over-exploited also apply here. These include:

- **Section 3.5.7: the extent of discarding of small-sized haddock needs to be determined urgently and management measures to reduce it implemented as required as soon as possible, while also reducing the TAC to take into account any discarding that is still taking place. The remainder of the management plan for this species is considered to be suitable and has been agreed by the Contracting Parties.**
- **Section 3.4: NEAFC should consider a multi-year research programme that could include improving the information on the status of key deep-sea species and improved management approaches for those species.**

[25] ICES advice for 2014. Presentation to the 31st Annual meeting of NEAFC. Annex, Vol. II Annexes of the Report of the 31st Annual Meeting. http://www.neafc.org/system/files/AM2012_annexes.pdf accessed 01/07/2014.

- **Section 3.5.5: The Commission is urged to reinforce its efforts to gain consensus on the formulation for guidelines for the management of deep-sea species, including management measures for individual deep-sea species where appropriate, and to implement those guidelines.**

3.6 Capacity management

At present, NEAFC does not have any management measures that directly regulate fishing capacity. According to the Secretariat, NEAFC prefers to leave control of capacity to the Contracting Parties themselves, as stipulated in Article 4.1.d of the NEAFC Scheme of Control and Enforcement that 'Each Contacrting Party shall undertake to manage the number of authorised fishing vessels and their fishing effort commensurate to the fishing opportunities available to that Contracting Party'.[26]

3.6.1 Comments on this Topic by 2006 Performance Review Panel

The 2006 Panel did not address this topic.

Panel Comments

The Panel notes the NEAFC premise that regulation of fishing capacity is the responsibility of the Contracting Parties themselves but is of the view that regulation of fishing capacity is an essential requirement for achieving the NEAFC objective 'to ensure the long-term conservation and optimum utilisation of the fishery resources in the Convention Area". There would therefore be benefit in the Commission taking a more proactive approach to capacity management in the RA in accordance with Article 4 of the NEAFC scheme that requires that a CP shall ensure that the number of authorized fishing vessels and their fishing effort are commensurate with the fishing opportunities granted to it.

Noting the difficulties that have been experienced in reaching decisions on allocations and some other management measures, each Party should consider its existing capacity in relation to the fishing opportunities to ensure that any over-capacity in their national fishing fleets is not driving over-exploitation, illegal or unregulated fishing, or contravention of regulations in the NEAFC area. Given the difficulties in obtaining agreement by the coastal States on management measures in several major fisheries shared with NEAFC, and the difficulties in reaching agreement between Parties in the redfish fishery, the Panel encourages NEAFC Contracting Parties to consider whether their own negotiating position has been influenced by attempts to accommodate capacity that is not commensurate with the fishing opportunities that would otherwise be available to them. In any such cases, those Contracting Parties may wish to consider reducing their fishing capacity to sustainable levels, taking into account the legitimate

[26] PRP Inf.-10. Management of fishing capacity. A note by the NEAFC Secretariat for the Performance Review Panel.

expectations of others utilising the available resources.

4. Compliance and Enforcement

Article 8 of the NEAFC Convention makes general reference to measures of control relating to fisheries conducted beyond areas under the jurisdiction of Contracting Parties (CPs) for the purpose of ensuring the application of the Convention, as well as measures of control relating to fisheries conducted within an area under the jurisdiction of a CP, provided that the CP in question so requested and the measure had received its affirmative vote.

It is however the NEAFC Scheme of Control and Enforcement (the Scheme) that regulates fishing and fishing related activities of CP and non-Contracting Party (NCP) vessels in the Regulatory Area (RA), and in some cases in the whole Convention Area. The Scheme is an extensive set of rules and has been amended several times since its inception in 1998 to respond to NEAFC' s needs and challenges faced in fisheries monitoring, control and surveillance (MCS). The Scheme establishes the obligations of CPs and Cooperating non-Contracting Parties (CNCPs) to implement control measures for fishing activities in the RA, including flag State responsibilities thereto (Chapter II); obligations to monitor fishing activities, including through the mandatory use of vessel monitoring system (VMS) (Chapter III); implementation of cooperative inspection programme at sea (Chapter IV); establishment of a port State system of control (PSC) for foreign fishing vessels (Chapter V); identification of infringements and serious infringements, as well as procedures to address such infringements (Chapter VI); and measures to promote compliance by NCP Fishing Vessels with NEAFC conservation and management measures (Chapter VII).[27]

It should be noted that a number of Recommendations adopted at the 32nd Annual Meeting of NEAFC in 2013 have brought substantial changes to several provisions of the Scheme.[28]

4.1 Flag State duties

4.1.1 **Extent to which NEAFC has established flag State duties as set out in international instruments, including, inter alia, the 1982 Law of the Sea Convention, 1995 UN Fish Stocks Agreement and the 1993 FAO Compliance Agreement, as applicable.**

The duties of the flag State in respect vessels flying its flag are provided under Articles 91 (Nationality of ships), 94 (Duties of the flag State), and 117 (Duties of States to adopt with respect to their nationals measures for the conservation of the living resources of the high seas) of the 1982 United Nations Convention on the Law of the Sea (UNCLOS). Articles 18 (Duties of the flag State) and 19 (Compliance and Enforcement by the flag State) of the

[27] The NEAFC Scheme of Control and Enforcement, http://www.neafc.org/scheme2014/contents
[28] Report of the North-East Atlantic Fisheries Commission, 11-15 November 2013, Vol. II, Annexes, Annex H.

United Nations Fish Stocks Agreement (UNFSA) provide the MCS and enforcement duties of the flag State in respect of vessels flying its flag carrying out fishing activities on the high seas. Article III of the FAO Compliance Agreement establishes the responsibility of the flag State in respect of vessels entitled to fly its flag conducting fishing activities on the high seas.

The NEAFC Scheme has established flag State duties, in accordance with UNCLOS, the UNFSA and the 1993 FAO Compliance Agreement, by requiring all flag States to implement measures provided under the Scheme aimed at controlling and monitoring vessels flying their flag that are authorized to carry out fishing activities in the RA.

Flag State duties under the Scheme

As preliminary duties of the flag State, Article 3 of the Scheme states that all CPs shall cooperate with each other and with the Secretariat to facilitate implementation of the Scheme. For this purpose, they are required to designate a competent authority, known as a Fisheries Monitoring Center (FMC), mandated to receive information and data in respect of surveillance and inspections reports, receive and reply to notifications and issue authorizations, in accordance with the requirements under Annex VII of the Scheme (Vessel Monitoring System). The following flag State duties are established under the Scheme and have to be complied with by all CPs of the NEAFC Convention.

Control measures regarding fishing vessels

Authorization to fish. Article 4 provides that as a flag State, a CP shall authorize a fishing vessel entitled to fly its flag to carry out fishing activities in the RA only if it is able to exercise its responsibilities in respect of such a vessel. A CP shall ensure that only authorized fishing vessels may conduct fishing activities in the RA and that such vessels comply with applicable NEAFC Recommendations. A CP shall also ensure that the number of authorized fishing vessels and their fishing effort are commensurate with the fishing opportunities granted to it, as a CP. In addition, a CP shall not authorize a fishing vessel flying its flag to engage in transshipment or joint fishing operations with vessels of NCPs that do not have the status of CNCPs. It shall further prohibit a fishing vessel engaged in transshipment operations to engage in any other fishing activity during the same trip.

Notification of fishing vessels. Article 5 provides that as a flag State, a CP is under obligation to notify NEAFC Secretariat of all vessels flying its flag that it has authorized to fish in the RA at the beginning of the calendar year and before such fishing vessels enter the RA. It shall also notify the Secretariat of the regulated resource(s) for which they had been granted authorization to fish. Notification of vessels shall be in conformity with the information and format required for in Annex II of the Scheme (Notification of Fishing Vessels). *Recommendation 06:2014* amending Annex II of the Scheme on notification of authorized fishing vessels adopted at the 32nd Annual Meeting of NEAFC in 2013 has changed the notification of "vessel gear" from "optional" to "mandatory".

A CP is further under obligation to notify promptly the Secretariat of any modification in the information provided in relation to its vessels.

Vessel requirements. Article 6 requires all CPs to mark fishing vessels flying their flags according to the FAO "*Standard Specifications for Marking and Identification of Fishing Vessels*". Such vessels are required to carry on board documents issued by the certifying authority of the flag State, as listed under Annex III (Vessel Documents). The flag State is also under obligation to ensure that fishing vessels over 24 meters keep on board technical documents describing their storage facility and that such documents shall be regularly verified by the appropriate authority of the flag State. The appropriate authority of the flag State shall certify any modification of the characteristics of the information contained in these documents.

Marking of gear. Article 7 of the Scheme requires the flag State to ensure that the gear used by its fishing vessels in the RA is consistent with the provisions of the 1967 London "*Convention on Conduct of Operations in the North Atlantic*". Such gear shall also display the registration number of the fishing vessel to which it belongs. In addition, the flag State is under obligation to have its fishing vessels retrieved lost fixed gear. To this end, fishing vessels shall have equipment on board to retrieve lost gear. Where the lost gear cannot be retrieved, the flag state, following prompt notification by the master of the vessel, is required to notify without delay the NEAFC Secretariat of all the relevant information relating to the lost gear, including the circumstances of such loss. Failure to report a lost gear is a breach of flag State duties and may entail financial obligation to the master of the vessel concerned.[29]

Labeling of frozen fish. The flag State has the duty under Article 8 of the Scheme to require fishing vessels flying its flag that have frozen fish previously caught in the Convention Area to clearly identify such frozen fish by species, production date, areas of where the catch was taken and the name of the fishing vessel which caught them.

Monitoring of fisheries

Recording of catch and fishing effort. Article 9 mandates the flag State to require fishing vessels flying its flag to keep a fishing logbook and provides the minimum information that such logbook must contain. Vessel freezing and/or processing catches shall, in addition, keep a production logbook. The minimum information required in the production logbook is also listed. The data recorded on both logbooks shall be in accordance with Annex IV (Recording of Catch and Fishing Effort). The flag State has the duty to ensure that the quantities of catch recorded correspond accurately to the quantities kept on board. It shall also require fishing vessels flying its flag to keep the original recordings in the logbook for a period of at least 12 months.

Reporting of catch and fishing effort. Article 10 establishes an obligation for the flag State to

[29] The Scheme, Art. 7 b (3) and (4).

provide to the NEAFC Secretariat a monthly report of aggregate catches of regulated resources, in accordance with specific recommendations approved by NEAFC Commission.

Vessel monitoring System. Article 11 requires the flag State to implement a vessel monitoring system (VMS) for all fishing vessels of certain specifications flying its flag carrying out fishing activities or planning to do so in the RA. The device shall be able to automatically transmit messages in order to allow continuous tracking of the vessel position by the flag State FMC, in accordance with the provisions of Annex VII of the Scheme. Such VMS must be able to transmit data on vessel identification, the most recent geographical position of the fishing vessel and the time and fixing of such position, data on catch on board and transshipment. Following the adoption of *Recommendation 11:2014* at the 2013 Annual Meeting of NEAFC, transmittal to the FMC of messages relating to the speed and course of a vessel at the time of fixing of its position have become mandatory for all fishing vessels.

It is the responsibility of the flag State to ensure that its FMC receives the VMS mandatory messages required under the Scheme and that the satellite tracking devices are at all times fully operational. In the event of technical failure, the flag State shall ensure that the device is repaired or replaced within one month. The flag State shall not authorize the master of a fishing vessel flying its flag to continue or commence a fishing trip with defective VMS tracking device. In addition, the flag State has the responsibility to ensure that a fishing vessel with a VMS defective tracking device during a fishing trip reports at least every 4 hours to the FMC mandatory information, in accordance with the format set out in Annex VIII (5) of the Scheme regarding position report/message.[30]

The flag State is further required to establish a database delimiting the RA by latitude and longitude coordinates.

Communication of catches. Article 12 puts the flag State under the obligation to require fishing vessels engaged in fishing activities on regulated resources to communicate to their FMC catch reports by electronic means, in accordance with requirements provided in Annex VIII of the Scheme relating to communication of catches, VMS messages and reports by fishing vessels.[31]

Following the adoption of *Recommendation 15:2014*, communication of catches by fishing vessels to FMCs has changed from "weekly" to "daily" catch reporting.[32]

Communication of transshipments and port of landings. Article 13 provides the obligation for the flag Sate to require fishing vessels flying its flag engaged in transshipment operations of

[30] *Recommendation 11:2014* has also changed the frequency of the reporting from a vessel with a defective VMS tracking device from "daily" to "every 4 hours".
[31] Ibid., Annex VIII 1) "CATCH ON ENTRY" report; Annex VIII 2) "CATCH" report; Annex VIII 3) "CATCH ON EXIT" report; Annex 4)" TRANSHIPMENT" report; Annex VIII 5) "POSITION" report/message; Annex VIII 6) PORT of landing" report; Annex VIII 7) "CANCEL" report.
[32] EU objected to the Recommendation on 20 December 2013. Objection period ends on 31 January 2014.

regulated resources in the RA to communicate by electronic means to their FMC transshipment reports, in accordance with the requirements set out in Annex VIII of the Scheme.[33] If such vessels were engaged in transshipments as receiving vessels, they are also required to file to their FMC a port of landing report, whether or not the port of landing is inside or outside the Convention Area, in accordance with the mandatory requirements set out in Annex VIII. [34]

Communication to the NEAFC Secretariat. Article 14 establishes the obligation for the flag State to communicate to the NEAFC Secretariat within 24 hours of receipt reports and messages related to VMS, catches, transshipments and ports of landing, in accordance with the requirements set out in Annex IX for data exchange format and protocols, so that the Secretariat can transmit such information to CPs with active inspection presence in the RA. In addition, a new report after correction as well as any cancellation report accepted by the FMC from a fishing vessel shall be transmitted by the flag State to the Secretariat, in accordance with mandatory requirements.[35]

4.1.1.2 Comments on this topic by the 2006 Performance Review Panel

This topic was not included in the Terms of reference of the 2006 Performance Review Panel. Consequently, no comment or recommendation was recorded thereon in the report of the Panel.

Panel Comments

As previously indicated, the NEAFC Scheme provides a comprehensive implementation of the main thrust of flag State duties, as established under UNCLOS, the UNFSA and the FAO Compliance Agreement. The Panel suggests however that NEAFC may wish to take into consideration the following suggestions in order to ensure full consistency with the relevant provisions of the above-mentioned international legal instruments and with a view to addressing some technical violations by CPs in the RA, as referred to under Section 4.1.2:

a) **Addition in the Scheme of a provision entitled "Duties of the flag State" before Chapter II on "Control Measures" that would enunciate flag State duties in respect of vessels flying its flag on the high seas, as a corollary to the flag State exclusive jurisdiction on the high seas,[36] and justifies the implementation of consequential flag State duties to control (Chapter II) and monitor (Chapter III) fishing activities of its vessels in the RA.**

[33] Ibid., Annex VIII 4)" TRANSHIPMENT" report.
[34] Ibid., Annex VIII 6) "PORT of landing report.
[35] Ibid., Articles 12 (1) (b) (c) and 13 (1) .
[36] The Case of the SS "Lotus", Judgment No.9, Publ. of the PCIJ, Series A-N0.10, Sept. 7th, 1927, p.25; http://www.icj-cij.org/homepage.

Exclusive flag State jurisdiction on the high seas is clearly stipulated under Article 92 of UNCLOS. This legal principle, which entails exclusive rights and obligations for the flag State, is at the basis of the duty of the State to take measures in respect of vessels flying its flag on the high seas, in accordance with Article 94 of UNCLOS, and the duty of the flag State to take measures in respect of its fishing vessels conducting fishing activities on the high seas, pursuant to Articles 117, 18 (1) and III (1) (a), of UNCLOS, UNFSA and the FAO Compliance Agreement respectively.

Depending on NEAFC's preference, statement of the principle of flag State duties may be inserted in the Scheme or in the text of the NEAFC Convention itself.

Referring to best practices of RFMOs, it should be noted that statements of flag State duties are provided in the convention texts of the Inter-American Tropical Tuna Commission (IATTC),[37] the Northwest Atlantic Fisheries Organization (NAFO),[38] the South East Atlantic Fisheries Organization (SEAFO),[39] the South Pacific Regional Fisheries Management Organization (SPRFMO)[40] and the Western and Central Pacific Fisheries Commission (WCPFC).[41]

b) Addition of a specific provision that requires the flag State to establish a national record of fishing vessels, as a major obligation of flag States

Chapter II of the Scheme (Control Measures) does not contain any provision that requires the flag State, before notifying the NEAFC Secretariat and authorizing a vessels to fish in the RA, to establish and maintain a national register/record of vessels entitled to fly its flag and authorized to conduct fishing activities on the high seas, including in the NEAFC RA. Such requirement is a flag State 's duty under UNCLOS,[42] UNFSA[43] and the FAO Compliance Agreement.[44]

Drawing attention to best practices of RFMOs, it should be noted that NAFO,[45] SEAFO,[46] SPRFMO[47] and WCPFC[48] have included such requirement in duties of the flag State.

c) Addition of a provision in Annex III of the Scheme dealing with the list of

[37] ITTC Antigua Convention, Art.XX; http://www.iattc.org/
http://www.iattc.org/PDFFiles2/Antigua_Convention_Jun_2003.pdf
[38] NAFO Convention, Art.XI; See http://www.nafo.int/publications/frames/publications.html
[39] SEAFO Convention, Art.14; http://www.seafo.org/
[40] SPRFMO Convention, Art.25; http://www.southpacificrfmo.org/
[41] WCPFC, Art.24; See http://www.wcpfc.int/regional-observer-programme
[42] UNCLOS, Art.94 (2) (a).
[43] UNFSA, Art.18 (3) (c).
[44] FAO Compliance Agreement, Art.IV.
[45] NAFO Convention, Art. XI (2) (b).
[46] SEAFO Convention, Art.14 (3) (c).
[47] SPRFMO Convention, Art.25 (3) (b).
[48] WCPFC Convention, Art.24 (4).

mandatory vessel documents required to be carried onboard of fishing vessels with a view to ensuring conformity with Article 18 (3) (b) (iii) of the UNFSA

Paragraph 2 of Article 6 of the Scheme requires fishing vessels to carry onboard documents issued by the flag State. A list of these mandatory documents is provided in Annex III of the Scheme.[49] While the documents required under Annex III allow positive identification of a fishing vessel, they will not however allow NEAFC inspectors to verify from the outset as to whether such vessel has an authorization from its flag State to fish for one or more regulated resources in the RA. Despite the fact that inspectors have the possibility to have online access to such information in accordance with Article 5(1), it is still considered to be important for fishing vessels to carry on board "fishing license" or "fishing authorization" at all times, and for the NEAFC CPs to include such requirement among the data elements listed in Annex III of the Scheme.

In that regard, Article 18 (3) (b) (iii) of the UNFSA puts the flag State under the obligation " ***to require vessels fishing on the high seas to carry the license, authorization or permit on board at all times and to produce it on demand for inspection by a duly authorized person...".***

d) Addition of a provision in Article 9 dealing with "Recording of Catch and Fishing Effort" and Annex IV(a) on "Logbook Recordings" that mandates the flag State to requires its fishing vessels to record and report all incidental catch of non-target species, in accordance with Article 18 (3) (e) of UNFSA

Article 9 of the Scheme on Recording of Catch and Fishing Effort does not mandate the flag State to require fishing vessels flying its flag to record catch of non-target species. It requires only fishing vessels to record the amount of fish discarded.[50] Consequently, Annex IV (a) to which Article 9 refers makes it only mandatory for the recording of discarded catch by species and quantity, if the amount of catches for each species exceeds 50 kg. Furthermore, Article 12 (Communication of Catches) and Annex VIII (Communication of Catches, VMS Messages and Reports by Fishing Vessels) require only a daily cumulative catch reporting by species "retained" on board.[51] Since non-target species are not generally retained on board of fishing vessels, no reports on these species are therefore transmitted to FMCs.[52] Importance of a complete and accurate reporting on discards and bycatches is also referred to by the Panel Comments under

[49] The data elements required under Annex III of the Scheme are as follows: name of the fishing vessel; the letter(s) of the port or district in which it is registered, and the number(s) under which it is registered; its international radio call sign; the names and addresses of the owner and, where relevant, the charterer; its overall length; and its engine power, in kW/horsepower, where available.
[50] The Scheme, Art.9(2) (b).
[51] *Recommendation 15-2014* has changed reporting from "weekly" catch reporting to "daily" catch reporting.
[52] Ibid., Annex VIII 2) "CATCH" report and Annex VIII 3) "CATCH ON EXIT" report.

Sections 3.5.6 and 3.5.7 of the present report.

In this respect, attention should be drawn to Article 4 of the NEAFC Convention which requires fisheries conservation and management measures to take due account of the impact of fisheries on other species and marine ecosystems and to minimize harmful impacts on living marine resources and marine ecosystems. It requires also NEAFC to conserve marine biological diversity and consider the overall effects of management policies on fishery resources and other marine living resources and marine ecosystems.

In addition, Article 18 (3) (e) of UNFSA puts the flag State under the obligation to require fishing vessels flying its flag to record and report, inter alia, catch of target and "non-target species". For its part, UNCLOS requires the flag State to take into consideration the effects of conservation and management measures for harvested species on associated and dependent species, with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.[53]

As a first step to ensure consistency with the relevant provisions of UNCLOS, the UNFSA and the NEAFC Convention, the Scheme should put the flag State under the obligation to require vessels flying its flag conducting fishing activities in the RA to provide mandatory recording and reporting of all catches of non-target species taken incidentally during the course of fishing operations.

e) Addition of provisions requiring the flag State to implement a national observer programme for fishing vessels flying its flag in the RA

Chapter III of the Scheme dealing with Monitoring of Fisheries does not contain provisions requiring the implementation by the flag State of onboard national observers for fishing vessels flying its flag in the RA. The Scheme does not implement either a regional observer programme in the RA. The need for NEAFC to ensure observer coverage in the RA with a view to providing reliable information on discards and bycatch by fishing vessels is emphasized by the Panel in its comments under Section 3.5.7.

Article 18 of the UNFSA requires the flag State to implement a national observer programme in respect of vessels flying its flag conducting fishing operations on the high seas. Observers are generally tasked to verify, inter alia, catches of target and non-target species as well as impacts of fishing activities on VMEs.

In addition to the requirement of a national observer programme, UNFSA mandates also the implementation of a regional observer programme, in which the flag State is a

[53] Art.119 (1) (b) of UNCLOS.

participant, including requirement for a fishing vessel flying the flag of one State to allow access by observers of another State to carry out functions agreed under the programme.[54]

4.1.2 Extent to which these measures are effectively implemented

The closing statement of the Chair of the Permanent Committee on Control and Enforcement (PECCOE) at its April meeting in 2013 pointed out that there had not been sufficient progress in CPs fulfilling their obligations under the Scheme. He indicated that non-compliance was being raised year after year, without significant progress, and most of them were due to a bad performance by the CPs' FMCs. He further noted that this situation was possibly contributing to the creation of a situation where CNCPs were being discriminated against. He added that NEAFC expected CNCPs to fulfill all their obligations but the CPs got away with having the same non-compliance problems for years. He then concluded that the solution would not be to be more flexible to non-compliance by CNCPs, but to stop tolerating non-compliance by CPs.[55]

As noted by the NEAFC Secretariat, there were no major changes in CP compliance levels in 2012: some FMCs improved their performance while others regressed. Non-compliance seems to involve many flag State duties under Chapters II and III of the Scheme, and was recorded by the NEAFC Secretariat as follows:[56]

Article 4 - Authorization to fish. NEAFC inspectors reported that fishing vessels of CPs have violated the provisions of Article 4 (3) of the Scheme on "Authorization to fish" that prohibits the master of a fishing vessel engaged in transshipment operations which on-loads quantities on board to refrain from engaging in any other fishing activity, including joint fishing operations, during the same trip.

Article 5 - Notification of fishing vessels. The NEAFC Secretariat reported that CPs have notified a total of 1,378 fishing vessels in 2012. Nonetheless, there were cases of CPs that did not comply fully with the provisions of Article 5 of the Scheme. Some CPs had authorization for fishing vessels that were not notified to the NEAFC Secretariat. Others attempted to re-authorize vessels that were already authorized. A significant number of repeated notification and authorization messages were also systematically rejected for syntax and construction problems.

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[54] Ibid., Art.18 (3) (g) (ii).
[55] Report of the NEAFC Permanent Committee on Control and Enforcement (PECCOE), 16-17 April 2013 (Doc. AM 2013-09), para.9.
[56] Report on Compliance by the CPs with the Scheme of Control and Enforcement in 2012 presented by the NEAFC Secretariat at the 2013 spring meeting of PECCOE, provides a detailed list of infringements by CPs (Doc. PE 2013/02-39).

Article 6 - Vessel requirements. NEAFC inspectors have reported infringements on Article 6 (2) and (3) of the Scheme by fishing vessels flying the flag of CPs. While some vessels did not carry on board documents issued by the appropriate authority of the flag State showing information listed in Annex III (Vessel Documents), other vessels did not keep on board up-to-date drawings or description of their fish rooms and refrigerated seawater tanks.

Article 8 - Labeling of frozen fish. Fishing vessels flying the flag of some CPs have not complied with the provision of Article 8 which requires that all frozen fish caught in the Convention Area shall be clearly identified with clearly legible label or stamp, by species, areas of catch, production date and the name of vessel which caught the fish.

Article 9 - Recording of Catch and Fishing Effort. Fishing vessels of one CP had missing mandatory entries in their logbooks in contravention of requirements for logbook recordings under Annex IV of the Scheme (Recording of Catch and Fishing Effort).

Article 11 - Vessel Monitoring System. Fishing vessels of several CPs did not comply with the requirements to communicate VMS mandatory messages to FMCs.

Article 12 - Communication of catches. Fishing vessels of several CPs committed several infringements under the requirement to report catches by electronic means to their respective FMCs, in accordance with the protocols and format under Annex VIII (Communication of Catches, VMS Messages and Reports by Fishing Vessels) of the Scheme.

Article 13 - Communication of Transhipments and of Port of Landing. Several CPs did not comply with requirements concerning the communication of transshipment and port of landing mandatory messages.

Article 14 - Communication to the Secretary. NEAFC Secretariat has pointed out that some CP flag States continued to have FMCs that do not forward reports required under Articles 11, 12 and 13 to the Secretariat, according to the Scheme procedures. In addition, some FMCs have systematic problems, while other FMCs do not operate on weekends. The NEAFC Secretariat has indicated that it was possible that a number of messages disappeared between FMCs and the Secretariat, and vice-versa, but the numbers have to be small. It has also detected a problem in forwarding data to FMCs. When the position of a vessel was on the boundary line between exclusive economic zones (EEZ) and the RA, it happened that for a FMC, such a vessel was in the RA, but when it was received by the Secretariat database it was treated as being in a EEZ and consequently the messages/reports were not forwarded to FMCs with inspectors at sea, and therefore for the inspectors, the messages/reports were missing.

In a report on compliance by CPs with NEAFC recommendations in 2013, the NEAFC Secretariat indicated that a CP inspection platform had reported infringements by 2 CPs to the pelagic redfish (*Sebastes mentella*) fishery regulations in the Irminger Sea and adjacent waters in 2013. In addition, the Secretariat noted that, with respect to the pelagic redfish

(*Sebastes mentella*) in the Irminger Sea and adjacent waters as well as the pelagic redfish (*Sebastes mentella*) in ICES I & II, the main concern continued to be the accuracy of the catch reporting systems, which often show discrepancies in the quantities reported by vessels in the RA in accordance with the requirements of the Scheme and the monthly catch reports under Recommendation 2:2011, despite the fact that the data quality in the pelagic redfish (*Sebastes mentella*) fishery in ICES I & II appeared to be improving.[57]

The Secretariat noted also that no CP had reported any infringement to NEAFC recommendations on pelagic redfish (*Sebastes mentella*) in ICES I & II for 2013, (Recommendation 2:2011); bottom fishing; VMEs; orange roughy (Recommndation 6:2013); basking shark (Recommendation 4:2012); spurdogs (Recommendation 5:2012); porbeagle (Recommendation 6:2012); blue ling seasonal closure (Recommendation 5:2013); Rockhall haddock closed area (Recommendation 3:2013); discard ban (Recommendation 16:2010); and on gill nets ban (Recommendation 3:2006). [58]

4.1.2.3 Comments on this topic by the 2006 Performance Review Panel

In Section 3.3.10.1 of its report, the Panel concluded that the CPs largely fulfill their duties as flag States. They noted that NEAFC in fact had been in the forefront in the use of new technologies for monitoring fisheries. The Panel indicated also that performance could be improved, but given the innovative use of VMS and communications for control purposes some developmental hurdles are to be expected.

Panel Comments

The Panel notes that NEAFC seems to encounter some difficulties in ensuring compliance by CPs with regulations provided under the Scheme, although a number of infringements might have been caused by technical problems. Reports of the Secretariat have shown however that some flag States had systematic and consistent problems in complying with the requirements and tasks assigned to their national FMCs.[59] It is hoped that such repeated technical failures are not indicative or symptomatic of some illegal activities by fishing vessels in the RA. Consequently, NEAFC CPs may wish to consider putting major effort in ensuring compliance by fishing vessels flying their flag and their FMCs with the relevant provisions of the Scheme. They might even wish to establish a NEAFC specific subsidiary organ to follow-up on flag States compliance with their duties under the Scheme. The Panel notes that no matter how comprehensive flag State's duties are provided under the Scheme, they are only as effective as they are thoroughly implemented by all CPs.

[57] Report on Compliance with NEAFC Recommendations by CPs - 2013 produced by the NEAFC Secretariat (Doc. PE 2014-01-21rev1).
[58] Ibid.
[59] Doc. PRP Inf.-14; Compliance and Infringements: A note by the NEAFC Secretariat for the Performance Review Panel.

4.2. Port State Measures

4.2.1 Extent to which NEAFC has adopted measures relating to the exercise of the rights and duties of its Contracting Parties as port States, as reflected in the 2009 FAO Port State Measures Agreement.

NEAFC is recognized as a pioneer in the adoption of port State measures to combat IUU fishing. In fact, NEAFC Port State Control (PSC) system, which has been incorporated in 2006 in the new Scheme of Control and Enforcement has served as a model in the initial development of the FAO Port State Measures Agreement (PSMA).[60] Although many provisions of the NEAFC PSC go well beyond those of FAO PSMA, the NEAFC Commission have nonetheless adopted at its 32nd Annual Meeting in 2013 *Recommendation 09:2014* that amends several provisions of Part V (Port State Control of foreign fishing vessels) and Chapter VII (Measures to promote compliance by non-Contracting Party fishing vessels) of the Scheme in order to align the NEAFC PSC system with the FAO PSMA.[61]

Article 20 - Scope. Provisions of this article are intended to implement Article 3 of the PSMA (Application). They state that the PSC system now applies to "the use of ports" of CPs by foreign fishing vessels with catch on board of fishery resources that were caught in the NEAFC RA, which have not previously landed or transshipped at a port. In addition, the PSC now applies to the whole "catch" on board of foreign fishing vessels.

The new scope of the PSC system introduced by *Recommendation 09:2014* is more comprehensive than the former version under the Scheme, since the scope of port State measures is no longer limited to "landings or transshipments" by foreign fishing vessels, nor limited to "frozen" catch only, but now applies equally to the use of all port services and fresh catch.

Article 20bis - Application of the FAO Agreement on Port State Measures. *Recommendation 09:2014* establishes that the PSMA applies *mutatis mutandis* as minimum standard for the PSC of foreign fishing vessels, and invites CPs to adopt measures consistent with the PSMA and cooperate for its effective implementation.

Article 21 -Designated ports. As a result of changes in Article 20, CPs are required to designate ports where landings or transshipment operations and "provision of port services" are permitted, and to communicate such information or any subsequent change thereon to the NEAFC Secretariat.

[60] The reorganization includes also the merging the Scheme of Control and Enforcement with the NCP Scheme.
[61] Report of the 32nd Annual Meeting of NEAFC (2013), Vol.II, Annex H. A footnote on *Recommendation 09:2014* indicates that application mutatis mutandis the FAO PSMA will be effective only 30 days upon the ratification, acceptance, approval or accession of the FAO PSMA by all NEAFC Contracting Parties. The final report of the 32nd Annual Meeting of NEAFC noted that the Recommendation would enter into force on 1st July 2015.

Article 22 - Prior notice of entry into port. The procedures regulating prior notification of entry into CP ports under Article 22 of the NEAFC PSC generally implement the obligations of the port State under the FAO PSMA. As a minimum standard, Article 8 of the PSMA requested only advance communication of information provided under Annex A of the Agreement. Annex XV of the PSC has incorporated such minimum standard in its PSC Form A-PSC 1 (catch landings) and PSC Form B-PSC 2 (transshipment operations).

In addition, some requirements under the PSC Forms go largely beyond the minimum standard established under the PSMA. For instance, PSC-1 and PSC-2 Control Forms under Part B require the port State to seek confirmation of the legality of catch on board of a foreign fishing vessel to the flag State, following communication by the vessel concerned of relevant information under the prior notice procedure. Such additional information is not included in the PSMA. Article 9 of the PSMA requires the port State to make a decision on denial or authorization of entry into port of a foreign fishing vessel, only on the basis of relevant information received from the vessel.

Furthermore, the requirement for an itemization of the total catch on board of a foreign fishing vessel under the PSC 1 and 2 Control Forms (frozen and fresh products), goes beyond the minimum standard information required under the FAO PSMA, and has therefore the potential to improve the overall effectiveness of the NEAFC PSC system.

Nonetheless, the provisions of Annex XV of the PSC system should have added "gear" specifications among the advance information to be provided under the Control Form A-PSC-1, as this information is among the minimum standard information required under Annex A of the PSMA. Such information would allow the port State to verify in advance as to whether the foreign fishing vessel seeking port entry has complied with the provisions of Articles 7 and 7a of the Scheme. Article 29 (c) of the Scheme identifies the "use of prohibited gear", as a serious infringement.

Article 23 -Landing, transshipment and other use of ports.[62] The provisions of Article 23 of the PSC subjecting landings, transshipments and other use of ports by a foreign fishing vessel to confirmation by the flag State of the information required by the port State under the PSC1 and PSC2 Forms, discharge generally the obligations of the port State contained in the FAO PSMA.[63] The main difference between the PSC and PSMA is in the procedure followed by the port State to authorize landing, transshipment and other uses of ports by foreign fishing vessels.

While the PSMA subjects authorization to land, transship and use other port services upon verifying in ports the legality of catches,[64] the PSC subjects such authorization to advance confirmation by the flag State of the legal status of catches through the PSC-1 and 2 Control

[62] New title of Article 23 under *Recommendation 9:2014*.
[63] FAO PSMA, Art.11.
[64] PSMA, Art.11 (1).

Forms.[65]
Article 23 (4) of the PSC allows the port State to deny landing, transshipment and other use of ports to foreign fishing vessels, if it receives "clear evidence" that the catch on board was taken from illegal fishing activities in areas under the national jurisdiction of a CP. These provisions reflect those of Article 11(1)(c) of the PSMA and improve therefore consistency of the PSC system with the PSMA.

In addition, Article 23 (5) of the PSC system requiring the port State to promptly notify the flag CP of its decision to deny or authorize landing, transshipment and other use of its ports to a foreign fishing vessel, discharges generally port States obligations under the PSMA. In fact, Article 11(3) of the PSMA requires the port State to notify, inter alia, the flag State of foreign fishing vessel, only in case of denial of the use of its port to such vessel.

In the same vein, if the port State decides to deny the use of its ports to a foreign fishing vessel, on the basis of "clear evidence" of violations that took place in areas under the national jurisdiction of a CP, it may be relevant for the port State to promptly notify also such CP, to ensure full consistency with Article 11(3) of the PSMA, which requires notification of "relevant coastal States" under the circumstance referred to in Article 23 (4) of the PSC.

Article 24 - Inspectors. Article 24 stresses that inspections shall be conducted by "authorized Contracting Party officials knowledgeable of Recommendations established under the Convention" and that such inspectors shall have "appropriate identity document". These provisions are in conformity with Article 13 (2) (a) and (b) of the PSMA, which require port State inspectors to be "qualified inspectors authorized for that purpose" and to dispose of "an appropriate document" identifying them as such.

Article 25 - Inspections. Article 25 (1) of the PSC has established that CP port States shall carry out inspections of at least 5% of landings or transshipments of fresh fish and at least 7,5% of frozen fish in ports during each reporting year, on the basis of risk assessments identified in the "General guidelines for risk management in relation to Port State Control" outlined under Annex XVII of the Scheme.[66] Article 23 (2) to (6) provides information on principles that shall guide the conduct of port inspections and Annex XVIII of the Scheme lays down detailed procedures for such inspections. These provisions fully implement the obligations of the port State in respect of in-port inspections as provided under the relevant provisions of the FAO PSMA.

In fact, the PSMA requires the port State to agree only on the minimum levels for inspections of vessels through, the appropriate RFMO and to inspect the number of vessels in its ports required to reach an annual level of inspections sufficient to achieve the objective of the PSMA, on the basis of some risk criteria identified in the Agreement. It leaves therefore to

[65] PSC, Art.23 (1).
[66] Article 25 of the PSC provided for a minimum inspection level of 15% of frozen fish before the adoption *Recommendation 09:2014*. Under the new Article 25, the current minimum levels for inspections shall be reviewed three years after entry into force of the provision, or earlier if a CP so requests.

the port State or the RFMO concerned the task of determining the actual percentage level of such inspections, in accordance with the objective of such port State or RFMO.[67]

Article 26 - Obligations of the master of the vessel. Article 26 refers to Article 19 of the Scheme on the duties of the master of a fishing vessel subject to inspections at-sea. By referring to Article 19, these provisions establish the right of the port State under the PSC system to require the full cooperation and assistance of the master of an inspected foreign fishing vessel with the port State inspectors during in-port inspections, in the same way as vessel masters have the obligation to assist and cooperate with inspectors during inspections at sea. These provisions are consistent with Article 13 (2) (d) of the PSMA, which requires full cooperation of the master of an inspected vessel with inspectors during port State inspections.

Article 27 - Inspection reports. The provisions of Article 27 on inspection reports as well the information required in the "Port Inspection Forms" (PSC-3) under Annex XVI of the PSC improve harmonization of NEAFC PSC system with minimum requirements set out in Annex C of the FAO PSMA. However, in order to achieve full consistency with Annex C of the PSMA, Annex XVI should require additional information in the PSC-3 form. Firstly, the form should indicate as to whether the foreign fishing vessel has complied or not with the "Prior notice of entry into port" in accordance with Article 22 of the PSC. Secondly, the form should include a provision that allows port State inspectors to verify the fishing authorization of the foreign fishing vessel for the RA, pursuant to Article 4 of the Scheme.

With respect to PSC of NCPs**,** *Recommendation 09:2014* indicates that the provisions of the FAO PSMA shall also apply *mutatis mutandis* as a minimum standard for the PSC of NCPs, in addition to other provisions of the Scheme aimed at promoting compliance by NCP vessels.[68]

Article 39- Entry into port. Article 39 of the Scheme subjects NCP fishing vessels to the same obligation of prior notification as CP fishing vessels, in accordance with the provisions of Article 22. Information required from NCP vessels is therefore similar to the information required from CPs vessels under the PSC1 and PSC2 forms of the NEAFC PSC system.

One major difference is that the port State is required to inform also "relevant" CPs, in addition to the forwarding of the NCP vessel's request to its flag State and to the Secretariat, which shall post this information on the NEAFC website.[69]

In addition, failure to abide with the prior notification procedure entails a prohibition of entry into port of the NCP vessel concerned. Inclusion of the NCP vessel into the NEAFC IUU B

[67] PSMA, Art.12.
[68] Art. 38bis, Chapter VII of the Scheme - Measures to promote compliance by non-Contracting Party fishing vessels.
[69] PSC, Art.39 (1).

list prohibits also its entry into ports of NEAFC CPs.[70] Prohibition to enter ports shall be communicated to the master of the vessel, the flag State, the relevant CPs and the Secretariat, which shall put this information on the NEAFC website.[71]

It should be noted that Article 9 (5) of the PSMA provides that despite the existence of substantial evidence for denying a fishing vessel port entry, the port State may find it more effective to allow such vessel to enter into its port "exclusively for the purpose of inspecting it and taking other appropriate actions in conformity with international law which are at least as effective as denial of port entry in preventing, deterring and eliminating IUU fishing and fishing related activities in support of such fishing."

Article 40 - Inspection in port. Article 40 provides that all NCP vessels in port shall be inspected and shall not be allowed to land or transship until inspections have taken place. A vessel that has failed port State inspections is assumed to have engaged in IUU fishing. The results of inspections shall be posted on NEAFC website and copies of the inspection reports shall be transmitted to the flag State of the vessel.

The provisions of Article 40 establish a major distinction in treatment between CPs and NCPs in relation to the operation of the NEAFC PSC. If, on the one hand, CP vessels are selectively inspected in ports on the basis of risk assessment management criteria set out in the PSC system,[72] all NCP vessels, on the other hand, are systematically inspected in ports of NEAFC CPs, in accordance with Article 40 (1) of the PSC system. This difference in treatment should probably be understood within the context of the NEAFC fight against IUU fishing.

Article 41 - Landings, transshipments and use of port. Article 41 establishes all the circumstances that justify the denial of landings, transshipments and use of ports to a NCP fishing vessel by a CP. In case of such denial by a CP, a NCP vessel shall be prohibited from transshipping in areas under the national jurisdiction of CPs. The CP concerned shall communicate its decision to the master of the vessel and to the NEAFC Secretariat. The Secretariat has in turn the obligation to notify the flag State of the vessel and all CPs. It shall also post the information on the NEAFC website.

The CP has the obligation to withdraw its denial of the use of its port to a NCP vessel, if such denial is based on insufficient proof, or is groundless. It has also the obligation to inform the master of the vessel concerned, its flag State and the Secretariat, which shall put this information on the NEAFC website.

The provisions of Article 41 of the PSC are in conformity with Articles 11 (Use of ports) and

[70] Ibid., Art.45 (2) (a).
[71] Ibid., Art.39 (3).
[72] The "General guidelines for risk management in relation to Port State Control" in Annex XVII of the PSC system set out the criteria in-port inspections.

18 (Port State actions following inspections) of the PSMA.

Article 42. Notification of presumed IUU activities. Article 42(1) requires the NEAFC Secretariat to circulate to all CPs, relevant RFMOs and the flag State of the NCP fishing vessel information of presumed IUU fishing activities in the Convention area. These provisions provide harmonization with Articles 15 and 18 (1) (a) of the PSMA dealing with transmittal of inspection results, following port State inspections.

4.2.1.2 Comments on this topic by the 2006 Performance Review Panel

This topic was not addressed by the report of the Panel in view the fact that the FAO PSMA was adopted in 2009 and harmonization of the NEAFC PSC with that Agreement began in 2012. However, comments on the implementation of port State obligations under the NCP Scheme and UNFSA Article 23 that were included in the mandate of the 2006 Performance Review Panel are referred to under Sect. 4.2.2.3 below.

Panel comments

The Panel notes that NEAFC has adopted measures relating to the exercise of the rights and duties of CPs as port States, as reflected in the PSMA adopted by the FAO in 2009. In several instances, the NEAFC PSC system even goes beyond the minimum standard established under the FAO PSMA. Furthermore, the adoption of *Recommendation 09:2014* which mandates harmonization of the provisions of PSC with those of the PSMA and requires a *mutatis mutandis* application of the provisions of the PSMA, has ensured full consistency of the NEAFC PSC with the FAO PSMA. Recommendation 09:2014 will enter into force on 1 July 2015.

With particular reference to inspections, the NEAFC revised PSC system now requires inspections of frozen and fresh fish. It also provides that the annual minimum levels of landing or transshipment inspections shall be fixed at 5% for fresh fish and 7,5% for frozen fish on the basis of risk assessments identified by the PSC system (Annex XVII). Pursuant to Article 25(1) of the new PSC, NEAFC CPs shall review these minimum levels of inspections three years after the entry into force of the PSC system, or earlier if a CP so requests. Previous PSC system required CPs to carry out annual inspections of at least 15% of landings or transshipments of frozen catch only in their ports.[73] It did not provide either guidelines for risk management in relation to PSC.

The Panel suggests that in line with its recommendations regarding flag State duties, NEAFC may wish to include in Chapter V of the Scheme on PSC of foreign fishing vessels or in the text of the NEAFC Convention, a provision that affirms the principle of port State duties.

[73] The previous PSC of foreign fishing vessels did not provide for general guidelines for risk management in relation to port State control.

Referring to best practices of RFMOs, statements of port State duties are provided in the convention texts of NAFO,[74] SEAFO,[75] SPRFMO[76] and WCPFC.[77]

4.2.2 Extent to which these measures are effectively implemented.

A note by the NEAFC Secretariat indicates that the PSC system became operational in 2007. Statistics on the use of the PSC system have shown that from 2008 to 2013, over a thousand of landings was subject to NEAFC PSC every year, with over 200 vessels using the system in most years. The trend is for fewer users and fewer total landing in the system over time. The PSC system was further improved in 2012, by the Annual Meeting of the NEAFC Commission, which decided to use only electronic forms for the PSC, from 15 January 2013. The fax-based system will be maintained as a back-up system for when the NEAFC website is offline .[78]

In an evaluation of the overall implementation of the PSC, the 2013 PECCOE final report noted that CPs have agreed that the PSC system shall not apply to landings by a NCP vessel of fish products processed by another NCP in areas under the national jurisdiction of a CP port State, in cases where the catches were originally made by fishing vessels of the CP port State in its own EEZ.

It was also agreed that PECCOE would address at future meetings the concern expressed by another CP that a loophole might exist in the PSC system. This loophole would allow a vessel to avoid NEAFC PSC system by going to ports outside the Convention Area. In that particular case, it would have no legal obligation to use the system. Consequently, a vessel, which would not want its catches to be subjected to the PSC system, could legally avoid it in that manner. One of the solutions that might be looked at in this context would be to invite CNCPs to designate ports in the PSC system.[79]

It was further pointed that "Port of landing" (POR) report had to be submitted for catches taken in the RA, even if catches were landed outside the Convention Area, as a result of an amendment made to the Scheme in 2012. Nonetheless, a loophole might still exist, since this requirement does not apply to catches made by a foreign fishing vessel in areas under national jurisdiction in the Convention Area.[80]

In addition, several documents issued at the 2013 meetings of PECCOE provided relevant

[74] NAFO Convention, Art.XII.
[75] SEAFO Convention, Art.15.
[76] SPRFMO Convention, Art.26.
[77] WCPFC Convention, Art.27.
[78] Doc. PRP Inf.-12, Port State Control: A note by the NEAFC Secretariat for the Performance Review Panel; See also the Report of the 31st Annual Meeting of the NEAFC Commission, 12-16 November 2012, p.9.
[79] Report of the Permanent Committee on Control and Enforcement (PECCOE), 30 September - 1 October and 11 November 2013, London (Doc. AM 2013-51); See also Doc. 2013-02-32: Port State Control Questions from Denmark (Faroe Islands, Greenland).
[80] Norway, Report of the PECCOE, op.cit.

information on the implementation of the NEAFC PSC. All the CPs reported that they have adopted legislation implementing the NEAFC Scheme, including the PSC provisions of the Scheme.[81]

A Summary of PSC landings authorized in 2012 indicated uneven inspection levels of landings and transshipments of foreign fishing vessels by CPs. Inspection levels range from 8% to 24%.[82] Another Summary of PSC authorized landings covering the period from January to 31 August 2013, puts the range of inspected catch levels between 6% and 17 %.[83] While one CP recognized that its overall inspection level in 2012 had been below the level stipulated in the PSC, another CP stated that its overall inspection level should be slightly higher than the numbers shown in the 2012 evaluation report.[84]

A report by the NEAFC Secretariat on the implementation of the electronic PSC (EPSC) forms since January 2013 pointed out that experience on the implementation of the EPSC has been generally positive. Landing forms have been circulated as before with no major problems and greater use of the system has identified some issues that have been improved, while other previously identified issues remained.[85]

In this respect, the report indicated that the main problem encountered in the use of the system relates to cancellations. It has been noted that the cancellation policy in the Scheme applies only to a paper-based system and was not appropriate for EPSC application and that generally there was a lack of provision for cancellation in the system.[86]

In addition, the Secretariat pointed out that some CPs have designated ports and competent authorities for the purpose of Articles 22 and 23 of the PSC, but they have never assigned individual officials to be part of the web-based procedures to authorize landings.[87] This would mean that there were now ports designated under the NEAFC PSC system, and publically listed as such that are however unable to process landing forms.[88]

4.2.2.3 Comments on this topic by the 2006 Performance Review Panel

The Panel noted that relevant global instruments do not go far enough or are too theoretical. But the NEAFC Scheme and the NCP have succeeded in implementing them adequately. The Panel then referred to important role played by the NEAFC PSC at that time in the fight

[81] EU, Doc. PE 2013-01-11; Iceland, Doc. PE 2013-01-31; Norway, Doc. PE 2013-01-42; Faroe Islands, Doc. PE 2013-01-46; Russian Federation, Doc. PE 2013-01-51; Greenland, PE 2013-01-58.
[82] Doc. PE 2013-01-43; Denmark (Faroe Islands and Greenland): 8%; EU: 14%; Iceland: 24%; Norway: 15%. No landings were recorded in Russian Federation ports during the period.
[83] Doc. PE 2013/02/37; Denmark (Faroe Islands and Greenland): 6%; EU: 12%; Iceland: 17%; Norway: 10%. No landings were recorded in Russian Federation ports during the period.
[84] Report of the Permanent Committee on Control and Enforcement (PECCOE), 16-17 April 2013, Doc. AM 2013-09, para. 4.2.1.
[85] Doc. PE 2013-01-44, op.cit.
[86] Ibid.
[87] Doc. PE 2013-02-39, op.cit.
[88] Doc. PE 2013-01-44, op. cit.

against IUU fishing. They referred to the establishment of "A" and "B" lists, and the closure of ports to the IUU "B" vessel lists. The Panel further noted that the NEAFC port State control provisions were already beyond the measures laid down in the FAO Model Scheme. For the panel, these actions demonstrated that NEAFC could act quickly to address specific issues and respond to unfolding events.

Panel comments

Implementation of the PSC system seems to be running smoothly despite some reported technical problems caused by the migration from paper-based PSC procedures to e-PSC form procedures.

4.3. Monitoring, control and surveillance (MCS)

4.3.1 Extent to which NEAFC has adopted integrated MCS measures (e.g. required use of boarding and inspection schemes, VMS, observers, catch documentation and /or trade tracking schemes, and restrictions on transshipment).

Fisheries Monitoring, Control and Surveillance (MCS) are broadly defined by FAO as follows: (i) monitoring is the continuous requirement for the measurement of fishing effort characteristics and resource yields; (ii) control is the regulatory conditions under which the exploitation of the resource may be conducted and (iii) surveillance is the degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities.[89] MCS is a key component of the fisheries management process, as the mechanism for implementing agreed policies and plans or strategies for fisheries management. Absence of MCS makes fisheries management scheme incomplete and ineffective.[90]

Effective MCS involves a two-pronged, parallel approach, relying on both prevention and deterrence. The preventive approach encourages voluntary compliance with the management strategies. The parallel approach of deterrent/enforcement MCS is aimed at ensuring compliance by fishers who resist adhering to the regulatory regime and includes inspection, investigation and court proceedings to enforce the law. MCS key tools should include the following: an appropriate participatory management plan; enforceable legislation and control mechanisms; data collection systems - dockside monitoring; observer programmes; sea and port inspections; supporting communications systems; patrol vessels capable of extended operations to remain at sea with the fishing fleets; aircraft available for rapid deployment to efficiently search large areas; use of new technology (VMS, satellite, video, infra-red tracking, etc.); linked land-based monitoring; support of the industry and fishers; bilateral, subregional and regional cooperation with other MCS components; and professional staff. The land component of a MCS system serves as the base of operations, the coordinating

[89] FAO Expert Consultation on Monitoring, Control and Surveillance Systems for Fisheries Management, Rome, 27-30 April 1981.
[90] http://www.fao.org/fishery/topic/3021/en

centre for all MCS activities, and entails port inspections, dockside monitoring, and the monitoring of transshipments and trade in fish products. [91]

Recent developments in MCS have seen the growing influence of VMS. The introduction of a very reliable satellite communications systems and the complementary development of Global Positioning Systems (GPS) has enabled fishing vessels to automatically report their positions to management authorities at predetermined intervals or when requested. These technologies are now being increasingly used by scientists and managers to obtain real time information from fishing vessels on supplementary data (catch reporting, fishing activities, analysis of catch, etc.) and form part of what is termed as Integrated Fisheries Management (IFM).[92]

MCS under the Scheme of Control and Enforcement

The Scheme provides the legal framework for regulating the conduct of the fishing activities of CPs and CNCPs in the RA. It implements an integrated MCS that combines traditional means of control, monitoring and surveillance (fishing authorizations, transshipment authorizations, logbook, catch reporting, surveillance platforms, at-sea inspections, port State control) with the use of modern technology such as satellite VMS. These MCS measures are as follows:

Vessel Monitoring System (VMS). Article 11 of the Scheme requires fishing vessels over 24 metres OA (or over 20 metres between perpendiculars - PP), which fish or plan to fish, to carry devices able to automatically transmit position data, known as a vessel monitoring system (VMS). It determines the minimum technical specifications and accuracy of the VMS and mandates all CPs to operate FMCs for the purposes of receiving and forwarding the required data through the VMS,[93] in accordance with Annex VII of the Scheme. Article 11 specifies that the coding, procedures and message syntax should be in accordance with Annex VIII of the Scheme and provides specific procedures to be followed in cases of temporary malfunction of the device.

Following the adoption of *Recommendation 11:2014*, mandatory data messages to be sent to CP FMCs under Article 11 (1) (b) now includes "the speed and course" of the fishing vessel at the time of fixing of the position of such vessel. In addition, communication of data messages under Article 11 (1) (b) from fishing vessels with defective VMS tracking device has been amended from daily to "at least every 4 hours" reporting. Finally, CPs are under obligation to implement, on the one hand, an automatic system able to monitor and detect bottom fishing outside existing bottom fishing areas and bottom fishing activities inside closed areas, and to ensure, on the other hand, that delimitations of existing closed areas are installed in their fishing vessels' VMS.

[91] Ibid.
[92] Ibid.
[93] Article 11 (b) requires the following data: vessel identification, the most recent geographical position of the fishing vessel and the time and fixing of such position, and data on catch on board and transhipment.

Restrictions on transshipment. The Scheme has provisions that restrict transshipments in the RA. Article 4 (2) prohibits a CP fishing vessel from engaging, inter alia, in transshipment operations with a NCP fishing vessels, the flag State of which has not been granted the status of CNCP. Article 4(3) prohibits also a fishing vessel engaged in transshipment operations that on-loads fish on board from carrying out other fishing activities during the same trip.

In addition, Article 13 establishes the obligation for fishing vessels transshipping regulated resources to provide "Transshipment" reports (TRA) to their respective FMCs, in accordance with specifications set out in Annexes VII and VIII of the Scheme. The receiving vessel has the additional obligation to transmit a "Port of Landing" report (POR) at least 24 hours in advance of entry into a port, whether such a port is within or not of the Convention Area.

Required boarding and inspection schemes. Chapter IV of the Scheme provides the legal framework for at - sea inspections and boarding by NEAFC inspectors of CP fishing vessels conducting fishing activities in the RA.

Article 15 stipulates that inspectors assigned to the Scheme and identified as such with special documentation issued by CPs that have assigned them, shall carry out control and surveillance.[94] A CP is under obligation to accept that NEAFC inspectors from another CP is allowed to carry out inspection duties on vessels flying its flag. A CP shall ensure that the fishing vessel's master cooperates with the inspectors and guarantees their safety during inspections. Inspectors shall distribute equitably the inspection effort on vessels of different CPs, based on fleet size and time spent in the RA. Inspectors shall not carry fire-arms and avoid interfering with fishing operations without limiting their inspection capability.

Article 16 establishes the obligation for CPs to notify annually to the Secretariat their inspectors and inspection platforms assigned to NEAFC and the responsibility for the NEAFC Secretariat to circulate such notifications to all CPs. Inspection platforms and boarding crafts shall also display a NEAFC inspection signal, in accordance with Annex XI of the Scheme.[95] In addition, CPs shall keep time records of their inspection activities under the Scheme and shall transmit to the NEAFC Secretariat their "Surveillance Entry" (SEN) and "Surveillance Exit" (SEX) reports, in accordance with Annex X of the Scheme.[96] Finally, CPs are under the obligation to have inspection presence in the RA whenever they have more than 10 vessels conducting fishing activities in the RA.

Article 17 provides that surveillance procedures are based on the sighting of fishing vessels by assigned inspectors from inspection platforms in the RA. Record of such sightings shall be kept by the inspecting CP, while a copy of the "Observation" report (OBS) shall be transmitted to the fishing vessel's flag State and the NEAFC Secretariat, in accordance with

[94] Annex XI B) of the Scheme provides a format of the NEAFC inspector identity card.
[95] Annex XI A) provides the format of the inspection pennants.
[96] Annex X a) and Annex X b) set out the format for the Report of entry of surveillance craft in the RA and the Report of exit of surveillance craft from the RA respectively.

Annex XII. The Secretariat shall circulate such report to other inspection platforms present in the RA.

Article 18 regulates the inspection procedures in the RA, including prior radio contact with fishing vessel master; the maximum duration of 4 hours for the conduct of an inspection; the obligation for the inspecting CP to produce an inspection report in accordance with Annex XIII, and the obligation to forward a copy of such report to the inspected fishing vessel's flag State and to the NEAFC Secretariat.

Article 19 establishes the obligation of the fishing vessel's master during the course of inspections, including the obligation to facilitate inspectors' boarding by providing a boarding ladder, the specifications of which are set out in Annex XIV; the obligation to ensure the safety of inspectors; the obligation to cooperate with inspectors and to assist in the inspection, including by granting access to documents, areas and equipment of the vessel that may be considered relevant by inspectors. In addition, the fishing vessel's master shall facilitate radio or telecommunication access of inspectors with the inspecting CP and the inspected vessel's flag State.

With respect to boarding and inspection procedures for NCP fishing vessels, the Scheme provides that NEAFC inspectors are under the obligation to request permission to the vessel's master before boarding and inspecting a NCP fishing vessel sighted to have been engaging in fishing activities in the Convention Area. Following an inspection, a report shall be established by inspectors, in accordance with the format set out in Annex XIII. A copy of such report shall be forwarded to the NEAFC Secretariat while another copy shall be provided to the vessel’s master. The Secretariat has the obligation to send a copy of the inspection report to the flag State of the inspected vessel. Where evidence so warrants, a CP may consider appropriate action under its domestic law to exercise jurisdiction over the vessel, in accordance with international law.

A NCP fishing vessel, which refuses to be boarded and inspected shall be presumed to be engaged in illegal, unreported and unregulated (IUU) fishing activities.[97]

Catch documentation and/or trade tracking schemes. The NEAFC Scheme does not provide for catch documentation and/or trade tracking schemes.

Observers. The NEAFC Scheme does not implement a national or regional observer programme.

4.3.1.2 Comments on this topic by the 2006 Performance Review Panel

This topic was not specifically addressed by the report of the Panel. The Panel's comments on the implementation of the NEAFC MCS are referred to under Section 4.3.2.3 below.

[97] The Scheme, Article 38.

Panel comments

International instruments dealing with the conservation and management of marine living resources (MLRs) recognize the adverse impact of unsustainable fishing practices on the overall conservation, management and sustainable use of high seas fishery resources. They have all therefore encouraged States to, inter alia, develop cooperative MCS mechanisms at the sub regional/or regional level to address such practices.[98]

Among these instruments, the UNFSA stands as the global instrument that has elaborated a legal framework for implementing a cooperative scheme between State Parties for the purpose of monitoring and enforcing high seas conservation and management measures for straddling fish stocks and highly migratory fish stocks, including those adopted by relevant RFMO/As in their RAs. In addition to the implementation of measures such as, sub regionally, regionally, or globally agreed VMS,[99] regional observer programmes,[100] regulations on transshipments,[101] measures to deter fishing activities of NCPs in the RA of a RFMO/A,[102] UNFSA has established a boarding and inspection scheme that introduces a unique and far-reaching exception to the flag State's exclusive jurisdiction on the high seas.[103] UNFSA MCS, including its boarding and inspection scheme has now become the legal basis for new approaches to MCS that are being implemented by modernized RFMO/As as well as new established RFMOs.

In light of the above, the Panel notes that NEAFC Scheme has adopted integrated MCS measures to control and monitor fishing activities as well as to enforce conservation and management measures in the RA. They are generally consistent with the relevant provisions of UNFSA.

However, some components of modern MCS tools seem to be missing in the NEAFC Scheme. The Panel notes that the Scheme does not provide for the implementation a regional observer programme, or catch documentation and/or trade tracking schemes, as additional MCS tools to ensure compliance with NEAFC conservation and management measures.

With particular reference to regional observer coverage, the CPs may wish to contemplate implementation of such a programme in the RA. An onboard observer coverage may be particularly relevant in light of the adoption in 2006 of amendments to

[98] UNFSA, Part VI; FAO Compliance Agreement, Art.V (3); FAO Code of Conduct for Responsible Fisheries, Paras.7.7.3; FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), paras.28 - 31 and 78 - 82.4.
[99] UNFSA, Art.18 (3) (g) (iii).
[100] Ibid., Art.18 (3) (g) (ii).
[101] Ibid. Art.18 (3) (h).
[102] Ibid., Art.17 (4).
[103] Ibid., Art.21

some key provisions of the NEAFC Convention. These new provisions now require fisheries conservation and management measures to take due account of the impact of fishing activities on other species and marine ecosystems and to minimize harmful impacts of such measures on MLRs and marine ecosystems, as well as the need to conserve marine biodiversity.[104] Importance of observer coverage has already been emphasized in the Panel Comments under Sections 3.5.7 and 4.1 of this report.

For these purposes, onboard observers would be useful in contributing, inter alia, to the collection of scientific data on non-target species, by-catches and discards, as well as to the monitoring of bottom fisheries and their possible impacts on VMEs. Onboard observers could also be used to monitor at-sea transshipments and enforce ban on discards. For cost-effectiveness, an onboard observer may serve both as a scientific and compliance observer, although opinions diverge as to whether combining the two functions may lead or not into compromising the effectiveness of either function. It should be noted that IATTC[105] and NAFO[106] maintain observer programmes in their respective RAs. Post-UNFSA RFMOs such as SEAFO,[107] SPRFMO[108] and WCPFC[109] run also regional observer programmes.

With respect to NEAFC procedures for boarding and inspection of NCPs' fishing vessels under Article 38 of the Scheme, NEAFC inspectors should be aware of the fact that procedures in force for boarding and inspection of CPs' fishing vessels under Articles 18 and 19 of the Scheme are fully applicable to NCPs' fishing vessels, if the flag States of these vessels are parties to UNFSA. Consequently, NEAFC inspectors are not required to request permission to board and inspect such vessels in the NEAFC RA, pursuant to Article 21 (1) of UNFSA.

As to trade-tracking schemes, UNFSA does not refer specifically to trade-tracking schemes, such as catch documentation scheme (CDS) or trade-certification schemes, although the FAO IPOA particularly encourages such tools in the fight against IUU fishing.[110] However, introduction of such schemes may not be currently necessary in the NEAFC RA, in view of the success of the Scheme in combating IUU fishing.

4.3.2 Extent to which these measures are effectively implemented.

In a document presented to PECCOE in 2013, the NEAFC Secretariat provided a thorough

[104] NEAFC Convention, Art.4 (c) (d); Declaration on the Interpretation and Implementation of the Convention on the Future Multilateral Cooperation in North-East Atlantic Fisheries, para.2 (b) (d).
[105] IATTC Antigua Convention, Art.XVIII (4) (a).
[106] See http://www.nafo.int/; The objective of the observer programme is to improve and maintain compliance with the conservation and management measures for the vessels fishing in the RA. All fishing vessels are required to carry at least one observer at all times while fishing in the RA.
[107] SEAFO Convention, Art.16 (3) (c).
[108] SPRFMO Convention, Art.28.
[109] See http://www.wcpfc.int/regional-observer-programme
[110] International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, para.69, ftp://ftp.fao.org/docrep/fao/012/y1224e/y1224e00.pdf

report on compliance by CPs with the Scheme in 2012.[111] With reference to inspections at sea, the Secretariat indicated that notification of inspectors and inspection platforms were done normally by CPs in the beginning of each year and no problems were detected in 2012. Surveillance entry (SEN) and surveillance exit (SEX) reports were also received without major problems. One CP FMC was reported to have experienced some technical problems, but such problems were eventually solved.

Pursuant to Article 16 (5) of the Scheme, CPs are under the obligation to have inspection presence in the RA whenever they have more than 10 vessels conducting fishing activities in the RA. However, the annual report of CPs to the NEAFC Secretariat under Article 32 seems to indicate that not all CPs have been fully compliant with these requirements. NEAFC Secretariat noted that the effort put by CPs into at-sea inspections varied, and was not always consistent with the rule regarding the obligation to have ten active vessels.[112] In that connection, the 2013 report of PECCOE indicated that one CP had the largest inspection presence in the RA in 2012, while two CPs had no inspection presence in the RA during the reporting period.[113]

NEAFC Secretariat has also reported that some CP inspection platforms did not respect the provisions of Article 17 on surveillance procedures as transmittals of sightings to the Secretariat were not always in conformity with requirements contained in the "Observation" report (OBS) set out under Annex XII of the Scheme. In addition, the Secretariat noted that despite infringements being linked to vessels, inspectors reported that vessels' operators had fulfilled their responsibilities and that catch reports (COE, CAT, COX) were transmitted to FMCs, in accordance with the relevant provisions of the Scheme and other specific recommendations.[114]

4.3.2.3 Comments on this topic by the 2006 Performance Review Panel

The Panel noted that NEAFC had been quite ambitious in the use of new technologies. In this respect, it drew attention on the need to ensure quality control in the implementation of NEAFC MCS tools, such as VMS. In that regard, the Panel recommended that VMS entry and exit messages should be cross-checked and VMS transshipment messages should be systematically checked for discrepancy between donor and receiver reports. Despite some shortcomings, the Panel was of the view that these new technologies provide a good basis for developing a new framework for the future, although they were currently underutilized.

Concerning NEAFC inspection activities, the Panel noted that there was room for improvement in the coordination and deployment of inspection presence by CPs in the RA. It

[111] Doc. PE 2013/02-39, op.cit.
[112] Doc. PRP Inf.-14., op.cit, p.1; Doc. PRP Inf. 14, Annex 2: Statistics of surveillance effort by NEAFC Contracting Parties 2006-2012.
[113] Report of the Permanent Committee on Control and Enforcement (PECCOE), 16-17 April 2013 (Doc. AM 2013-09), Sect. 4.1.2.
[114] OBS received with syntax/construction problems were rejected; OBS received with OS bigger than "999" were rejected; OBS received without mandatory fields AI, OS were rejected; Doc. PE 2013/02-39, op.cit.

was of the view that such burden was not shared equitably by all CPs, in violation of the relevant provisions of the Scheme. The Panel noted also that NEAFC NCP Scheme through the introduction of first "B" list has taken a leading role in curbing IUU fishing activities. It emphasized that the effectiveness of the NCP Scheme also depended on a close cooperation between CPs and the Secretariat in "real time". The Panel suggested that the effectiveness of the measures to combat IUU fishing could be strengthened through the future reciprocal recognition of IUU lists between NAFO and NEAFC, expected to come into effect from 2007.

Panel comments

NEAFC MCS appears to have been effective in abating IUU fishing activities by NCPs in the Convention Area. NEAFC Secretariat has noted that during the period 2006-2012, there had been a significant decrease in NCP IUU fishing activities in the RA.[115] In fact, no CP that carried out surveillance and inspection in 2012 had reported any sighting of NCP fishing vessels in the RA during that year.[116] In that respect, NEAFC cooperation in enforcement has proven to be effective in the fight against IUU fishing and should serve as a model to other RFMO/As beset by such activities.

While NCP IUU fishing is no longer a major issue for NEAFC, reports of inspections at sea have now shifted the focus on infringements by CPs in the RA, including serious infringements listed under Article 29 of the Scheme.[117] The annual reports of CPs covering the period 2006-2012 seem to indicate that compliance control and enforcement could be areas that need improvement since the proportion of inspections where infractions were detected were between 5 and 18% in 2006-2012.[118] CP flag States have the obligation to ensure compliance by their fishing vessels with measures adopted for the RA, so that NEAFC can effectively "perform its functions in order to fulfill the objective [of the Convention] set out in Article 2".[119]

One of the main criteria for assessing flag State performance lies in the ability or willingness of the State concerned to exercise effectively its jurisdiction and control over vessels flying its flag and to take effective action against non-compliance by such vessels.[120]

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[115] Doc. PRP Inf. - 19, Non-Contracting Parties: A note by the NEAFC Secretariat for the Performance Review Panel, pp.3-5.
[116] See docs. PE 2013-01-04 (Iceland); PE 2013-01-06 (Greenland); PE 2013-01-09 (EU); PE 2013-01-12 (Norway); PE 2013-01-24 (Faroe Islands).
[117] Doc. PRP Inf.-14, Annex 1: Statistics of infringements of the NEAFC Scheme by NEAFC Contracting Parties in 2006-2012; Annex 3: Infringements reported by the NEAFC Contracting Parties in 2006-2013; Doc. PE 2013/02-39, op.cit.
[118] Doc. PRP Inf.-14.
[119] North East Atlantic Fisheries Commission "New" Convention (NEAFC), Art.4. Article 2 stipulates that the objective of the Convention is to ensure the long-term conservation and optimum utilization of the fishery resources in the Convention Area, as providing sustainable economic, environmental and social benefits.
[120] FAO Voluntary Guidelines for Flag State Performance, par.2 (d)(g); ftp://ftp.fao.org/FI/DOCUMENT/tc-fsp/2013/VolGuidelines_adopted.pdf

As previously indicated, no matter how outstanding the Scheme is, it is only as effective as all the CPs abide by its relevant provisions, including the obligation to abide by the requirement to have inspection platforms in the RA, particularly in the circumstance specified under Article 16 (5) of the Scheme; the obligation for all CP vessels to abide by all fisheries regulations applicable in the RA; the obligation to implement established procedures for surveillance and inspections; and the obligation for inspection platforms to enforce all regulations in force in the RA against all fishing vessels.

4.4. Follow-up on infringements.

4.4.1 Extent to which NEAFC and its Contracting Parties follow-up on infringements to conservation and management measures.

Article 31 of the Scheme establishes the obligation for the CP of an inspected fishing vessel to take administrative or criminal measures, in accordance with its national legislation against natural or legal persons found to have violated NEAFC conservation and management measures. It stresses that sanctions shall be capable of effectively depriving those responsible of the economic benefit resulting from the infringements or proportionate to the seriousness of such infringements, with a view to discouraging future violations. Furthermore, pursuant to Article 33, CPs have the obligation to report annually to the Secretariat on the status of proceedings taken by them on infringements to NEAFC conservation and management measures committed by fishing vessels flying their flag in the RA.

An overview of infringement follow-up from the period 2006-2012 by the NEAFC Secretariat indicates that sanctions imposed on culprits varied generally from written warnings to "significant" pecuniary penalties. A significant number of cases were dismissed because investigations concluded that vessels' operators had fulfilled their obligations, but it was their flag State authorities that failed to comply with operational procedures. In addition, due to different legal systems and procedures in various flag States, the time lapse between the infringement detection and the conclusion of proceedings varies from several months to more than 3 years.[121]

In the Annual Report of CPs on Surveillance Activities in the RA for 2012, some CPs indicated that the conclusion of proceedings on some infringements were still "pending",[122] "under investigation",[123] or were subject to "written warning".[124] Other CPs reported that they had imposed fines to fishing vessel operators who contravened to NEAFC fisheries regulations.[125] PECCOE has reminded CPs that it was the obligation of flag States to continue

[121] Doc. PRP Inf.- 14, op.cit.
[122] Doc. PE 2013-01-06 (Greenland); Doc. PE 2013-01-09 (EU).
[123] Doc. PE 2013-01-09 op.cit.
[124] Doc. PE 2013-01-30 (Russian Federation).
[125] Doc. PE 2013-01-09, op.cit.

reporting on infringements by their vessels until the relevant cases have been concluded.[126]

4.4.1.2 Comments on this topic by the 2006 Performance Review Panel

This topic was not specifically addressed by the Panel. It should be noted however that the Panel's Comments under Sect. 3.3.12 of its report regarding the implementation of the NEAFC Scheme of Control and Enforcement noted, inter alia, that "*The compliance of Contracting Parties, and follow up on the results of inspections and reported infringements is reviewed by the NEAFC PECCOE every year and reported to the NEAFC Commission Annual Meeting. The (mainly) clean fisheries, and limited number of regulations (in practical terms there are no gear regulations) limits the number of reported infringements*."

Panel comments

The Panel notes that the Scheme establishes a classification in the violations of NEAFC conservation and management measures by distinguishing between infringements and "serious" infringements. A list of serious infringements is provided in Article 29 of the Scheme. One could then expect that the establishment of a scale in the seriousness of infractions should have translated into a similar classification in the imposition of sanctions under the respective national legislations of CPs. However, a review of sanctions imposed by CPs to fishing vessels flying their flag that had committed infringements or serious infringements in the RA during the period 2006-2012 do not seem to reflect such classification in the imposition of penalties.

Of CPs that reported on measures they have been taking against masters and other officers of fishing vessels flying their flag who committed serious infringements under Article 29, none had imposed sanctions that included, *inter alia*, refusal, withdrawal or suspension of authorizations to serve as masters or officers for perpetrators, or cancellation of authorization to fish on the high seas against incriminated fishing vessels. With the exception of 2 vessels deleted from the Registers of Shipping of their respective flag States for serious infringements, no other severe penalties were recorded during the reporting period, irrespective of the seriousness of infringements.[127]

The Panel thus further notes that despite the standard set by Article 31 (2) of the Scheme, the sanctions imposed by most CPs against their vessels in cases of demonstrated violations were not severe enough to discourage future violations, and deprive offenders of benefits accruing from their illegal activities. In addition, CP reporting on the follow-up of infringements covering the period 2006-2012 often shows a time lapse between the committing of the infringements and the conclusion of enforcement actions, and does not seem therefore to meet the requirement of expeditious proceedings.

[126] Report of PECCOE (Doc. AM 2013-09), op.cit.
[127] See Doc. PRP Inf. 14, op.cit., Annex 3.

In view of the above, NEAFC CPs may wish to consider developing a set of NEAFC guidelines for investigation of suspected violations and for fisheries sanctions to be applied by flag States, so that CPs may evaluate their respective procedures and systems of sanctions to ensure that they are effective in securing compliance and deterring violations.

The Panel entertains the view that ultimately a harmonization of applicable sanctions for infringements of NEAFC conservation and management measures that would create a system of sanctions proportionate to the seriousness of the violation would be highly desirable. Such sanctions should be adequate in severity, effective in securing compliance and discourage future violations. They should further deprive effectively offenders of benefits accruing from their illegal activities.

4.5. Cooperative mechanisms to detect and deter non-compliance.

4.5.1 Extent to which NEAFC has established adequate cooperative mechanisms to both monitor compliance and detect and deter non-compliance (e.g. compliance committees, vessel lists, sharing of information about non-compliance*).*

The NEAFC Scheme has established a number of cooperative mechanisms to both monitor compliance and detect and deter non-compliance. These mechanisms are included in Chapter IV (Inspections at Sea), Chapter V (Port State Control of Foreign fishing Vessels), and Chapter VI (Infringements).

Several provisions are intended at monitoring and detecting non-compliance. Article 17 of the Scheme implements CP surveillance procedures based on the sighting of fishing vessels in the RA. Reports of such sightings are forwarded by the inspecting CP to the sighted fishing vessel's flag State and to the NEAFC Secretariat. The Secretariat has the obligation to circulate such information to all CPs with active inspection presence in the RA.

Article 18 provides the inspection procedure to be followed by inspecting CPs in the RA. Article 25 refers to the minimum levels of inspections required from the port State in respect of foreign fishing vessels landing or transshipping in its ports. Article 28 determines the infringement procedures for inspectors, the inspecting CP and the CP of the inspected vessel. These include the obligation of inspectors to establish an inspection report and secure evidence; the exchange of information between the inspecting CP and the CP of the inspected vessel; where appropriate, the communication of findings to the CP in areas under the national jurisdiction of which infringements took place and to the State of which the vessel's master is a national;[128] the communication of evidence to the CP of the inspected vessel and

[128] These provisions were introduced by *Recommendation 09:2014* to ensure consistency with Art.15 (a) (i) (ii) of the PSMA concerning transmittal of inspection results.

the Secretariat; the follow-up by the authorities of the CP of the inspected vessel; and finally the obligation for a CP to accept reports from inspectors of another CP as legally valid and admissible in court proceedings in the same way as those of national inspectors.

Other provisions under the Scheme are aimed and deterring non-compliance as well as at sharing information between CPs about non-compliance. These include procedures set out under the PSC system, as well as those falling under the reporting obligations of CPs in cases of infringements to NEAFC conservation and management measures. Article 31 requires the CP of an inspected vessel to take appropriate measures, including administrative action or criminal proceedings in conformity with its national law against its nationals who have committed infringements in the RA. Article 32 establishes the obligation for CPs to report annually to the NEAFC Secretariat on surveillance effort, the number of sightings as well as on the number of conducted inspections. Article 33 establishes further obligations for CPs to report annually to Secretariat on the number of infringements detected during surveillance activities and the follow-up given to such infringements, including investigation, fines or other sanctions.

In addition, the Scheme has incorporated specific provisions that monitor compliance, detect and deter non-compliance by NCPs, under Chapter VII (Measures to Promote Compliance by non-Contracting Party Fishing Vessels). To this end, Article 37 determines the procedures to be followed upon sighting of NCP fishing or transshipping in the RA or by other means identified as being engaged in activities that undermine the effectiveness of NEAFC conservation and management measures. Article 38 determines the procedures for the boarding and inspection of NCP vessels by NEAFC inspectors in the RA. Article 39 determines the procedures for port entry by NCP vessels. Article 40 establishes the obligation for CP port States to inspect NCP vessels that enter their ports and the follow-up procedures for inspecting CPs and the NEAFC Secretariat. Article 42 determines the procedures for the Secretariat to communicate to all CPs and other RFMOs information about presumed IUU fishing activities by NCP vessels in the Convention Area. Article 43 mandates all CPs to report annually on the number and result of inspections of NCP fishing vessels, as well as the sighting of IUU activities in the RA. It requires also the Secretariat to prepare an annual consolidated report based on CPs' reports.

Furthermore, Article 44 sets out the conditions for listing NCP fishing vessels on the NEAFC IUU vessel lists, including the listing of NCP fishing vessels on the provisional list (IUU "A" list), or on the confirmed IUU vessel list (IUU "B" list), as well as the conditions for their removal from such lists. It establishes also the procedures for exchange of information on IUU activities and vessel lists with other RFMOs[129] and the display of both lists on the NEAFC website. Article 45 spells out restrictive measures that CPs shall take against IUU vessels. These include denial of port entry, inspection of such vessels if they are in port, denial of support services, and implementation of trade-related measures. Finally, Article 46 establishes the obligation of CPs to initiate dialogue with NCPs with IUU listed vessels, with

[129] Art. 44(5) of the Scheme refers specifically to CCAMLR, NAFO and SEAFO.

a view to engaging them to cooperate with NEAFC. It opens also the possibility for CPs to cooperate in the adoption of "appropriate multilaterally agreed non-discriminatory trade-related measures, consistent with the World Trade Organization (WTO), that may be necessary to prevent, deter, and eliminate the IUU fishing activities", against NCPs that undermine the effectiveness of NEAFC conservation and management measures.

The Scheme does not provide for a Compliance Committee with a mandate to evaluate compliance performance by NEAFC CPs. It has instead established a Permanent Committee on Control and Enforcement (PECCOE) pursuant to Article 3(8) of the NEAFC Convention and Chapter 5 of its Rules of Procedure, with a mandate to address a variety of issues relating to the formulation of proposals and amendments to the control and enforcement regulations, the follow-up of inspection and surveillance activities, as well as the review and evaluation of CP annual reports on inspection and surveillance activities and on infringements. For these purposes, PECCOE has an annual discussion on the implementation of the MCS system established under the Scheme, and makes proposals to the NEAFC Commission on any issues identified as needing to be addressed.

4.5.1.2 Comments on this topic by the 2006 Performance Review Panel

This topic was not specifically addressed by the Panel.

Panel comments

NEAFC CPs may wish to establish a Compliance Committee or convert PECCOE into a Compliance Committee to address issues of non-compliance within NEAFC membership. RFMOs such as NAFO, SEAFO, CCAMLR and WCPFC have each established a Compliance Committee.[130] The Panel notes that while PECCOE has been very effective in addressing IUU fishing activities by NCPs, non-compliance by CP fishing vessels with NEAFC fishing regulations remains problematic.[131]

Should NEAFC decide to establish a Compliance Committee, its Terms of Reference should allow it to evaluate periodically compliance performance by CPs with the Organization's conservation and management measures. Such review would assess in particular the performance of each NEAFC CP with respect to the fulfillment of its

[130] NAFO: Standing Committee on International Control (STCTIC), http://www.nafo.int/ ; SEAFO: Compliance Committee, http://www.seafo.org/ComplianceCommitte/TOR%20for%20Compliance%20Committee.pdf ; CCAMLR: Standing Committee on Implementation and Compliance (SCIC), http://www.ccamlr.org/en/system/files/e-pt8.pdf ; WCPFC: Art.14 of the WCPFC Convention (Functions of the Technical and Compliance Committee) http://www.wcpfc.int/system/files/text.pdf , Conservation and Management Measure for Compliance Monitoring Scheme, Conservation and Management Measure 2012-02, http://www.wcpfc.int/system/files/CMM-2012-02-Conservation-and-Management-Measure-Compliance-Monitoring-Scheme.pdf

[131] Terms of Reference for Permanent Committee on Control and Enforcement (PECCOE) adopted at the 20th Annual Meeting, November 2001, http://www.neafc.org/system/files/peccoe_termsof_reference.pdf . The problem of non-compliance by, inter alia, RFMO members, cooperating members and fishing by non-members are referred to in para.25 of the Outcome of the 2006 Review Conference (A/CONF.210/2006/15).

MCS obligations under the Scheme and suggest remedial measures that could include a range of possible responses that take into account of the reason for and degree of non-compliance. The Committee may also wish to request the CP with documented persistent compliance failure to rectify the problem, including through the preparation of a plan of action with timeliness to ensure full compliance with NEAFC fishery regulations.

A Compliance Committee should also serve as a formal mechanism to routinely assess the performance of surveillance and enforcement activities in the RA, including the effectiveness of such activities. For a MCS system to be effective, it is important that the quality of compliance be evaluated on a regular basis.

In any recommendations to the Commission, such a Compliance Committee should be allowed to propose measures to encourage compliance and deter non-compliance, including through the development of a set of incentives and sanctions. Measures could include market-related measures consistent with the World Trade Organizations (WTO) rules in respect of a CP that repeatedly fails to meet its obligations under the NEAFC Convention, especially for the CP that repeatedly commits serious infringements under Article 29 of the Scheme. Its mandate should further allow it to recommend harmonization of sanctions at the NEAFC regional level to ensure consistency of applicable measures among CPs.

4.5.2 Extent to which these measures are being effectively utilized.

A note by the NEAFC Secretariat summarizing the annual reports of CPs under Articles 32, 33, 42 and 43 of the Scheme concerning surveillance, at-sea inspections and follow-up infringements, as well as on the sharing of information on IUU fishing activities for the period 2006-2012, shows the extent of implementation of the cooperative mechanisms to monitor compliance, detect and deter non-compliance.[132] During the reporting period, CPs inspected 952 vessels and detected 115 infringements. Such infringements range from "simple" infringements to serious infringements under Article 29.[133] In addition, during the period 2008-2013, contracting port States inspected a total number of 751 landings and denied 23 others.[134]

With respect to IUU fishing, the NEAFC Secretariat reported that while there had been a significant problem of NCP IUU activities in the RA in previous years, however, a stark trend towards a decrease in such activities was observed in the period 2006-2012. A major reason for this trend is the efforts made by NEAFC to counter IUU fishing in the RA. Such efforts

[132] Doc. PRP Inf.-14, Compliance and infringements: A note by the NEAFC Secretariat for the Performance Review Panel.
[133] Ibid., Annexes 2 and 3. The NEAFC Secretariat has noted that a significant number of these infringements related to missing reports are the responsibility of the flag State FMCs (in very few cases it was found that there were technical problems between the FMC and the Secretariat).
[134] Doc. PRP Inf. - 12, op.cit; p.2. The NEAFC Secretariat Note indicates that denials of landings were not tracked for the year 2008.

include surveillance activities that monitor IUU vessels after they leave the RA; the adoption from 2006 of the approach of closing ports to IUU vessels rather than simply refusing services in port; and the adoption of the PSC system. [135]

In addition, the CPs adopted at their 32nd Annual Meeting in 2013 a Recommendation that amended Article 35 of the Scheme with a view to introducing annual reporting duties for CNCPs. Amendments were aimed at evaluating compliance by CNCPs with NEAFC conservation and management measures in the RA during the previous year, as well as the status of the follow-up on infringements to those measures, in accordance with the requirement provided under Article 33 of the Scheme.[136] Absence of CNCP reporting obligations has been identified by CPs as a gap in the NEAFC regime, as these States are not subject to the same reporting obligations as CPs under the Scheme.[137] Such reporting would allow also CPs to evaluate any request from NCPs for the renewal of their status as CNCPs.

Pursuant to Article 44 (7) of the Scheme on IUU vessel lists, NEAFC maintains on its website information on vessels included on its IUU A and B lists.[138] No vessel has been added to the IUU B list since 2008,[139] and no vessel is currently on the IUU A list.[140] Some vessels were deleted from the IUU B list based on documents presented by CPs proving that such vessels did no longer existed due to scrapping.[141] Information on vessels delisted from the IUU B list is available on NEAFC website. Note should also be made of the fact that no CP has reported any IUU fishing activities in the RA in 2012.[142]

With regard to cooperation with NAFO, SEAFO and CCAMLR on IUU lists, NEAFC agreed to continue to share amendments to the IUU B list with NAFO, SEAFO and CCAMLR on the basis of reciprocity and trust in each other's internal process. As to cooperation with other RFMOs, NEAFC indicated that there would be a need to formalize NEAFC' s relations with IATTC before it could take action on a revised IUU list notified by that organization.[143] This would include making both RFMOs familiar with the procedures used by the other regarding the IUU listing of vessels, and ensuring that such relationship was based on reciprocity.[144]

4.5.2.3 Comments on this Topic by the 2006 Performance Review Panel

Although the topic of "cooperative mechanisms to detect and deter non-compliance" was not specifically addressed by the Panel, however, some comments made by the 2006 Panel on "Port State measures" and "Monitoring, surveillance and control activities" were related to

[135] Doc. PRP Inf. - 19, Non-Contracting Parties: A note by the NEAFC Secretariat for the Performance Review Panel.
[136] Recommendation 10:2014.
[137] Doc. AM 2013-09, Report of PECCOE, op.cit.
[138] See http://www.neafc.org/mcs/iuu/blist
[139] Doc. PRP Inf.-19, op.cit.
[140] See http://www.neafc.org/mcs/iuu/alist ; Report of PECCOE (Doc. AM 2013-51), op. cit.
[141] Doc. PE 2013/02-39, op.cit.
[142] Ibid.
[143] Doc. PE 2013-02-51.
[144] Doc. AM 2013-51, op.cit.

some issues raised under the present topic. They are referred to under Sect. 4.2.2.3 and 4.3.2.3 of this report.

Panel comments

Following a review of the relevant provisions of the NEAFC Rules of Procedure, the Panel notes that NEAFC Secretariat does not seem to play an active role in the monitoring of fishing activities in the RA. The current mandate of the Secretariat gives it mainly administrative functions and a clearinghouse role in the NEAFC MCS system.[145] The Commission may wish therefore to consider as to whether a more pro-active role for the Secretariat in implementing the Scheme, in addition to its current mandate, would lead to improving the overall compliance performance in the NEAFC RA.

Drawing attention to best practices of RFMO/As, it should be noted that CCAMLR Secretariat, for instance, plays an active role in monitoring compliance with CCAMLR conservation measures and "other decisions of the Commission."[146] For this purpose, CCAMLR Secretariat has adopted a biennial Strategic Plan (2012-2014), which "details the vision, mission and goals for the Secretariat, together with the role and responsibilities for the Secretariat." According to the Strategic Plan, one of the objectives of the Secretariat is to provide high-quality technical and logistical support for Members, the Standing Committee on Implementation and Compliance (SCIC) and the Commission, through best-practice compliance initiatives consistent with the priorities of the Commission. A revised Strategic Plan, for the period 2015-2017 is to be prepared for consideration by CPs at the 2014 Annual Meeting of CCAMLR.[147]

4.6. Extent to which NEAFC has adopted measures relating to the exercise of the rights and duties of NEAFC Contracting Parties as market States for living marine resources under the purview of NEAFC, to combat IUU fishing.

Article 46(3) of the Scheme indicates that NEAFC CPs may cooperate to adopt appropriate multilaterally agreed non-discriminatory trade-related measures, consistent with the World Trade Organization (WTO),, that may be necessary to prevent, deter, and eliminate the IUU fishing activities identified by the Commission. Article 45 dealing with follow-up measures against vessels on the IUU lists, requests CPs to take such measures as prohibiting the imports of fish coming from IUU vessels on B list as well as prohibiting importers, transporters and other sectors concerned, from transshipping and trading of fish caught by such vessels. In addition, the Scheme invites CPs to collect and exchange any appropriate information with other CPs or CNCPs in order to detect, control and prevent false import/export certificates regarding fish from vessels on IUU B list.[148]

[145] See http://www.neafc.org/rules/chapter4-secretary.
[146] See http://www.ccamlr.org/en/organisation/secretariat.
[147] See http://www.ccamlr.org/en/system/files/Strategic%20Plan%20%5BFinal%5D.pdf
[148] The Scheme, Article 45 (2) (e) (f) (g).

4.6.1. Comments on this Topic by the 2006 Performance Review Panel

This Topic was not included in the mandate of the Panel.

Panel comments

The NEAFC Scheme has established the legal basis for allowing the application of trade-related measures against vessels on IUU B list as well as against NCPs, the vessels of which appear on IUU lists, in accordance with the provisions of Article 45(2)(e)(f)(g) and Article 46(3) respectively. They remain available tools that may be used by NEAFC to complement current measures against IUU fishing.

4.6.2 Extent to which these measures are being effectively utilized.

No record indicates that the relevant provisions of Articles 45 and 46 of the Scheme on trade-related measures are being effectively utilized by CPs, as market States, to combat IUU fishing.[149]

4.6.3 Comments on this Topic by the 2006 Performance Review Panel

This Topic was not addressed by the 2006 Panel.

Panel comment

The fact that trade-related measures have not yet been implemented by the NEAFC CPs may need to be placed in the context of NEAFC's success in reducing drastically IUU fishing in the RA.

5. Decision-making and Dispute settlement

5.1 Decision-making

5.1.1 Efficiency of NEAFC meetings in addressing critical issues in a timely and effective manner

NEAFC meetings are considered generally to be efficient in addressing critical issues in a timely and effective manner. For instance, NEAFC subsidiary bodies such as the Permanent Committee on Management and Science (PECMAS), PECCOE, Advisory group on Data Communication (AGCD), the Working Group on the Future of the NEAFC (WG Future), the Ad Hoc Working Group on Port state Control (AHWGPSC) and the Working group on Statistics (WG Stats) were able, in their respective areas of competence, to present proposals

[149]Doc. PRP Inf.-15, Market-related measures: A note by the NEAFC Secretariat for the Performance Review Panel.

to the 2013 NEAFC Annual Meeting. The Commission itself has adopted several Recommendations on fisheries conservation and management measures in the RA at the end of its 32nd Annual Meeting.[150]

Nonetheless, one problem that affects the efficiency of NEAFC meetings in addressing critical issues in a timely and effective manner is reported to be the current procedure in force for allocating fishing opportunities within NEAFC. In practice, negotiations on allocation keys for fish stocks managed by NEAFC take place firstly in coastal State consultations outside NEAFC formal meeting framework. These fora would seek to agree on NEAFC managed resources (herring, blue whiting, mackerel, haddock, redfish) located in the exclusive economic zones (EEZs). Criteria that are taken into consideration in determining an allocation key among coastal States include the biological distribution of the stock over different EEZs and the historical catches of respective CPs. However, fluctuations or changes in the migration patterns, or areas of distribution of fish stocks have the potential to undermine an agreed allocation key.[151]

Where these coastal State fora result in formal agreements on the management of fisheries in areas under national jurisdiction, such agreements will then become the basis of proposals for high seas conservation and management measures within NEAFC.[152] However, where the positions of CPs are far from each other, reaching an agreement on allocation key can take several years, such as in the case of mackerel allocations, in respect of which CPs were unable to reach agreement for several years. [153]

On the other hand, absence of agreement on allocations would lead CPs to set unilateral catch limits for their fishing vessels and the combined catches in such a situation is often higher than the scientifically advised level from the International Council for the Exploration of the Seas (ICES).[154]

5.1.1.2 Comments on this Topic by the 2006 Performance Review Panel

The Panel noted that in the case of the RA, while NEAFC had a decision-making role in terms of the management of resources, in practice decisions on a number of stocks were made outside NEAFC. This leaves NEAFC with a limited residual role in decision-making in respect of the management of stocks.

Panel comments

The Panel notes that a number of CPs has expressed the view that the NEAFC

[150] Report of the 32nd Annual Meeting of the North-East Atlantic Fisheries Commission, op.cit.
[151] Doc. PRP Inf.-7B, Allocation of fishing opportunities: A note by the NEAFC Secretariat for the Performance Review Panel.
[152] Doc. PRP-2013-01_Info., op.cit., p.4.
[153] Doc. PRP Inf.-16, Decision-making process: A note by the NEAFC Secretariat for the Performance Review Panel.
[154] Doc. PRP Inf.-7B, op.cit.

procedures for allocating participatory rights for managed fishery resources may have constituted an impediment to the efficiency of NEAFC meetings in addressing the critical issue of allocating fishing opportunities to all CPs in a timely and effective manner. Comments received by the Panel included that the two-stage decision making process of allocations was lacking transparency, dysfunctional and unstructured and was seen by some as undermining the whole management regime of NEAFC, particularly in cases where coastal States are unable to agree among them on allocation keys in respect of EEZ shared resources.[155]

Accordingly, the Commission may wish to consider the relevance of adopting at its Annual meetings recommendations on interim allocation keys for fisheries conducted beyond areas under national jurisdiction (the RA), pending an agreement on allocation keys among coastal States for shared and straddling fish stocks occurring in areas under their respective national jurisdictions. Such recommendations should apply the precautionary approach in accordance with Article 4 of the NEAFC Convention and the relevant provisions of Article 6 of UNFSA. Interim allocations shall be revised upon the reaching of agreement among coastal States and shall be without prejudice to final allocation keys agreed ultimately within the NEAFC Commission. This suggestion should be read in conjunction with the recommendations of the Panel under Section 3.5.1 of this report.

While NEAFC should seek to improve its role in the conservation and management of fishery resources under its purview, including the allocation of participatory rights to CPs over such resources, it should also note that the legal regime for the conservation and management of fishery resources in areas under national jurisdiction and that of fishery resources on the high seas, are fundamentally different, in accordance with the relevant provisions of UNCLOS.[156] For the UNFSA, conservation and management measures for straddling fish stocks established for the adjacent high seas and those adopted for areas under national jurisdiction are only required to be compatible in order to ensure conservation and management of these fishery resources in their entirety.[157] Provisional arrangements are particularly recommended by UNFSA pending final agreement on conservation and management measures.[158]

5.1.2 Extent to which NEAFC has transparent, consistent and adequate decision-making procedures that facilitate the adoption of conservation and management measures in a timely and effective manner

a) NEAFC decision-making process[159]

[155] The PRP interviewed several CPs during the 32nd Annual Meeting of NEAFC.
[156] UNCLOS, Parts V and VII, Sect.2.
[157] UNFSA, Art. 7.
[158] Ibid, Art.7 (5) and (6).
[159] The NEAFC decision-making process is fully described in the 2006 Report of the NEAFC Performance Review Panel, Vol. I: Main Report, Sect. 3.4 Decision making, (AM 2006/31).

Binding decisions in NEAFC are in the form of recommendations and only the NEAFC Commission is competent to make such recommendations. These concern recommendations on the management of fisheries located on the high seas (RA) and, under certain conditions, in areas under national jurisdiction; recommendations on control of fisheries; and recommendations on statistics.

Recommendations on the management of fisheries. Article 5 of the Convention refers to recommendations on fisheries conducted beyond areas under the jurisdiction of CPs, and Article 6 addresses recommendations on fisheries conducted within an area under jurisdiction of a CP. A recommendation can only apply to areas under jurisdiction of a CP, if such CP has both proposed it and voted in favor of it. Otherwise, the Commission may only give advice concerning fisheries in areas under jurisdiction, if the CP in question so requests. This type of recommendations includes all the management measures for individual fish stocks, which form the basis of NEAFC fisheries management.

Recommendations on control of fisheries. Pursuant to Article 8 of the Convention, this type of recommendations concerns measures of control for fisheries conducted beyond areas under national jurisdiction and can only be applied to fisheries conducted within an area under the jurisdiction of a CP, if such CP has both requested them and voted in their favor.

Recommendations on statistics. These recommendations are adopted pursuant to Article 9 of the Convention. Recommendations can only be applied to areas under the jurisdiction of CPs, if such CPs have voted in favor of these measures, although they may not have necessarily proposed them. This type of recommendations includes measures for the collection of statistical information.

Pursuant to Articles 5, 8 and 9, recommendations applying to the high seas (RA) must be adopted by a qualified majority of CPs (a two-thirds majority of votes of all CPs present and casting affirmative or negative votes).

Once adopted, all three types of recommendations become legally binding on the CPs at the date determined by the NEAFC Commission, in accordance with Article 12 (1) of the Convention. However, a recommendation shall not be binding on a CP that has lodged a formal objection to it, pursuant to Article 12 (2).

Furthermore, administrative measures, including the adoption of the budget, the election of the President and the establishment of Committees can be made by a simple majority of CPs. In practice, such decisions are generally taken by consensus.[160]

[160] Doc. PRP -2013-01_Info, General information on the structure and decision-making process of NEAFC: A note by the NEAFC Secretariat for the Performance Review Panel.

Finally, pursuant to Article 19, an amendment to the Convention requires a three-fourths majority vote of all CPs, with the right of any CP to lodge objection to such amendment with the Depositary. In case of objection by a CP, the amendment shall not take effect for any CP.

b) The revised NEAFC Rules of Procedures submitted by the Working Group on the Future of NEAFC[161]

Adoption of new decision-making procedures. As part of a proposal to revise the NEAFC Rules of Procedure, the WG on the Future of NEAFC submitted at the 2013 Annual Meeting of the Commission an amendment to decision-making procedures in force in NEAFC. The amendment proposed that the Commission's decisions should be made henceforth on the basis of consensus. Decisions shall be taken by vote only in the absence of consensus.[162] In addition, the new Rules of Procedure established that a written communication between meetings is no longer presented as an "emergency" procedure, but has rather become a normal method for taking decisions in NEAFC.[163]

Adoption of new rules concerning objection procedures under Articles 12 and 13 of the Convention.[164] The revised NEAFC Rules of Procedure have proposed that a CP which presents an objection to a recommendation, in accordance with Article 12 or gives notice of the termination of its acceptance of a recommendation, in accordance with Article 13 of the Convention, is under obligation to give a statement of the reasons for its objection or notice. Such CP shall make also a declaration of its intentions following the objection or notice, including a description of any alternative conservation and management measures it intends to take or has already taken.[165]

The revised Rules of Procedure, including amendments relating to decision-making and objection procedures, was adopted by the Commission.[166]

5.1.2.3 Comments on this Topic by the 2006 Performance Review Panel

The Panel considered that the NEAFC CPs should ensure that the use of the objection procedure did not undermine conservation of the resources and was supported by the dispute settlement mechanism, which could assist Parties to resolve the underlining reasons for the objection. The Panel added that interim measures should be agreed upon and implemented

[161] Doc. AM 2013-16-Rev.2: Proposal from the Working Group on the Future of NEAFC for revised NEAFC Rules of Procedure, Chapter 6 - Decision Making.
[162] Ibid., Rule 22.
[163] Ibid., Rule 28.
[164] For some unexplained reasons, the provisions of the revised Rules of Procedure on "objection procedures", which normally belong to Chapter 6 on "Decision-Making", are incorporated in Chapter 8 on "Dispute Settlement".
[165] Doc. AM 2013-16-Rev.2, op.cit., Rule 41.
[166] See Report of the 32nd Annual Meeting of the North-East Atlantic Fisheries Commission, op.cit.

while disputes were being resolved.

Panel comments

The adoption of the revised Rules of Procedure giving priority to consensus as the primary method of taking decisions is a positive step towards streamlining decision-making process in NEAFC. In addition, the obligation for a CP to state the reasons for its objection to a recommendation, and the requirement to provide an alternative measure, are commendable developments that promote transparency in the decision-making process and may prevent the CP concerned from undermining conservation and management measures agreed within NEAFC. Introduction of these new elements in the decision-making process will promote consistency and facilitate the adoption of conservation and management measures in a timely and effective manner.

These amendments are also in conformity with the relevant provisions of the UNFSA, which require States within RFMO/As to "agree on decision-making procedures which facilitate the adoption of conservation and management measures in a timely and effective manner".[167] They respond also to the concern of the 2006 UNFSA Review Conference, which requested RFMO/As, inter alia, to ensure that "post-opt-out behaviour" is constrained by rules that prevent opting out parties from undermining conservation and to provide a description of alternative measures that will be implemented in the interim.[168]

With reference to best practices of RFMOs, NAFO,[169] SEAFO,[170] CCAMLR,[171] IATTC,[172] WCPFC[173] and SPRFMO[174] have already established consensus as the primary mode of taking decisions in their respective organizations.

As the RFMOs referred above, NEAFC may wish also to include a definition of the consensus in the new provisions on decision-making procedures, which would indicate that consensus means "the absence of any formal objection made at the time the decision was taken". They should further specify that decisions by voting would be taken, only after all efforts to reach a decision by consensus have been exhausted.

[167] UNFSA, Art. 10 (j).
[168] Doc. A/CONF.210/2006/15: Outcome of the 2006 Review Conference on the UNFSA, para.32 (f), http://www.un.org/Depts/los/convention_agreements/review_conf_fish_stocks.htm .
[169] Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, Art. XIII.
[170] Convention on the Conservation and Management of Fishery Resources in the South East Atlantic, Art.17.
[171] Convention for the Conservation of Antarctic Marine Living Resources, Art. XII; Rule 4 of the Rules of procedure of the Commission.
[172] Antigua Convention, Art. IX.
[173] Convention on the Conservation and Management of Highly Migratory Fish stocks in the Western and Central Pacific Ocean, Art. 20.
[174] Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, Art. 16.

In addition, a number of RFMOs, such as NAFO,[175] SEAFO,[176] and SPRFMO[177] have established the obligation for a CP or member, which has lodged an objection to a conservation and management measure, to state the grounds for its objection and to propose alternative conservation and management measures.

As for WCPFC, it allows a Member State that has voted against a decision of the Commission or absent at the taking the decision to seek a review of the decision by a review panel on the grounds that the decision is inconsistent with the WCPFC Convention and UNCLOS, or the decision unjustifiably discriminates in form or in fact against the member concerned. If the review panel finds that the decision of the Commission does not need to be modified, amended or revoked, the decision shall become binding 30 days following the recommendations of the panel. On the other hand, if the review panel recommends to the Commission that the decision be modified, amended or revoked, the Commission shall modify or amend its decision in accordance with the findings of the panel, or it may decide to revoke the decision, provided that a special meeting of the Commission shall be convened, at the request of a majority of the members.[178]

Noting the recurrent difficulties of NEAFC to reach consensus on important management decisions, the Commission may want to consider the adoption of an approach similar to that of WCPFC.

5.2. Dispute settlement

5.2.1 Extent to which NEAFC has established adequate mechanisms for resolving disputes

Discussions and negotiations in NEAFC's committees, or working groups, as well as in coastal State consultations outside NEAFC fora are reported to be the most used methods of settling disputes between CPs in NEAFC. In some cases, specific working groups are set up to deal with particular issues that have proven to be difficult to resolve. In cases, where the appropriate committee or working group is not able to settle disputes, they are referred to the NEAFC Commission and/or Heads of Delegation.[179]

Although consultations, discussions and negotiation are useful components of a process of

[175] Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, Art. XIV(5).
[176] Convention on the Conservation and Management of Fishery Resources in the South East Atlantic, Art. 23 (c) (d).
[177] Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, Art. 17 (2).
[178] Convention on the Conservation and Management of Highly Migratory Fish stocks in the Western and Central Pacific Ocean, Art. 20 (6) to(9). http://www.wcpfc.int/system/files/text.pdf.
[179] Doc. PRP Inf.-17, Dispute settlement: A note by the NEAFC Secretariat for the Performance Review Panel.

peaceful means for settling disputes in international law,[180] they are rarely sufficient to resolve disputes and at most times disputes require a third party intervention. This could be a third party settlement procedure with nonbinding decisions (conciliation, mediation, inquiry, etc...)[181] or a third party settlement procedure entailing binding decisions (arbitration, judicial body).[182] Consequently, limiting the methods of settling disputes between NEAFC CPs to discussions and negotiations in committees and working groups as well as in coastal State consultation fora, do not constitute adequate mechanisms for resolving disputes.

a) Towards the adoption of NEAFC dispute settlement procedures through an amendment to the NEAFC Convention

At the Annual Meeting of the NEAFC in 2004, the Commission agreed to include the current Article 18bis as an amendment to the NEAFC Convention. It adopted also two Recommendations associated with the amendment on dispute settlement procedures.[183]

The first Recommendation provides that any CP lodging an objection in accordance with Article 12 of the Convention or give notice of termination of acceptance of a Recommendation in accordance with Article 13 shall state the reasons for doing so and declare its intentions, including a description of any alternative conservation and management measures which it intends to take or has already taken.

The second Recommendation formally establishes the NEAFC Procedures for the settlement of disputes. The Recommendation states that CPs shall cooperate to prevent disputes. CPs shall seek to resolve expeditiously disputes concerning the interpretation or application of the Convention by any peaceful means of settlement disputes, whether through noncompulsory procedures or compulsory procedures for settlement of disputes. Where a dispute concerns the application of the NEAFC Convention or the interpretation or application of a recommendation adopted by the Commission, CPs in dispute may refer such dispute to an *ad hoc* panel constituted in accordance with rules of procedures adopted by the Commission. By agreeing to refer their disputes to the *ad hoc* panel, CPs may agree at the same time to apply provisionally the relevant recommendation adopted by the Commission, until the panel finalizes its work, or the dispute is resolved by the parties to the dispute.

Moreover, pending the settlement of a dispute through compulsory procedures, CPs to the dispute shall apply provisionally any measure described by the panel, until they agree on arrangements of equivalent effect or when a judicial body to which the dispute

[180] Charter of the United Nations, Art.2(3) and 33, https://treaties.un.org/doc/publication/ctc/uncharter.pdf; UNCLOS, Art. 279.
[181] Charter of the United Nations, op.cit; UNCLOS, Part XV, Sect.1; UNFSA, Art.27.
[182] Charter of the United Nations, op.cit., UNCLOS, PartXV, Sect.2; UNFSA, Art.30.
[183] See the Report of the 23rd Annual Meeting of the North-East Atlantic Fisheries Commission, 8-12 November 2004, Vol. I and II (Annex K). Art.18bis, which was proposed by the European Union, reads as follows:" The Commission shall make recommendations establishing procedures for the settlement of disputes arising under this Convention."

has been referred has taken provisional or definitive decision or at the date of expiration of the recommendation of the Commission at issue.

Where a dispute is not resolved by noncompulsory procedures, one of the parties to the dispute may refer such dispute to compulsory procedures entailing binding decisions as set out in Part XV of UNCLOS, or in Part VIII of UNFSA, if disputes relate to straddling fish stocks.

A panel or judicial body to which a dispute has been referred to, shall apply, as appropriate, the relevant provisions of the NEAFC Convention, UNCLOS, UNFSA, other rules of international law compatible with the referred instruments, as well Recommendations of the Commission applicable to the parties to the dispute, with a view to ensuring the conservation and optimum utilization of the fish stocks concerned.

The Recommendation finally points out that the relevant parts of UNCLOS and UNFSA shall apply whether or not the parties to the dispute are also Parties to these international instruments.

On 31 July 2013, the Russian Federation lodged an objection to the amendment to the Convention concerning the dispute settlement mechanism adopted unanimously by the CPs at their 23rd Annual Meeting in 2004.

b) Towards the adoption of NEAFC dispute settlement procedures through the revised NEAFC Rules of Procedure

The provisions on Dispute Settlement in the revised NEAFC Rules of Procedure adopted by the Commission at its 32nd Annual Meeting are similar to those provided in the Recommendation implementing Article 18bis of the NEAFC Convention adopted by NEAFC in 2004, as an amendment to the Convention. [184]

However, a footnote relating to the establishment of the *ad hoc* expert panel indicates that the effective application of the Annex establishing the Rules concerning the *ad hoc* expert panel on dispute settlement is contingent upon a revocation of the objection lodged by the Russian Federation on 31 July 2013 against the amendment "a" to the NEAFC Convention, proposed by the EU on 24 July 2003 and adopted unanimously by the CPs at their 23rd Annual Meeting.

5.2.1.2 Comment on this Topic by the 2006 Performance Review Panel

The Panel indicated that the development of a dispute settlement mechanism was to be welcomed as an important element in the modernization of the NEAFC Convention and would hopefully be used by the CPs to achieve the resolution of outstanding elements of

[184] Doc AM 2013-16-Rev.2, op.cit., Chapter 8.

disagreement that hampered NEAFC's conservation and management roles.

Panel comments

The Panel notes that the current mechanisms for the peaceful settlement of disputes, as provided under Chapter 8 of revised Rules of Procedure adopted at the 32nd Annual meeting of NEAFC, constitute adequate mechanisms for resolving disputes. They establish clear and predictable processes for dispute resolution and are in full conformity with Part VIII of UNFSA.

Mechanisms for settlement of disputes entailing binding decisions as provided in the revised Rules of procedure apply to disputes concerning conservation and management measures adopted for the RA, as disputes relating to conservation and management measures in areas under national jurisdiction of coastal States are governed by the provisions of Section 3 of Part XV of UNCLOS (Limitations and exceptions to applicability of Section 2 of Part XV).[185]

Pursuant to Article 297 (3) (a) of UNCLOS, disputes relating to sovereign rights of the coastal State with respect to marine living resources in the EEZ, including, inter alia, its discretionary powers for determining the allowable catch, its harvesting capacity and allocation of surpluses to other States, are excluded from the compulsory procedures entailing binding decisions under Section 2 of Part XV. In accordance with Article 297 (3) (b), where no settlement has been reached by recourse to procedures without binding decisions under Section 1 of Part XV, such disputes shall be submitted to compulsory conciliation under Section 2 of Annex V of UNCLOS. Under the compulsory conciliation, although submission to the proceedings is mandatory, the report of the conciliation commission, including its conclusions or recommendations, is not binding upon the parties in dispute.

Pursuant to Article 29 of UNFSA, States Parties may refer a dispute concerning a matter of technical nature to an *ad hoc* expert panel established by them, and such panel shall endeavour to resolve the dispute expeditiously "without recourse to binding procedures for the settlement of disputes".

The provisions of Article 29 provide relevant information on the mandate and legal nature of the *ad hoc* expert panel. Firstly: the procedure is tasked to address a dispute that concerns a matter of "technical nature", and secondly, the procedure does not render binding decisions. Any recommendation of the *ad hoc* expert panel would thus have the same legal nature as recommendations and reports issued by the procedures for the settlement of disputes described under Section 1 of Part XV of UNCLOS.

In view of the above, it might be useful to clarify the legal status of the *ad hoc* panel

[185] UNCLOS, Art.297 (3).

established under the NEAFC Rules of Procedure, the mandate and functions of which have caused some disagreement among CPs. It is important to specify that the *ad hoc* expert panel does not bear any similarity with the panel of experts established by the special arbitration procedure under Annex VIII of UNCLOS, the decisions of which being binding upon the parties in dispute. The Rules of Procedure need therefore to indicate under paragraph 42 (c) or the Annex thereto that the *ad hoc* expert panel is a nonbinding procedure for settlement of disputes.[186]

Furthermore, CPs may wish to specify what they would consider to be disputes of "technical nature" that may be submitted to the *ad hoc* panel and other types of disputes that may be best submitted to other procedures.

With reference to best practices of RFMOs, NAFO,[187] SEAFO,[188] SPRFMO,[189] and WCPFC[190] have already established mechanisms for the settlement of disputes in conformity with the requirements under Part VIII of UNFSA.

Since objection procedures are more associated with decision-making process than with settlement of disputes, the Panel suggests that current Rule 41 dealing with objection procedures under Articles 12 and 13 of the Convention should be moved to Chapter 6 on Decision Making as new Rule 29.

6. International cooperation

6.1 Transparency

6.1.1 Extent to which NEAFC is operating in a transparent manner, taking into account, inter alia, Article 12 of the 1995 UN Fish Stocks Agreement

The relevant provisions of UNFSA. Article 12 of UNFSA subjects the effectiveness of transparency in activities of RFMO/As through the existence of three criteria: (i) attendance of observers to meetings of RFMO/As; (ii) transparency in their decision-making process and other activities and; (iii) timely access of observers to records and reports of such RFMO/As. The Agreement stresses also that procedures governing participation of observers in RFMO/A meetings shall not be unduly restrictive.

In addition, the 2006 Review Conference on the UNFSA[191] has requested RFMO/As to improve transparency of their activities both in terms of decision-making that incorporates the

[186] For instance, the NAFO Convention, Article XV(3) stipulates that the *ad hoc* panel is a nonbinding proceedings; See also the SEAFO Convention, Art.24(3).
[187] NAFO Convention, Art. XV.
[188] SEAFO Convention, Art.24.
[189] SPRFMO Convention, Art.34.
[190] WCPFC Convention, Art.31.
[191] Doc. A/CONF.210/2006/15, op.cit., para.32 (g).

precautionary approach and the best scientific information available and by providing reasonable participation for intergovernmental and non-governmental organizations through the organizations' rules and procedures.

Status of observers in the revised NEAFC Rules of Procedure.[192] Chapter 7 of the Rules of Procedure has incorporated new provisions regulating the status of observers in NEAFC meetings. Rule 29 lists the categories of States and intergovernmental organizations (IGOs) that are allowed to attend as observers plenary meetings of the Commission. These are: (i) States that have the status of CNCPs; (ii) States, the vessels of which have been identified as fishing in the RA or the Convention Area; (iii) States that are interested in the work of NEAFC; and (iv) intergovernmental organizations (IGOs), the work of which is of interest to NEAFC or *vice versa*. These entities may be allowed also to participate in other NEAFC meetings.

Rule 30 establishes the conditions for the participation of non-governmental organizations (NGOs) as observers to NEAFC meetings. Rule 30 stipulates that NGOs that support the objective of the NEAFC Convention, have a demonstrated interest in the fulfillment of such objective and are in good standing, shall be eligible to participate as observers in all NEAFC plenary meetings. Rule 31 indicates that environmental NGOs having the status of observers, are allowed to participate in meetings of the Permanent Committee on Management and Science (PECMAS). Rule 32 lists the information needed by NEAFC Secretariat in the application for the status of observers by NGOs. Rule 33 states that objection of one or more CPs to the observer status of a NGO, which has otherwise fulfilled all requirements shall be put to voting. The NEAFC Secretariat shall circulate reasons invoked for the objection as well as comments included by CPs with their vote on the matter.

Rules 34 to 40 establish the rights, constraints and obligations of observers admitted to a meeting of the Commission or PECMAS. In this respect, observers are, entitled, inter alia, to make oral statements, circulate documents and receive the same documentation as other participants in the meeting. Rule 35 indicates however that they are prohibited from using visual or sound recording devices to record meeting proceedings, and issuing press releases or other information to the media on agenda items under discussion. Furthermore, Rule 36 points out that particular agenda items of PECMAS meetings shall, at the request of two CPs, be reserved to CPs only.

6.1.1.2 Comments on this Topic by the 2006 Performance Review Panel

The Panel noted that steps had been already taken to improve transparency of information and decisions within NEAFC, but it noted also that some improvements could be made by providing more transparency to meetings between coastal States on allocation issues and by giving further consideration to providing documents to NGOs prior to Commission meetings.

[192] Doc.2013-16-Rev2, Rule 29 - 40; See also the Report of the 32nd Annual Meeting of the North-East Atlantic Fisheries Commission, op.cit.

The Panel indicated it could see no specific reasons to restrict NGO access to information prior to Commission meetings, except in special circumstances of confidentiality and considered that in most instances provision of such information would help inform debate rather than detract from it. In addition the Panel considered that the development of an annual report on the status of the Convention Area stocks would help improve overall transparency.

Panel comments

The Panel notes that NEAFC is operating in a transparent manner, in accordance with the provisions of Article 12 of UNFSA. Particular praise is given to the decision by the Commission to allow participation of relevant NGOs to meetings of PECMAS, which has a mandate, inter alia, to request scientific advice to ICES and to scrutinize such advice before it is presented to the Annual Meeting of NEAFC. The CPs may wish to consider as to whether participation of relevant NGOs could be extended to other Committees and Working Groups of NEAFC, as appropriate.

6.1.2 Extent to which NEAFC decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion

Rule 16 of the revised Rules of Procedure provides that the NEAFC Secretariat is required to transmit without undue delay to CPs and observers recommendations and decisions of the Commission. Draft reports of each meeting of the Commission shall also be transmitted as soon as possible to CPs and observers.

Although there is no explicit rule regarding making information more widely publicly available, the customary practice in NEAFC is to make information available to the public via the NEAFC website immediately following each meeting of the NEAFC Commission. This means that all decisions of NEAFC are publicly available, as are all reports of NEAFC meetings. Reports of meetings of Committees and Working Groups are considered as being confidential until they have been presented to the NEAFC Commission. After each Annual Meeting, they are made publicly available. Even before then, extracts of the reports are regularly made available to those directly concerned. For example, in October each year, PECCOE provides the NEAFC Commission with advice regarding applications for CNCP status. The relevant parts of the PECCOE reports are regularly transmitted to those NCPs that have applied for the status, to enable them to respond, as appropriate, in time for the Annual Meeting in November.

Meeting documents are normally not made publicly available. All conclusions, and summaries of discussions, are reflected in the meeting report and the report will regularly include some of the meeting documents as annexes. These then become publicly available along with the meeting report.

NEAFC receives scientific advice from ICES.[193] No scientific advice is prepared by NEAFC itself, or a NEAFC committee or working group. All ICES advice, including responses to requests by NEAFC, is made publicly available on the ICES website at the same time it is communicated to the recipient of the advice. The scientific advice on which NEAFC measures are based is therefore publicly available even before it has been discussed in the NEAFC Commission.[194]

The official documents of NEAFC, including the Report of the 32nd Annual Meeting of NEAFC in 2013 are publicly available on NEAFC website.[195]

6.1.2.3 Comments on this Topic by the 2006 Performance Review Panel

This topic was not included in the mandate of the Panel.

Panel comments

The Panel notes that NEAFC decisions, meeting reports, scientific advice upon which decisions are made, and other relevant materials are made publicly available in a timely fashion.

6.2 Relationship with non-Contracting Parties

6.2.1 Extent to which non-Contracting Parties have undertaken fishing activities in the NEAFC Regulatory Area

Chapter VII of the Scheme on "Measures to promote Compliance with Non-Contracting Party Vessels" provides the responsibilities of CPs when sighting NCP vessels in the RA. Reports of PECCOE in 2013 indicated that there were no longer fishing activities of NCPs in the RA in 2012.[196]

The NEAFC Secretariat noted that for the period 2006-2008, there were 34 sightings of NCP vessels in the RA. While 16 IUU fishing activities were reported during the period 2006-2009, by contrast, there was no report of IUU fishing activities in the RA from 2010 to 2012.[197]

Chapter VII provides that a NCP may be granted the status of CNCP if it fulfils a number of requirements set up in the Scheme.[198] Article 35 of the Scheme now requires CNCPs to: (i)

[193] See http://ices.dk/Pages/default.aspx
[194] Doc. PRP Inf.-18, Transparency in NEAFC: A note by the NEAFC Secretariat for the Performance Review Panel.
[195] See http://www.neafc.org/
[196] Doc. AM 2013-09; Doc. AM 2013-51, op.cit.
[197] Doc. PRP Inf.-19, Non-Contracting Parties: A note by the NEAFC Secretariat for the Performance Review Panel.
[198] The Scheme, Art.34.

report annually to the NEAFC Secretariat the number of vessels notified in the NEAFC RA for the previous calendar year; (ii) report monthly the number of vessels in operation per month, the number of reports by type provided for under Articles 11 (Vessel Monitoring System), 12 (Communication of Catches) and 13 (Communication of Transshipments) of the Scheme and the number of notifications of entry into port required under Article 22 (Prior Notice of Entry into Port); (iii) report on the status of the follow-up infringements for the previous calendar year, in accordance with the provisions of Article 33 (Report of Infringements and Follow-up).[199] The granting of a CNCP status allows a NCP to claim an allocation to a "cooperating quota". Belize, Cook Islands, Estonia and Japan were among States that had been CNCPs in NEAFC RA, from 2003 to 2011.[200]

The Annual Meeting of NEAFC in 2013 agreed to renew the CNCP status of Canada, New Zealand and St Kitts and Nevis for the year 2014. Such status was refused to Serbia, on the grounds that Serbian authorities did not give confirmation that they had established all the necessary infrastructure to fulfill their obligations as a CNCP.[201]

6.2.1.2 Comments on this Topic by the 2006 Performance Review Panel

The Panel considered that NEAFC had transparent and appropriate rules with regards to CNCP status and that these rules had been applied accordingly. It further considered that obligations may be put on CNCPs to apply restrictions to IUU vessels in a way comparable to those obligations applied by CPs.

Panel comments

The Panel notes that NCP fishing activities have diminished drastically in the NEAFC RA. As to CNCPs, the provisions of Article 34 of the Scheme regulating NEAFC CNCP status seem to provide the necessary guarantee to ascertain that a NCP seeking such status has a real interest in the fisheries and that it is able, as a flag State, to ensure compliance with conservation and management measures established by NEAFC.

6.2.2 Extent to which NEAFC facilitates cooperation with non-Contracting Parties, including encouraging non-Contracting Parties to become Contracting Parties or to implement NEAFC conservation and management measures voluntarily.

Article 20 (4) of the NEAFC Convention stipulates that any State may become a CP to the Convention provided that three-fourth of all NEAFC CPs approve its application for membership. During the period 2006-2012, no NCP was reported to have applied to become a CP. It is therefore difficult to evaluate how NEAFC would treat applications for

[199] Recommendation 10:2014.
[200] Doc. PRP Inf.-19, op.cit.
[201] See Report of the 32nd Annual Meeting of the North-East Atlantic Fisheries Commission, op.cit.

membership.[202]

However, attention should be given to the "Guidelines for the expectation of future new Contracting Parties with regard to fishing opportunities in the NEAFC Regulatory Area" adopted by the NEAFC in 2003, which indicate the following:

"*Non Contracting Parties of NEAFC should be aware that presently and for the foreseeable future, stocks regulated by NEAFC are fully allocated, and fishing opportunities for new members likely to be limited to new fisheries (fisheries not currently allocated,*

New Contracting Parties will participate, on the same basis as existing Contracting Parties, in future allocations of stocks which are unregulated at the time when the application is made,

New Contracting Parties who were previously Cooperating Non Contracting Parties may request an allocation of a part of the relevant co-operative quota. Such allocations will be done on a case by case basis".[203]

6.2.2.3 Comments on this Topic by the 2006 Performance Review Panel

On the subject of participatory rights of new members in accordance with Article 11 of UNFSA, the Panel acknowledged the difficulties that NEAFC faced when determining participatory rights of new comers in fisheries already fully, or over-exploited and considered the processes established and followed to be appropriate.[204]

Panel comments

The Panel notes that the NEAFC Convention does not contain provisions that specifically invite relevant NCPs to become party to NEAFC, as required under the relevant provisions of UNFSA.[205] In addition, the Guidelines for the future new Contracting Parties with regard to fishing opportunities in the NEAFC Regulatory Area do not seem to offer real incentives to encourage NCPs to become NEAFC CPs.

In this connection, it is worth noting that a report of the NEAFC Secretariat indicates that no NCP has applied to become NEAFC CPs since 2006.

Drawing attention to best practices of RFMOs, CCAMLR,[206] NAFO,[207] SEAFO[208] and

[202] Doc. PRP Inf.-19, op.cit.
[203] See http://www.neafc.org/becomingacp
[204] The issue of participatory rights of new members in accordance with Article 11 of UNFA is also addressed under Sect.3.5.4. of this report.
[205] UNFSA, Art.8.
[206] CCAMLR Convention, Art. XXIX (1).
[207] NAFO Convention, Art. VXI (1).
[208] SEAFO Convention, Art. 22 (1).

SPRFMO[209] have specific provisions that, inter alia, invite NCPs fishing in their RAs to become parties to their conventions.

6.2.3 Extent to which NEAFC provides for action in accordance with international law against non-Contracting Parties undermining the objective of the Convention, as well as measures to deter such activities.

Chapter VII of the Scheme provides the legal framework for action against NCPs undermining the objective of NEAFC Convention, as well as measures to deter such activities. It defines the duties of CPs when sighting vessels conducting fishing operations in the RA.[210] The general assumption is that a NCP vessel that is observed engaging in fisheries or in support of fisheries in the RA is assumed to be undermining NEAFC's management measures, unless its flag State has the status of CNCP. The Scheme establishes procedures for inspecting such vessels and for the reporting of their observed activities.[211]

Under the PSC system, NCP vessels intending to call into port shall give prior notice of entry into port and provide the information in PSC forms required by the port State under the PSC of foreign fishing vessels. The port State shall forward the information to the NCP vessel flag State and CPs. NCP vessels that do not give prior notice of entry into port, nor provide the information under the PSC procedures required by the port State, shall be prohibited from entering NEAFC ports.[212] A NCP vessel, which enters a NEAFC port shall be systematically inspected.[213]

Surveillance efforts, including monitoring of IUU vessels after they leave the RA and cooperation with non-NEAFC port States to prevent IUU vessels from landing their catches, as well as the decision to closing ports to IUU vessels rather than simply refusing service in port, have also contributed to abating IUU fishing activities. Finally, the introduction of the IUU A and B listings in 2004 has contributed to the elimination of IUU fishing in the NEAFC RA in recent years. [214]

6.2.3.4 Comments on this Topic by the 2006 Performance Review Panel

The Panel acknowledged the progress made in addressing fishing activities by non-contracting and non-cooperating parties.

Panel comments

The Panel notes that NEAFC Scheme provides action in accordance with international

[209] SPRFMO Convention, Art. 18 (2).
[210] The Scheme, Art. 37.
[211] Ibid., Art.38.
[212] Ibid., Art.39.
[213] Ibid., Art 40.
[214] Doc. PRP Inf.-19, op.cit.

law, including the relevant provisions of UNFSA[215] and the FAO Compliance Agreement,[216] against NCPs that undermine the objective of its Convention, as well as measures to deter IUU fishing activities.

Nonetheless, NEAFC may wish to amend the provisions of Article 40 (1) of the Scheme concerning inspections of NCP vessels in port, in order to specify that such inspections shall be conducted only when a NCP vessel enters *voluntarily* the port of a CP.

In accordance with international law, only the "voluntary" entry into port of a foreign vessel, whether fishing or merchant vessel, by contrast to an entry motivated by a force majeure or distress, allows a port State to inspect a foreign vessel in its ports on suspicion of undermining the effectiveness of sub regional, regional and global fisheries conservation and management measures or to investigate and institute proceedings in respect of a vessel-source pollution in areas beyond national jurisdiction.[217]

6.3 Cooperation with other international organizations

6.3.1 Extent to which NEAFC cooperates with regional fisheries management organizations and other relevant international organizations.

Cooperation with other RFMOs. NEAFC has regular cooperation with 3 RFMOs located in the Atlantic Ocean, namely NAFO, the International Commission for the Conservation of Atlantic Tunas (ICCAT) and SEAFO, and has less regular cooperation with other RFMOs .

NAFO and NEAFC are geographic neighbours with straddling RAs and all NEAFC CPs are also NAFO CPs. Cooperation includes harmonization of technical regulations that would allow vessels to conduct fishing activities in the RA of each RFMO. NEAFC and NAFO manage jointly the "shallow pelagic" redfish in the Irminger Sea. NEAFC is helping also NAFO in software development regarding the inspectors' part of NAFO website and the two RFMOs have recently established a joint structure called the "Joint Advisory Group on Data Management" (JAGDM) , as a successor to the previous AGDC which was formally a NEAFC body even though it was open to participation by other RFMOs. They also cooperate on regulations regarding the protection of vulnerable marine ecosystems (VMEs).

NEAFC has regular informal cooperation with SEAFO, at the level of both Secretariats and NEAFC has supported the development of SEAFO in various ways since its establishment. It is also hosting SEAFO's VMS database. Several regulations in SEAFO are based on those in force in NEAFC.

NEAFC has had some cooperation with ICCAT on the management of shark species, which are taken as by-catch in fisheries managed by both organizations.

[215] UNFSA, Art.17.
[216] FAO Compliance Agreement, Art. VIII.
[217] UNFSA, Art.23; UNCLOS, Art.218.

In implementation of measures against IUU fishing, NEAFC Secretariat is required to share information on NEAFC IUU-B list with the Secretariats of CCAMLR, NAFO and SEAFO, and to circulate such list to other RFMOs.[218]

In addition, NEAFC cooperates with a number of RFMOs, through the Regional Fishery Body Secretariats Network, and through attendance of NEAFC CPs to meetings of other RFMO/As, such as CCAMLR, North Atlantic Marine Mammal Commission (NAMMCO), NASCO and Pollock in the Bering Sea. [219]

Cooperation with other relevant international organizations. NEAFC has regular close cooperation with international organizations, such as ICES and the OSPAR Commission. ICES is the organization in charge of providing scientific advice to NEAFC, since the signing of a Memorandum of Understanding (MOU) between NEAFC and ICES. NEAFC cooperates also with the OSPAR Commission in recent years in two major issues. The first issue is the adoption of a "collective arrangement" between NEAFC and OSPAR to formalize cooperation and coordination of actions between two organizations with different legal mandates. The second one is the identification of candidate areas for nomination as "Ecologically or Biologically significant marine Areas" (EBSAs). EBSAs are a process initiated by the Convention on Biological Diversity (CBD), which relies on regional mandate for identifying such areas. PECMAS is the NEAFC interlocutor for these two international organizations.

In addition, NEAFC Secretariat has occasional contact with a number of other organizations such as Interpol, the International Monitoring, Control and Surveillance Network, the North Atlantic Coastguard Forum, the Arctic Council and the Nordic Council.[220]

Cooperation with relevant global organizations. NEAFC has much closer links with the FAO than with other UN bodies, in view of the mandate of FAO on fisheries within the United Nations System. NEAFC Secretariat has attended also meetings convened by UN General Assembly, such as the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction.[221]

6.3.1.2 Comments on this Topic by the 2006 Performance Review Panel

The Panel acknowledged the active role that NEAFC and its Secretariat had played in global and regional cooperation. It recommended that such cooperation should continue and that

[218] The Scheme, Art. 44(5).
[219] Doc. PRP Inf.-20, Relationship with other international organizations: A note by the NEAFC Secretariat for the Performance Review Panel; See also the Report of the 32nd Annual Meeting of the North-East Atlantic Fisheries Commission, op.cit.
[220] Ibid.
[221] Ibid.

NEAFC should get involved in future cooperation at this level as the opportunity arose.

With respect to the OSPAR Commission, the Panel considered that future collaboration between NEAFC and the OSPAR Commission to be important given the potential overlap in resource management responsibility. This was particularly so given the concerns raised earlier over the development of deep-sea fisheries.

As to ICES, the Panel acknowledged the importance of maintaining ongoing coordination between NEAFC and ICES and, in particular, improving access to the scientific process underpinning ICES advice on Convention Area fisheries.

Panel comments

The Panel notes that NEAFC has established cooperation with RFMOs and other relevant international organizations.

The Panel notes also that the two sessions of the Review Conference on UNFSA which were held respectively in 2006 and 2010 have invited RFMOs to, inter alia, "strengthen and enhance cooperation among existing and developing regional organizations, including increased communication and further coordination of measures..."[222] and "...to invite regional fisheries management organizations with competence to manage straddling fish stocks to consider holding joint meetings to exchange views on key issues and to share best practices where appropriate;... ".[223] In this regard, attention should be given to the fact that RFMOs with competence for highly migratory fish stocks have already had such meetings.[224]

Accordingly, NEAFC CPs may wish to consider as to whether joint meetings with other RFMOs that manage straddling fish stocks with a view to sharing experience and best practices could be of benefit to NEAFC overall activities.

6.4 Special requirements of developing States

6.4.1 Extent to which NEAFC recognizes the special needs of developing States and cooperates with developing States, taking into account Part VII of the 1995 UN Fish Stocks Agreement.

Part VII of UNFSA addresses the requirements of developing States. It requests States to give full recognition of the special requirements of developing States in relation to conservation and management of straddling fish stocks and highly migratory fish stocks and development of fisheries for such stocks. Part VII indicates also the forms of cooperation that shall be extended to developing States and further invites States to provide special assistance to such

[222] Doc. A/CONF.210/2006/15, op.cit., para.32 (b).
[223] Doc. A/CONF.210/2010/07, Outcome of the 2010 resumed Review Conference on the UNFSA, para. II (f),
[224] Kobe Process, http://www.dfo-mpo.gc.ca/international/tuna-thon/Kobe-eng.htm.

States in the implementation of UNFSA, including by establishing special funds to that end.

In NEAFC, special requirements of developing States have not been a prominent issue within the Organization, due to the fact that none of the NEAFC CPs is a developing State. Some developing States had the status of CNCPs to NEAFC in the past, and currently only one developing State has the status of a CNCP. None of the regulations and measures adopted by NEAFC has provisions for allowing recognition of special needs of developing States. There has been no willingness in NEAFC to give developing States more flexibility in implementing regulations, and lack of compliance has resulted in non-renewal of CNCP status. A developing State having the status of a CNCP is therefore expected to live up to the same standards as any other State.

One of the reasons for not agreeing to give more flexibility to developing States, is motivated by the fact that CPs do not want to create loopholes in the NEAFC Scheme of Control and Enforcement.[225]

NEAFC's primary task is to focus on its own objective in its own area of competence. Assisting developing States is therefore a secondary task. However, NEAFC's experience can be useful for developing States, and NEAFC therefore is making some effort in that context.[226]

6.4.1.2 Comments on this Topic by the 2006 Performance Review Panel

This topic was not included in the mandate of the Panel.

Panel comments

The Panel notes that although NEAFC CPs have provided occasional or informal assistance to developing States, NEAFC, however, as an organization, has not established specific programmes to provide cooperation with developing States in relation to the conservation and management of fishery resources.

Concerning the scope of such cooperation, the 2006 Review Conference on the UNFSA has requested States individually and collectively through RFMOs to assist developing States in various aspects of fisheries conservation and management, in recognition of their special requirements in that field.

In this respect, the Review Conference indicated that developing States need, among other areas of assistance, critical assistance in capacity-building, particularly in the areas of (i) stock assessment and scientific research; (ii) data collection and reporting; (iii) monitoring, control and surveillance; (iv) port State control; (v) compliance with

[225] Doc. PRP Inf.-21, Special requirements of developing States: A note by the NEAFC Secretariat for the Performance Review Panel
[226] Ibid.

market and trade-related measures and meeting market access requirements, including with respect to health and quality standards; (vi) development of fisheries for straddling fish stocks and highly migratory fish stocks; (vii) human resource development; and (viii) information sharing. [227]

Developing States need also assistance that would facilitate their participation in RFMOs, including through facilitating access to fisheries for straddling fish stocks and highly migratory fish stocks, in accordance with Article 25 (1) (b) of UNFSA, as well as ensuring that such access benefits the States concerned and their nationals.[228]

NEAFC may wish to consider in which areas of fisheries governance it could cooperate with developing States, taking into account Part VII of the UNFSA.

6.4.2 Extent to which NEAFC provides relevant assistance to developing States as reflected in Article 26 of the 1995 UN Fish Stocks Agreement.

Article 26 of UNFSA refers to special assistance to developing States in the implementation of UNFSA, including cooperation for the establishment of special funds to assist developing States in the implementation of UNFSA and in meeting the costs involved in any proceedings for the settlement of disputes to which developing States may be parties. States and international organizations should also assist developing States in establishing new RFMO/As, or in strengthening existing ones, for the conservation and management of straddling fish stocks and highly migratory fish stocks.

In this respect, NEAFC indicates that it has been involved in some work with developing States. This includes assistance to other RFMOs, such as hosting SEAFO's VMS database and providing information on administrative issues to RFMOs that were being established.

NEAFC has shared also its experience with developing States at various meetings, conferences and workshops, such as through FAO, other RFMOs and the International MCS Network. This is done in a general manner by presenting how NEAFC was doing things, or in a more specific manner by using NEAFC's experience as a basis for a contribution to training for relevant officials, such as fisheries managers or inspectors. It is most common for the Secretariat to represent NEAFC in these exchanges of information, but the NEAFC President and CPs may do that also on occasion.

In addition, individual States regularly approach NEAFC, in order to seek advice and/or assistance regarding various fisheries-related development projects. The NEAFC Secretariat does not become a full partner in any of such projects, but would provide some basic advice and share NEAFC's experience on particular issues.

[227] See Doc. A/CONF.210/2006/15, op.cit., para.49.
[228] Ibid., para.50.

In fact, most development cooperation and capacity-building are done by NEAFC CPs, without any involvement of NEAFC as an organization. CPs are involved in numerous fisheries-based programmes with developing States where the work of NEAFC and the experience gained within NEAFC are relevant.[229]

6.4.2.3 Comments on this Topic by the 2006 Performance Review Panel

This topic was not included in the mandate of the Panel.

Panel comments

The Panel notes that NEAFC does not have a specific programme that allows it to provide relevant assistance, including financial mechanism to assist developing States, in accordance with Article 26 of UNFSA. NEAFC may wish therefore to consider providing technical assistance to developing States in the implementation of UNFSA in their respective regions. It may also wish to encourage NEAFC CPs to contribute to Part VII Assistance Fund established by the UN General Assembly in 2003, in implementation of Article 26 (1) of UNFSA.[230] This Assistance Fund is under the joint management of UNDOALOS and FAO. Iceland and Norway are the two NEAFC CPs that have already contributed generously to the Part VII Assistance Fund.

Referring to best practices of RFMOs, several organizations have established some forms of financial mechanism to provide assistance to developing States. For example, WCPFC has established a special requirement fund for developing Member States.[231] SEAFO has established mechanisms to provide not only financial assistance to developing countries, but also technical assistance, information exchange to better facilitate conservation and management of stocks, and assistance with scientific research and MCS.[232]

SPRFMO provides also financial assistance, human resource development assistance, technical assistance, transfer of technology, advisory and consultative services to developing State CPs in the South Pacific region for the purpose of improving fisheries conservation and management, stock assessment and scientific research as well as MCS, compliance and enforcement. In addition, the SPRFMO Convention requires CPs to establish a fund for the purpose of facilitating the effective participation of developing State CPs in the region in the work of SPRFMO Commission and its subsidiary bodies.[233]

[229] Doc. PRP Inf.-21, op.cit.
[230] UN General Assembly Resolution A/RES/58/14 adopted on 24 November 2003.
[231] WCPFC Convention, Art.30 (3)(4).
[232] SEAFO Convention, Art.21(4).
[233] SPRFMO Convention, Art.19 (4)(5).

7. Financial and Administrative Issues

7.1 Availability of resources for activities

7.1.1. Extent to which financial and other resources are made available to achieve the aims of NEAFC and to implement NEAFC's decisions.

A note prepared by the NEAFC Secretariat for the Panel[234] indicates that the overall financial position of the organization is very healthy. The note points out that no project has ever been cancelled due to lack of funding. In 2004, it was decided that a General Fund of 50% of the annual budget should be set up. Reserves in this fund amount to approximately £1,369,468 (i.e. almost 104% of the agreed expenditure of £1,322,300 for 2013). It should be recalled that at the Annual Meeting in 2006, NEAFC agreed to set aside £15,000 per annum for a Building Fund; this now amounts to £ 90,000.

The costs of maintaining the organization, based on the budget for 2013, were as follows: staff costs (38%); contribution to ICES for scientific advice (21%); costs of maintaining and expanding NEAFC's IT needs (13.5%); office costs (19.5%) and meeting costs (8%).

In recent years, all CPs have paid promptly their contributions with an exception in 2013 caused by an administrative error made by one of the CPs.

7.1.2. Comments on this Topic by the 2006 Performance Review Panel

This topic was not included in the mandate of the Panel.

Panel Comments

NEAFC appears to have the necessary financial resources to undertake all needed activities.

7.2 Efficiency and cost effectiveness

7.2.1. Extent to which NEAFC is efficiently and effectively managing its human and financial resources, including those of the Secretariat.

The NEAFC Secretariat indicated that it had currently three full time employees, two part time employees and one free-lance IT consultant. Staff consists of the Secretary; the Monitoring Control and Surveillance Officer; the Information Technology and Web Production Officer; the Office Manager; the Administrative Assistant and the Web Developer/Programmer.[235]

[234] Doc.PRP Inf.-22.
[235] Ibid.

7.2.2. Comments on this Topic by the 2006 Performance Review Panel

This topic was not included in the mandate of the Panel.

Panel Comments

NEAFC appears to be efficient and cost effective in the composition and functioning of its Secretariat.

7.2.2. Extent to which the schedule and organization of the meetings could be improved.

A note prepared by the Secretariat[236] indicated that the number of NEAFC meetings had increased greatly over the past few years, particularly since the NEAFC Secretariat had hosted meetings of coastal States. These meetings used to take place in October when advice had been received from ICES. However, coastal States' meetings may take place at other times of the year when necessary and this has been an increasing trend.

NEAFC Annual Meetings were held during the second week of November with a quite standardized agenda and did not change much from one meeting to the next, except efforts to streamline the agenda, rather than to make structural changes. PECCOE generally met in April of each year and at the beginning of October with standardized agendas. PECMAS always met in early October with reasonably standardized agenda and additional meetings had been held as necessary. Agendas for the Finance and Administration Committee had minimal changes between years.

In view of the recent workload of AGDC, the number of its meetings had risen from one to three meetings per year and its agenda had changed to include data confidentiality and security. JAGDM has now replaced AGDC, and it will likely meet once or twice a year, with the NEAFC and NAFO Secretariats alternating in hosting the meetings. In 2013, the WG on the Future of NEAFC met twice to discuss amendments to the Rules of Procedure. If needed, future meetings could be held in the margins of the Annual Meeting. In general, the agendas of various working groups depend on the tasks that they are entrusted to perform, as they do not have the same kind of regular function as permanent committees.

The Secretariat notes also that the agendas of the NEAFC Commission, those of all committees and working groups are to some extent influenced by the main topics at hand. There was therefore a combination of fixed items that are considered at all meetings and topical items that are considered at one or more meetings without being a long-term standard fixture of the agenda. However, the general rule has been that there is a trend towards consistency in the presentation of agenda within NEAFC.

7.2.3. Comments on this Topic by the 2006 Performance Review Panel

[236] Doc.PRP Inf.-23.

This topic was not included in the mandate of the Panel.

Panel Comments

The schedule and agendas of NEAFC meetings seem to be manageable for the Secretariat, despite an increase on the number of meetings of coastal States hosted by NEAFC Secretariat over the past few years.

8. Summary of Findings

This report reviews in detail the performance of NEAFC against the stated terms of reference. Detailed analyses are presented in the preceding sections outlining overall performance and providing some suggestions of issues to be addressed by the Commission in the future. NEAFC is one of the premier RFMOs in the world, as reflected by the many positive aspects brought to light in this review. In many cases there has been considerable progress since the 2006 review of NEAFC, particularly with respect to addressing ecosystem impacts of fisheries, combatting IUU fishing, bottom fishing protocols in relation to VMEs, and strengthening the legal and institutional bases for effective fisheries management. As well, there remain many challenges to the organization. Chief among them is the inability to agree for some stocks on catch allocation keys that ensure that catches do not exceed catch levels recommended by independent scientific analyses conducted by ICES. This aspect was noted in the 2006 report as well as a shortcoming of NEAFC. The reasons for the inability to reach consensus allocations are complex, in some cases the contemporary distributions of resources (e.g., mackerel) do not comport with historical participation in the fishery. In the case of redfish stocks, there remain disputes about the productivity and stock structure of redfish in various areas and depths. The fact that these disputes are allowed to potentially undermine the health of stocks or create risks of stock depletion is inconsistent with the precautionary approach detained in several sections above.

The “traffic light” approach detailed in Figure 11 is intended to provide a quick read of the progress and challenges of NEAFC as it deals with the various challenges it faces. Although somewhat of an arbitrary classification, the reasons for assigning categories to each of the specific criteria are detailed in the body of the report. A green classification is intended to depict substantial progress and acceptable risks of underperformance, yellow is intended to convey concerns by the panel that there are management challenges, and red indicates some areas of serious underperformance indicating the need for high priority be given for ensuring improvements.

Figure 11 (next page). Traffic-light summary of performance of NEAFC relative to evaluation criteria for the 2014 performance review

Area	General Criterion	Specific Criterion	Status	Comments
NEAFC Convention	Effectiveness in Meeting Objectives	Assess in relation to Objective in Article 2		
Conservation & Management	Status of LMRs	Status of LMRs in relation to MSY		
		Trends in status of those species		
		Status of species depending on targeted LMRs		
		Trends in status of those species		
	Ecosystem Approach	Decisions account for EBFM		
	Data Collection & Sharing	Agreed formats, specifications and time-frames		
		Rules to ensure timely data		
		Data gathered & shared with CPs		
		Data gaps addressed		
	Quality and Provision of Scientific Scientific Advice	Extent to which NEAFC receives best scientific advice on LMRs and ecosystems		
	Adoption of conservation & management measures	Extent to which NEAFC has adopted measures based on best available science		Redfish Irmiger Sea
				Redfish ICES I&II
				Haddock Rockall
				NE Herring
				Mackerel
				Blue Whiting
				Deepwater Stocks
		Extent to which precautionary approach applied		TACs generally set at reference levels
		Consistent/compatible measures - A-7 of UNFSA		Redfish Irmiger Sea
				Redfish ICES I&II
				Haddock Rockall
				NE Herring
				Mackerel
				Blue Whiting
		Extent fishing rights successfully allocated		
		Mgt. of previously unregulated fisheries		
		Minimize harmful impacts on ecosystems		
		Minimize pollution, waste, discards		
		Rebuilding plans for depleted stocks		
	Capacity Mgt.	Identified optimum capacity		
		Prevent/eliminate excess capacity		
		Monitor levels of fishing effort		
Compliance & Enforcement	Flag state duties	Flag state duties set out in instruments		
		Measures effectively implemented		
	Port state duties	NEAFC adopted FAO Port State measures agreement		
		Measures effectively implemented		
	Monitoring, Control, Survellance (MCS)	Adopted integrated MCS measures		
		Measures effectively implemented		
	Follow-up on infringements	NEAFC & CPs follow up on ingringements		
	Cooperative detection/ deterance	Cooperative measures to detect and deter non-compliance		
		mechanisms effectively utilised		
	Market-related measures	Rights & duties of CPs as market states to combat IUU fishing		
		measures effectively utilized		
Decision-making and dispute resolution	Decision-making	Efficiency of NEAFC meetings in making critical decisions		
		Transparent, consistent & adequate procedures		
	Dispute settlement	Adequate mechanisms for resolving disputes		
International Cooperation	Transparency	NEAFC operating in a transparent manner		
		Decisions, reports & science made public		
	Relationship with Non-contracting parties	NCPs have undertaken fishing activities in the RA		
		NEAFC facilitates cooperation w/NCPs		
		Action against NCPs undermining objectives of NEAFC		
	Cooperation with other international organizations	Cooperation with other RFMOs and Ios		
	Special requirements	Recognizes needs of developing states		
		Provides relevant assistance		
Financial and administrative issues	Availability of resources for activities	Financial and other resources made available		
	Efficiency & cost effectiveness	efficiently managing human and financial resources		
		Schedule and organization of meetings improved		

Annex 1

Terms of Reference: Permanent Committee on Management and Science (PECMAS)[237]

1. Pursuant to Article 3 (8) of the Convention, and Chapter 5 of the Rules of Procedure, there shall be a Permanent Committee on Management and Science.

2. The functions of the Committee shall be to:

   a. draft requests for advice under the Memorandum of Understanding with the International Council for the Exploration of the Sea;

   b. Review proposals for management measures, submitted by Contracting Parties, to take due account of the impact of fisheries on other species and marine ecosystems and of the need to conserve marine biological diversity, and in doing so propose, where necessary, conservation and management measures that address the need to minimise harmful impacts on living marine resources and marine ecosystems; and

   c. provide the Commission with information on developments in science, technology and management tools to ensure that management measures are based on the best scientific evidence available i.e. changes in assessment methods, changes in the perception of data and progress with respect to moving from stock based advice to fishery based advice as well as monitoring the progress of the ecosystem approach and the integration of fisheries management and environmental concerns;

   d. at the request of the Commission review the effectiveness of the management measures and plans agreed;

   e. review the support of conduct of scientific research to be used in the advisory process and possible NEAFC initiatives in this respect;

   f. consider such other management and science matters as may be referred by the Commission;

   g. report its findings, conclusions and/or proposals to the Commission.

3. The Committee shall work by correspondence and the Secretariat shall propose solutions, which allow the optimum use of electronic communication and the NEAFC website. The Committee may meet in conjunction with the Annual Meeting and inter-sessionally if deemed necessary by the Commission.

4. The Committee may establish, with the approval of the Commission, such subsidiary bodies as are necessary for the performance of its functions.

[237] Copied from http://www.neafc.org/tor/pecmas, accessed 19 June 2014

Annex 2 Article 7 of the UN Fish Stocks Agreement

Article 7 Compatibility of conservation and management measures

1. Without prejudice to the sovereign rights of coastal States for the purpose of exploring and exploiting, conserving and managing the living marine resources within areas under national jurisdiction as provided for in the Convention, and the right of all States for their nationals to engage in fishing on the high seas in accordance with the Convention:

   (a) with respect to straddling fish stocks, the relevant coastal States and the States whose nationals fish for such stocks in the adjacent high seas area shall seek, either directly or through the appropriate mechanisms for cooperation provided for in Part III, to agree upon the measures necessary for the conservation of these stocks in the adjacent high seas area;

   (b) with respect to highly migratory fish stocks, the relevant coastal States and other States whose nationals fish for such stocks in the region shall cooperate, either directly or through the appropriate mechanisms for cooperation provided for in Part III, with a view to ensuring conservation and promoting the objective of optimum utilization of such stocks throughout the region, both within and beyond the areas under national jurisdiction.

2. Conservation and management measures established for the high seas and those adopted for areas under national jurisdiction shall be compatible in order to ensure conservation and management of the straddling fish stocks and highly migratory fish stocks in their entirety. To this end, coastal States and States fishing on the high seas have a duty to cooperate for the purpose of achieving compatible measures in respect of such stocks. In determining compatible conservation and management measures, States shall:

   (a) take into account the conservation and management measures adopted and applied in accordance with article 61 of the Convention in respect of the same stocks by coastal States within areas under national jurisdiction and ensure that measures established in respect of such stocks for the high seas do not undermine the effectiveness of such measures;

   (b) take into account previously agreed measures established and applied for the high seas in accordance with the Convention in respect of the same stocks by relevant coastal States and States fishing on the high seas;

   (c) take into account previously agreed measures established and applied in accordance with the Convention in respect of the same stocks by a sub-regional or regional fisheries management organization or arrangement;

(d) take into account the biological unity and other biological characteristics of the stocks and the relationships between the distribution of the stocks, the fisheries and the geographical particularities of the region concerned, including the extent to which the stocks occur and are fished in areas under national jurisdiction;

(e) take into account the respective dependence of the coastal States and the States fishing on the high seas on the stocks concerned; and

(f) ensure that such measures do not result in harmful impact on the living marine resources as a whole.

3. In giving effect to their duty to cooperate, States shall make every effort to agree on compatible conservation and management measures within a reasonable period of time.

4. If no agreement can be reached within a reasonable period of time, any of the States concerned may invoke the procedures for the settlement of disputes provided for in Part VIII.

5. Pending agreement on compatible conservation and management measures, the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature. In the event that they are unable to agree on such arrangements, any of the State concerned may, for the purpose of obtaining provisional measures, submit the dispute to a court or tribunal in accordance with the procedures for the settlement of disputes provided for in Part VIII.

6. Provisional arrangements or measures entered into or prescribed pursuant to paragraph 5 shall take into account the provisions of this Part, shall have due regard to the rights and obligations of all States concerned, shall not jeopardize or hamper the reaching of final agreement on compatible conservation and management measures and shall be without prejudice to the final outcome of any dispute settlement procedure.

7. Coastal States shall regularly inform States fishing on the high seas in the sub region or region, either directly or through appropriate sub regional or regional fisheries management organizations or arrangements, or through other appropriate means, of the measures they have adopted for straddling fish stocks and highly migratory fish stocks within areas under their national jurisdiction.

8. States fishing on the high seas shall regularly inform other interested States, either directly or through appropriate sub regional or regional fisheries management organizations or arrangements, or through other appropriate means, of the measures they have adopted for regulating the activities of vessels flying their flag which fish for such stocks on the high seas.

Annex 3 Article 11 of the UN Fish Stocks Agreement

Article 11 New members or participants

In determining the nature and extent of participatory rights for new members of a sub-regional or regional fisheries management organization, or for new participants in a sub-regional or regional fisheries management arrangement, States shall take into account, inter alia:

(a) The status of the straddling fish stocks and highly migratory fish stocks and the existing level of fishing effort in the fishery;

(b) The respective interests, fishing patterns and fishing practices of new and existing members or participants;

(c) The respective contributions of new and existing members or participants to conservation and management of the stocks, to the collection and provision of accurate data and to the conduct of scientific research on the stocks;

(d) The needs of coastal fishing communities which are dependent mainly on fishing for the stocks;

(e) The needs of coastal States whose economies are overwhelmingly dependent on the exploitation of living marine resources; and

(f) The interests of developing States from the sub region or region in whose areas of national jurisdiction the stocks also occur.

Annex 4

ICES estimates, current advice and management measures established by NEAFC for depleted stocks[238].

Stock	Stock state and ICES advice	Reference points	NEAFC measures
Orange roughy	Stock state unknown, can sustain very low rates of exploitation. Catches dropped to low levels, suggesting sequential depletion. No directed fisheries. Bycatches in mixed fisheries should be as low as possible.	F_{MSY} proxies = 0.04–0.06	No targeted fishery for orange roughy in NEAFC RA, ICES Subareas V, VI, VII. Fishing activities shall be restricted to vessels of Contracting Parties having participated in fishery for orange roughy in the NEAFC Regulatory Area in areas other than V, VI and VII prior to 2005. Total catches <150 t
Blue ling (Divs. IIIa and IVa and Subareas I, II, VIII, IX, and XII)	Below poss. reference points. Landings data suggest that the stock in Subareas I and II is severely depleted. No directed fisheries and a reduction in bycatches should be considered until the scientific information is sufficient to prove the fishery sustainable. Measures should be implemented to minimize the bycatch. Closed areas to protect spawning aggregations should be maintained and expanded where appropriate.	None	Prohibition to conduct all fishery with bottom contacting gear in the period 15 February-15 April in a specified area to protect spawning aggregations
Red (blackspot) seabream (Subareas VI, VII and VIII)	Catches well below historic levels, indicating depletion. B likely below $B_{trigger}$ and B_{lim}	None	N/A
Spurdog	Depleted. Highly likely that SSB is below any candidate MSY $B_{trigger}$. No target fishery, bycatch in mixed fisheries should be reduced	MSY exploitation ratio = 0.029	No directed fishery in the Convention Area since 2009. Provision of all data, including fisheries data, to ICES for further evaluation of the state of

[238] Extract from Table 1 in document PRP Inf. -02, prepared by the Secretariat for the Performance Review Panel. Some of these estimates have been superseded by new information provided by ICES in 2014

	to the lowest possible level. A rebuilding plan should be developed		the stock
Porbeagle	Depleted. No fishing for porbeagle should be permitted. Landings of porbeagle should not be allowed. A rebuilding plan should be developed	None	No directed fishery in the Convention Area since 2011. Provision of all data, including fisheries data, to ICES for further evaluation of the state of the stock
Basking shark	Depleted, likely below poss. reference points. No catches, fisheries prohibited.	None	No directed fishery in the Convention Area since 2011. Provision of all data, including fisheries data, to ICES for further evaluation of the state of the stock
Deep-sea sharks	Depleted. No fishery should be permitted. Measures to prevent bycatch	None	Ban on targeted fisheries since 2012. Obligation to submit all data on deep sea sharks available to ICES for further evaluation of the state of the stocks.

Annex 5. Principles of relevance to an ecosystem approach to fisheries (EAF)

The various forms of an ecosystem approach or ecosystem-based management described in literature or adopted formally by states refer to a number of inter-related guiding concepts, principles or requirements. Many of these are accepted and agreed; some of the fundamental ones were established formally in the 1982 Convention. Others have been derived or expanded from that convention. While these may not be new or specific to EAF, they become more relevant under this approach. Sources from which these principles are primarily documents developed by FAO, and their web-based explanations of them. They are reviewed in the following sections.

Avoiding overfishing

Article 61.2 of the 1982 Convention requires that states "ensure that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation". This requirement is reflected in many of the agreements made to establish regional fishery management bodies and in most national fisheries legislation. For instance, the Australian ESD charter states that "a fishery must be conducted in a manner that does not lead to over-fishing". While overfishing is not always precisely defined, the related objective is to allow catch levels (or fleet sizes) that are compatible with the maintenance of ecologically viable stock at an agreed level or range of levels, with acceptable probability that it is viable.

The same requirement is expressed in the 1980 CCAMLR, which states that "exploited populations must not be allowed to fall below a level close to that which ensures their greatest net annual increase". This concept has also been central to fisheries management as established in the 1982 Convention which states that "measures shall also be designed to maintain ... populations of harvested species at levels which can produce the maximum sustainable yield (MSY), as qualified by relevant environmental and economic factors" (Article 62.3). As above, the related objective is to allow catch levels (or fleet sizes) that maintain stock at or above the MSY level. The FSA has established that, for precautionary purposes, MSY should be considered as a "limit" to be avoided and not a target to be reached.

Ensuring reversibility and rebuilding

The 1980 CCAMLR Convention requires that "risks of changes to the marine ecosystem that are not potentially reversible over two or three decades must be minimized". The United States National Marine Fisheries Service Panel on ecosystem-based fisheries management (EBFM) also noted as a principle that "once thresholds and limits [of an ecosystem] have been exceeded, changes can be irreversible".

When stocks have been accidentally driven to excessively low levels, they should be rebuilt. The concept of rebuilding is reflected in the 1982 Convention (Article 62.3) which requires restoring "populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors". This imperative is also reflected in the Australian ESD charter, which states that "for those stocks that are accidentally over-fished, the fishery must be conducted such that there is a high degree of probability that the stock(s) will recover". The CCAMLR Convention requires that, when stocks are accidentally overfished, "depleted populations must be restored to [former] levels". The related objective is to plan for, and implement within mandatory timeframes, a

rebuilding strategy for exploited stock(s) that are below the agreed and preferably precautionary reference points.

Minimizing fisheries impact

Article 5f of the FSA requires that "fishing operations should be managed to minimize their impact on the structure, productivity, function and biological diversity of the ecosystem. Related objectives are to conduct fisheries in a manner that (i) does not threaten by-catch species; (ii) avoids mortality of, or injuries to, endangered, threatened or protected species; (iii) minimizes the impact of fishing operations on the ecosystem generally.

Considering species interactions

The 1982 Convention refers to the need to "take account of ... the interdependence of stocks" (Article 62.3) and requires that "coastal states shall take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened" (Article 62.4). The requirement is also reflected in Article 5b of the FSA. The CCAMLR Convention requires that "ecological relationships between harvested, dependent and related species ... be maintained". This requirement often specifically refers to endangered, threatened or protected species. The related objective is to minimize by-catch and discards.

Ensuring compatibility

Boundaries of ecosystems and jurisdiction are unlikely to be fully compatible, and many ecosystems will straddle political boundaries, EEZs or extend into the high seas. However, management measures need to be coherent across the resource range. The FSA requires that "conservation and management measures [be] established for the high seas and those adopted for areas under national jurisdiction shall be compatible in order to ensure conservation and management of the straddling fish stocks and highly migratory fish stocks in their entirety" (Article 6.2). A related objective is to promote collaboration between sub-national or national authorities (as relevant) to ensure that measures taken under different jurisdictions converge towards agreed objectives.

Applying the precautionary approach

Aquatic ecosystems are complex and dynamic, and they change seasonally and in the longer-term. However, little is known about their complexity. Fisheries, aquaculture and other activities modify ecosystems. Their interconnections lead to potentially significant transboundary effects. Consequently, ecosystem resilience and human impact (including reversibility) are difficult to forecast and hard to distinguish from natural changes. In such circumstances, a precautionary approach is advisable. This approach is imbedded in the UNCED Declaration (Principle 15), which states that "the precautionary approach should be widely applied and that, where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation". The approach has been adopted for fisheries in the FSA and the FAO Code of Conduct, and guidelines are available for its practical implementation. Related objectives are to (i) improve research to better understand ecosystems, (ii) take

measures that account for complexity and dynamics and uncertainty and (ii) give attention to transboundary impacts.

Improving human well-being and equity

The requirement to satisfy human well-being (compatible with ecosystem requirements) is central to the concept of sustainable development, and it recognizes that uses can be sustainable only if they are of value to human beings and contribute to their well-being. The objective of EAF is the management and sustainable use of the aquatic resources in their marine environment for efficient and effective delivery of food, economic wealth and recreation.

With a view to improving human well-being, governance should endeavour to "establish and preserve inter-generational, intra-generational, cross-sectoral, cross-boundary and cross-cultural equity". Equity implies that similar options are available to all parties, a principle of stewardship by Governments and the community. There exist a number of sub-concepts, but as yet no consensus has been reached. "Inter-generational equity" is widely referred to, and requires that future generations be given the same opportunity as the present ones to decide on how to use resources. It requires avoiding actions that are not potentially reversible on some agreed time scale (e.g. a human generation), consideration of long-term consequences in decision-making, and rehabilitation of degraded physical and biological environments. Lack of "intra-generational equity" (i.e. equity among sections of the present generation) is recognized as a major source of both conflict and non-compliance. "Inter-sectoral equity" seems very hard to define and make operational, but implies, for instance, that the fishery sector be treated fairly when its interests conflict with those of other sectors. "Cross-boundary equity" may be a condition for successful shared-stocks agreements. "Inter-cultural equity" is relevant when allocating resources to different cultures or defining rights (e.g. between indigenous and other populations).

Allocating user rights

The need to explicitly allocate user rights in fisheries is now fairly widely accepted. The need to allocate them against payment (for example, to capture economic rent or pay for management costs) is a matter of ongoing debate. The "user-pays principle" aims at fuller internalization of production costs. It states that "all resource users should pay for the full long-term marginal social cost of the use of a resources and related services including any associated treatment cost". In other words, authorized users should pay for the exclusive privilege granted to them to use a public resource. The principle can be implemented through payments for licenses or quotas, or though taxes.

Promoting sectoral integration

The need for integrating the management of fisheries and other uses (e.g. in the coastal area) has been expressed in these terms: "States should ensure that an appropriate policy, legal and institutional framework is adopted to achieve the sustainable and integrated use of the resources, taking into account the fragility of coastal ecosystems and the finite nature of their natural resources and the needs of coastal communities" (FAO Code of Conduct, Article 10.1). An expression of this need can also be found in the recent World Wildlife Foundation (WWF) guidelines, which state that "ecosystems are of value to society and can potentially be used in many ways, to satisfy various sectors' needs and strategic interests, now and in the

future".[13] This requires functional connections between fisheries management institutions, other sectoral institutions, and other institutions in charge of the ecosystem maintenance.

Broadening stakeholders participation

Most recent international instruments require that stakeholders be more closely associated to the management process, in data collection, knowledge-building, option analysis, decision-making and implementation. The need to deal with fisheries in their ecosystem context implies an even broader participatory process. This requirement is often combined with that of decentralizing decision-making at lower levels of administration to better take account of all sectoral and community interests. The concept of subsidiarity proposes that decisions be taken at the lowest possible level. It is increasingly invoked together with the recommendation to decentralize decision-making and to increase direct participation of stakeholders. It implies the creation of institutions and the development of governance capacity at lower governance levels.

Maintaining ecosystem integrity

Integrity is often stated as one of the goals of ecosystem management. While there is no agreed definition, ecosystem integrity is usually taken as implying or requiring: (i) maintenance of biodiversity at biological community, habitat, species and genetic levels (as required in the CBD); and (ii) maintenance of the ecological processes that support both biodiversity and resource productivity.