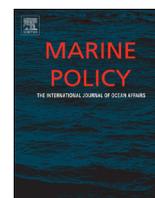




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# Evaluating the basic elements of transparency of regional fisheries management organizations



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## ABSTRACT

This paper reports on the first global study of regional fisheries management organization (RFMO) transparency. It was prompted by recent scholarship that suggests that RFMOs are failing to meet their conservation and management mandates and that transparency is a critical element of this performance. In this study, 11 RFMOs were evaluated using 34 questions, divided into three sections: (i) access to full, up-to-date and accurate information; (ii) public participation in decision-making; and (iii) access to outcomes. Secretariats for all 11 RFMOs were contacted, and all responded, to correct and comment on initial findings and to share additional information. The total scores in this study reflect transparency as measured against current good practices in RFMOs as a whole, rather than some sort of idealistic benchmark. Each question should therefore be seen as a diagnostic tool that shows where some RFMO (s) fall short and how they can correct the shortfall based on the practices of their peers. These results have highlighted a number of good practices amongst RFMOs, with no single RFMO standing out as having particularly poor transparency practices. On the other hand, there also were not any RFMOs that had exemplary transparency practices in every respect and all RFMOs still have room to improve upon their basic transparency practices. This first transparency assessment is necessarily broad in nature and considers only very basic elements of transparency. It is to be expected that as RFMO practices become more sophisticated, so will the techniques and criteria of future transparency assessments.

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## 1. Introduction

Transparency is broadly recognized as an essential component of sustainable development and good governance [1–3], especially with regard to the management of natural resources [4]. In order to develop a more secure investment environment and provide the public with knowledge of natural resource rents received by their governments, terrestrially-based standards such as the Extractive Industries Transparency Initiative have been established to ensure greater fiscal transparency [5]. Though the value of transparency in marine resource extraction, particularly fisheries, is likewise broadly recognized [6] (Sections 172 and 173), transparency standards have not yet been applied. The Food and Agricultural Organization of the United Nations' (FAO) voluntary Code of Conduct for Responsible Fisheries states that decision making processes and management of fisheries should be transparent [7] (Sections 6.13 and 7.1.9). However, while several technical

guidelines have been produced by the FAO to facilitate implementation of the Code [8], none yet explicitly consider transparency.

Increases in fishing pressure accompanied by global declines in fish stocks strongly suggest that fisheries need to be more effectively managed [9]. The United Nations Fish Stocks Agreement [10] recognizes regional fisheries management organizations and agreements (RFMOs) as institutions and processes through which these high seas resources are to be sustainably managed. Although these organizations now cover much of the geographic extent of the world's oceans beyond national jurisdiction [11], the global status of fish stocks continues its slow decline [12]. According to some scholars and environmental non-governmental organizations (NGOs), RFMOs are failing to achieve their objectives [13–19]. However, the extent of the problem is often obscured due to a lack of publicly available information, particularly concerning compliance and enforcement [20–22].

While international ocean governance bodies, including RFMOs, have been discussing the importance of transparency for over twenty years, it is unclear how much their practices have evolved [23]. This paper seeks to address that question and is the first study of RFMOs that focuses exclusively on transparency.

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## 2. Methods

The scope of this study was limited to active, multi-lateral RFMOs that manage fisheries mainly in the high seas. Bilateral treaties (such as the US-Canada Halibut Agreement) were not included. The following 12 RFMOs met these pre-requisites: CCAMLR,<sup>1</sup> CCSBT, IATTC, ICCAT, IOTC, IWC,<sup>1</sup> NAFO, NEAFC, SEAFO, SIOFA, SPRFMO, and WCPFC (For expanded acronyms, see Table 1). However, at the time of this study, SIOFA (a relatively new agreement, established in 2012, [24]) did not have a website and there was not enough publicly available information to complete the questionnaire for the organization; therefore, it was removed from the analysis. SPRFMO, which entered into force in the same year as SIOFA, has a functional website and therefore was included to the extent possible in the analysis.

To compare the transparency of RFMOs, a standardized questionnaire was developed (Appendix A) consisting of 34 questions. Because there is no single recognized “best practice” standard for RFMO performance, our questions drew upon a variety of good practices that were generally recognized,<sup>2</sup> as well as those that were identified in response to issues exposed in RFMO performance reviews [26,27,7,13,20]. The questionnaire divided transparency into three broad sections: availability of information, participation in decision-making processes, and access to outcomes. These sections reflect the three categories of transparency articulated within the Aarhus Convention [27]. The first two sections of the questionnaire are virtually identical to the first two Aarhus categories (“access to full, up-to-date and accurate information,” and “public participation in decision-making”). The questionnaire for the current study divides the second category of transparency, participation in decision-making, into two subsections in order to account for the actual process of decision-making (e.g. the participation of civil society observers in meetings) as well as the records of the decision-making (e.g. the publication of meeting reports). The third section of transparency, access to outcomes, expands upon the third Aarhus category (“access to justice”) to incorporate compliance measures, performance reviews, and reporting progress made towards objectives, as recommended by international bodies [28] and scholars [29,20,9]. The questions included in the questionnaire can be found in Table 2 below.

Each of the 34 questions was assigned a range of points, with the most transparent behavior receiving the highest score, based on criteria reflecting the range of current practices, adding up to a maximum of 50 points overall (Table 3). For example, for question 3.2.2, “Are the findings of the performance review(s) publicly available online?” an RFMO would receive one point if the performance review was available online and zero points if it was not.

As RFMO practices became clearer over the course of research, the questions were revised in order to better capture current practices. For example, question 1.2 (“Does [the RFMO] list staff members and contact information for the Secretariat”) was created in the process of sending out the questionnaires because one organization (WCPFC) did not have contact information for members of the Secretariat available, which made it difficult to send the questionnaire to that organization for review. Often questions

were revised in response to feedback from the Secretariats. For example, in Question 3.2.3 of the original questionnaire (“Are there independent evaluators involved in the performance review?”), a maximum score was given only if all members of the performance review panel were independent. However, because a number of organizations objected to that criterion as being overly stringent, it was changed so that a maximum score was assigned if a simple majority of the members of the RFMO performance review panel were independent. Question 7, “Are scientific/observer data available at a resolution/scale such that they can be used in independent scientific analysis?” was the only instance where the range of scores was not re-adjusted upon request from Secretariats because public access to data sufficient for independent peer-review was viewed as a non-negotiable requirement for good scientific practices (i.e. the ability to peer-review and repeat analyses).

The evaluation took place in two stages. For the first stage, the questionnaire was completed using information that was readily available from the organization’s website. Key documents were sought from each website, including the organization’s conservation measures, Convention text, rules of procedure, annual reports, sub-/committee reports, and meeting documents. The second stage occurred after all questions that could be answered from publicly available information were addressed, and involved sending the partially-completed questionnaires to the RFMO Secretariats for input and comments. There were questions in the questionnaire that could not be answered from the information and documents available from the RFMOs’ websites; for example, Question 2.2, which asks whether “Observers are ever asked to leave meetings.” For this and other such questions, input helpfully provided by the Secretariats was indispensable to rounding out the overall picture.

The questionnaire (Appendix A) reflects this two-stage process—with separate columns for questions that could, or could not, be answered from the web site. In the spirit of transparency, the entire questionnaire was sent to Secretariats for comments, not simply the questions that required their input. In ambivalent situations, the Secretariats were taken at their word. For example, if a particular RFMO had never experienced a legal dispute but stated that if such a dispute were to occur, the outcomes would be publicly available, that RFMO was given the same number of points as an organization that had actually experienced a legal dispute and its outcomes were publicly available online.

In addition, if Secretariats disagreed with their score on any question, that score was always reconsidered and adjusted, unless there was compelling evidence to support the original score. The completed questionnaires from all RFMOs were collectively reviewed to ensure that the rationale for assigning specific point values was consistent across organizations. Because each section of the questionnaire has a different number of questions and points, the overall score for each RFMO was calculated in two ways—by weighting the questions equally and also by weighting the sections equally.

## 3. Results

### 3.1. Total scores and overall high/low scores

The overall average score for RFMOs for all sections is 76 percent of the total available points if all questions are equally weighted and 75 percent if the sections are weighted equally (Table 4; Fig. 1). In general, scores are not very sensitive to the weighting scheme—those calculated using equally weighted sections were within two percentage points of scores calculated using equally weighted questions.

<sup>1</sup> Both CCAMLR and IWC are technically not RFMOs. However, they have been included here because they have some functions that are similar to RFMOs. The International Whaling Commission (IWC) was originally established to manage commercial whaling. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) manages all fisheries in the Antarctic’s Southern Ocean.

<sup>2</sup> “Good practice” in this sense is meant to indicate a variety of possible approaches, as well as leaving open the possibility that specific transparency practices could in the future become codified as “best practice” as more experience in implementation is developed. However, individual RFMOs face their own unique management challenges and detailed, across-the-board prescriptions of “best practices” are unlikely to be appropriate for all aspects of transparency.

**Table 1**  
Basic information on the RFMOs included in this study. Information in this table generated from the RFMOs' websites as well as the FAO's Regional Fishery Body factsheets [25].

Acronym	Full name	Number of contracting parties	Entry into force
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources	25	1982
CCSBT	Commission for the Conservation of Southern Bluefin Tuna	5	1994
IATTC	Inter-American Tropical Tuna Commission	21	2010
ICCAT	International Commission for the Conservation of Atlantic Tunas	47	1969
IOTC	Indian Ocean Tuna Commission	31	1996
IWC	International Whaling Commission	88	1946
NAFO	Northwest Atlantic Fisheries Organization	12	1979
NEAFC	North East Atlantic Fisheries Commission	5	1982
SEAFO	South East Atlantic Fishery Organization	7	2003
SIOFA	South Indian Ocean Fisheries Agreement	5	2012
SPRFMO	South Pacific Regional Fisheries Management Organization	12	2012
WCPFC	Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean	25	2004

**Table 2**  
Questions from RFMO transparency questionnaire, divided by sub-section.

Section 1: Availability of data and basic information
1 Does the organization have a website?
2 Does the website list staff members and contact information for the Secretariat?
3 Does the organization list its members, cooperating non-members, and/or observers?
4 Is there public online access to current regulations, including conservation measures?
5 Are summary data available publicly on the internet?
6 Is there an observer data collection/monitoring program for most fisheries?
7 Are scientific/observer data available at a resolution/scale such that they can be used in independent scientific analysis?
8 Are the data up to date?
9 Do the data come with metadata and/or description of their origins and collection methods?
Section 2: Participation in decision-making
<i>Sub-section 1: NGO observers</i>
1 Does the organization allow for NGO observers?
2 Is a procedural description/required forms for becoming an observer available on the organization's website?
3 Are the criteria [for becoming an observer] exclusive/stringent?
4 Does it take longer than a year to receive observer status?
5 Can a minority of parties prevent an NGO from obtaining observer status?
6 How can NGO observers participate?
<i>Sub-section 2: Meetings</i>
1 Does the organization publish a schedule of upcoming meetings?
2 Are meeting reports available to the public?
3 Does the organization include an attendance list in meeting documents?
4 Are there attributed statements in meeting documents?
5 Which meetings are open to observers?
6 Are observers ever asked to leave meetings?
Section 3: Access to outcomes
<i>Sub-section 1: Progress towards objectives</i>
1 Does the organization publicly identify its objectives?
2 Does the organization have publicly available quantitative indicators against which its outcomes can be assessed (e.g. "targets")?
3 Does the organization produce regular reports on the state of the resource/environment over time (e.g. OSPAR's Quality Status Report) and/or the organization's progress towards meeting its objectives?
<i>Sub-section 2: Organizational performance</i>
1 Has the organization undergone a performance review?
2 Are the findings of the performance review(s) publicly available online?
3 Are there some independent evaluators involved in the performance review?
4 Has the organization agreed to a regular schedule of performance reviews?
5 Has the organization responded to the performance review?
<i>Sub-section 3: Compliance reporting</i>
1 Are compliance reports publicly available?
2 Are there lists of compliance measures taken by parties and/or lists of infractions (e.g. national implementing legislation, "white" and/or "black" lists, lists of vessels under investigation, successful prosecutions, etc.)?
3 What are the MCS requirements on Contracting Parties/Flag States?
<i>Sub-section 4: Dispute resolution</i>
1 Is dispute resolution covered in the Rules of Procedure or Convention text?
2 Should disputes occur, are records of disputes and their outcomes available?

Overall, no organizations were identified as particularly transparent or particularly non-transparent. Most organizations scored above-average in some categories of transparency and below-average in other areas of transparency. NEAFC was the only organization to score below average for all sections; however, it

was not the lowest-scoring organization for Section I (CCSBT and IOTC scored the lowest in this section) or Section III (IWC scored the lowest in this section). WCPFC was the only organization to score above average for all sections; however, it was not the overall highest-scoring organization (NAFO scored higher than

WCPFC using both weighting systems; IATTC scored higher than WCPFC when the sections were weighted equally).

### 3.2. Section-level results

A summary matrix of all results is provided in Fig. 1. Of the three sections, RFMOs on average scored lowest (66 percent of the maximum points for the section) on the first, *availability of data and information* (Fig. 2). A comparison across questions within this section (Fig. 1) reveals that there was one question (1.7, “Are scientific/observer data available at a resolution/scale such that they can be used in independent scientific analyses?”) where all of the RFMOs failed to score the maximum number of points. This was the only instance where no RFMO achieved the maximum score. While none of the RFMOs had scientific and observer data publicly available at a resolution/scale that allowed for independent scientific review and replication of their results, CCAMLR, ICCAT, NAFO, and SPRFMO all received the highest scores in this section because they had data that were up-to-date and they included metadata, or at least some description of how the data were collected.

**Table 3**  
Questionnaire summary table. Information on sections appears in **bold** and information for subsections appears in normal font.

Section/subsection	Number of questions	Maximum number of points
<b>Availability of data and basic information</b>	<b>9</b>	<b>13</b>
<b>Participation in decision-making</b>	<b>12</b>	<b>17</b>
NGO observers	6	6
Meetings	6	11
<b>Access to outcomes</b>	<b>13</b>	<b>20</b>
Progress towards objectives	3	6
Organizational performance	5	6
Compliance reporting	3	6
Dispute resolution	2	2
<b>Total</b>	<b>34</b>	<b>50</b>

**Table 4**  
Transparency questionnaire summary data; % of section and total points for each RFMO. % of total points given both for equally weighted sections and for equally weighted sections. SPRFMO was removed from analysis (indicated with N/A) because too few questions in Section III were applicable.

RFMO	% Of section points			% of total points	
	Section I	Section II	Section III	Equally weighted sections	Equally weighted questions
CCAMLR	69.2	76.5	71.1	<b>72.3</b>	<b>72.4</b>
CCSBT	53.8	82.4	77.5	<b>71.2</b>	<b>73.0</b>
IATTC	84.6	94.1	68.4	<b>82.4</b>	<b>81.6</b>
ICCAT	76.9	82.4	73.7	<b>77.7</b>	<b>77.6</b>
IOTC	53.8	88.2	77.5	<b>73.2</b>	<b>75.0</b>
IWC	57.7	91.2	63.2	<b>70.7</b>	<b>71.4</b>
NAFO	76.9	79.4	92.1	<b>82.8</b>	<b>83.7</b>
NEAFC	57.7	73.5	65	<b>65.4</b>	<b>66.0</b>
SEAFO	61.5	100	67.5	<b>76.3</b>	<b>77.0</b>
SPRFMO	61.5	92.9	N/A	N/A	N/A
WCPFC	69.2	94.1	82.5	<b>81.9</b>	<b>83.0</b>
Average (%)	<b>65.7</b>	<b>86.8</b>	<b>73.8</b>	<b>75.4</b>	<b>76.1</b>

Transparency questionnaire summary data; % of section and total points for each RFMO. % of total points given both for equally weighted sections and for equally weighted sections. Red section scores indicate that the RFMO scored below the average score for that section and black scores indicate that the RFMO scored above average for that section. Similarly, red total section scores indicate that the total organizational score was lower than average and black total scores indicate that the total organizational score was above average. SPRFMO was removed from analysis (indicated with N/A) because too few questions in Section III were applicable.

RFMOs on average received 87 percent of the total possible points for the second section of the questionnaire, *Participation in Decision-Making* (Fig. 3), making it the highest-scoring section. One organization, SEAFO, received the full score for this section. An NGO’s ability to attend and participate in RFMO meetings (measured in the first subsection of this section) reflects how transparent decision-making is to civil society outside of government and industry groups. CCAMLR, CCSBT, and ICCAT all lost one point in this section because a minority of parties could prevent an NGO from obtaining observer status; CCAMLR lost additional points because its website did not include a procedural description of how to become an observer.

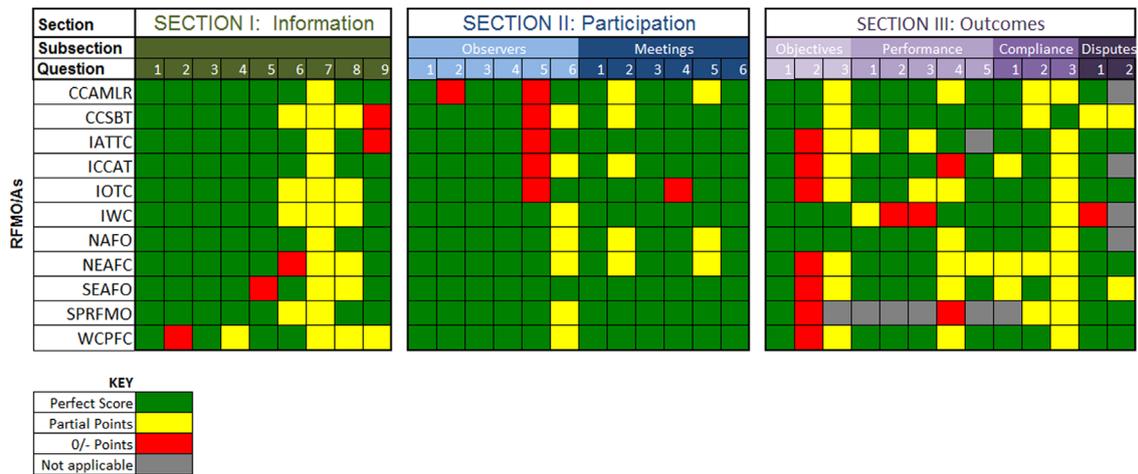
In the third section, *Access to Outcomes* (Fig. 4), RFMOs scored an average of 74 percent of the total possible points for that section. While the average score for this section is neither the highest nor the lowest, Fig. 1 reveals that in this section, RFMOs got the least number of perfect scores (i.e. the maximum number of points available for a particular question). Because SPRFMO is a new organization, many of the questions for this section were not applicable; SPRFMO was consequently removed from analysis for this particular section (indicated with an “X” in Figs. 4 and 5). Within this section, one of the most critical elements of RFMO transparency assessed is that of compliance [20]. No RFMO received the maximum number of points within the compliance sub-section (3.3), although IATTC, IOTC, IWC, NAFO, and WCPFC came close, each losing one point for not having independent verification of MCS reporting.

### 3.3. Question-level results: high-scoring questions

There were certain questions for which all or most RFMOs demonstrated good transparency practices. There are nine questions (1.1, 1.3, 2.1.1, 2.1.3, 2.1.4, 2.2.1, 2.2.3, 2.2.6, 3.1.1; Appendix A, supplementary materials) for which all organizations received the total maximum points. All of the organizations included in our study had a website (except SIOFA, as previously mentioned), publicly listed their member States, allowed for NGO observers, did not have overly stringent criteria to become an NGO observer, allowed for organizations to obtain observer status in less than a year, published a schedule of upcoming meetings, included an attendance list in their meeting reports, reported that observers were never to seldom asked to leave meetings, and publicly identified its objectives.

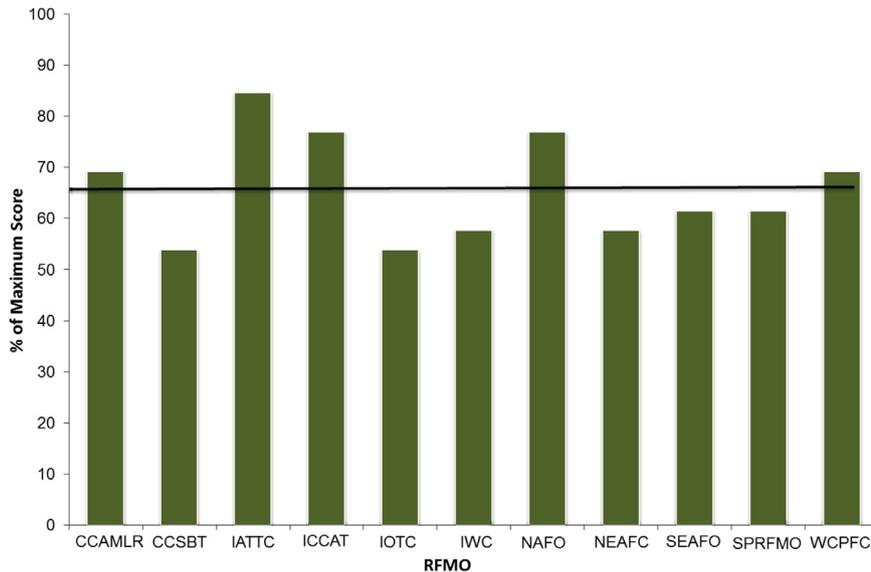
In addition to the items discussed above, there were a number of questions where all but one organization received a full score (1.2, 1.4, 1.5, 2.1.2, and 2.2.4). All organizations but one (WCPFC) identified their staff members and had at least some staff members’ contact information publicly available. All organizations except for one (WCPFC) had public access to current regulations; WCPFC *does* publicly list conservation measures, but it did not receive the maximum number of points because it was not clear from the website which conservation measures were currently in effect. All of the organizations except for SEAFO had summary data publicly available; all organizations except CCAMLR posted on their website a procedural description of how to become an observer; and all organizations except IOTC attributed statements to specific member states/observers in at least some meeting documents.

Another area where the RFMOs in our study performed relatively well was with respect to performance reviews. All of the organizations in our study underwent a performance review of some sort. Most of the organizations not only made the findings of the performance review(s) publicly available online but also responded to the performance review, working to address the shortcomings identified. CCSBT was the only RFMO to receive a full score for the performance review section because it was the only



**Fig. 1.** Grid of individual results from transparency questionnaire, with individual questions listed as columns and RFMOs as rows. A light gray block (green in web version) indicates that the organization received a full score for a particular question; a medium gray block (yellow in web version) indicates that the organization received a partial score for a particular question; a black block (red in web version) indicates that the organization received zero or negative points for a particular question; and white (gray in web version) indicates that the question was not applicable for that organization. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

### I. Availability of Data and Basic Information



**Fig. 2.** Questionnaire Results from Section 1, Availability of Data and Basic Information. Average score was 66% of the maximum available points, indicated by the horizontal line.

one that, in addition to the items above, involved independent evaluators in the review process and agreed to a regular schedule of future reviews.

Generally speaking, RFMOs are doing a good job of providing basic information about their activities, of allowing for NGO observers at meetings, of making meeting documents available, of carrying out performance reviews, and of identifying their general objectives.

#### 3.4. Question-level results: low-scoring questions

As noted above, while all of the organizations in our study had some data publicly available, none of them received a maximum score for having scientific/observer data publicly available at a resolution sufficient for use in independent scientific peer-review or analysis (Question 1.7). IATTC and WCPFC received the highest score for stating that they would provide scientific/observer data

upon request, although this assertion was not tested (i.e. full resolution data were not requested as part of this study).

While RFMOs generally scored the best in the second section of the questionnaire and all allowed for NGO observers to attend meetings, a number of organizations (CCAMLR, CCSBT, IATTC, ICCAT, and IOTC) allow a minority of member States to block an NGO's application for observer status (Question 2.1.5). Although the secretariats of many of these RFMOs stated that this has not been a problem in practice, the fact that a minority has the capacity to block an application for observer status poses a potential problem. RFMOs received a maximum score for this question only if a majority was needed to block an observer's participation. In addition, the majority of RFMOs failed to achieve the maximum score with respect to the degree to which observers and NGOs were allowed to participate (Question 2.1.6). All of the organizations allowed for NGOs to make comments during the meetings and many of the organizations allowed for NGOs to author or co-author meeting documents. Only a handful of

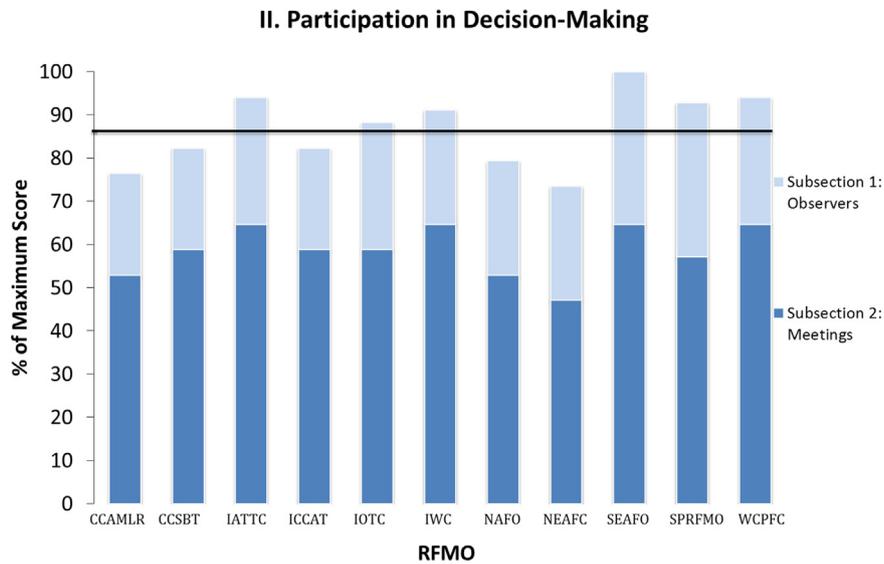


Fig. 3. Questionnaire Results from Section 2, Participation in Decision-Making. Average score was 87% of the maximum available points, indicated by the horizontal line.

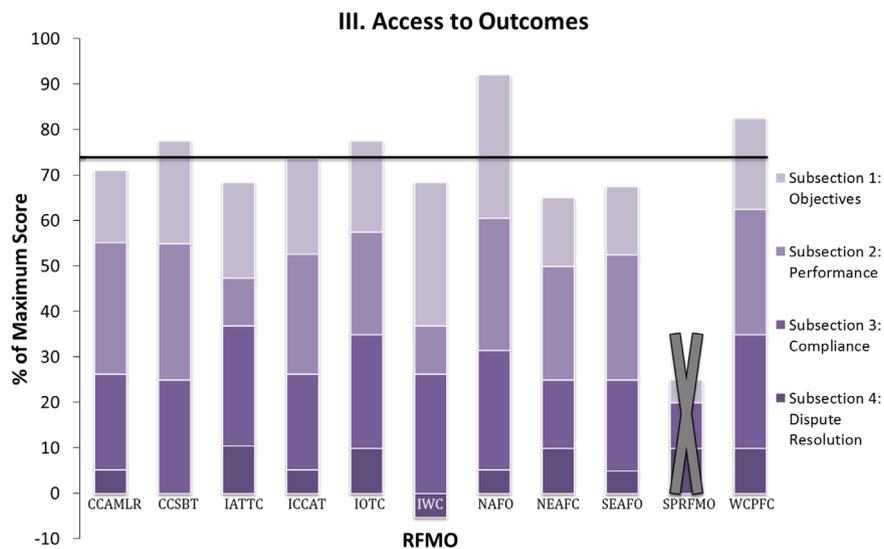


Fig. 4. Questionnaire Results from Section 3, Access to outcomes. Average score was 74% of the maximum available points, indicated by the horizontal line. SPRFMO was removed from analysis for this section because too few questions were applicable.

organizations (CCAMLR, IATTC, IOTC, and SEAFO), however, allowed NGOs to serve on sub-committees or working groups – a requirement to receive the maximum number of points for that question.

RFMOs received full scores for the fewest number of questions in the third section, indicating that these organizations could make the greatest number of improvements with respect to public access to outcomes. Specific areas for improvement include availability of monitoring, control, and surveillance (MCS) information (Question 3.3.3), officially agreeing to a regular schedule of performance reviews (Question 3.2.4), and reporting outcomes against prior objectives (Questions 3.1.2 and 3.1.3). Only one organization (CCSBT) indicated that it had some sort of independent verification of MCS measures. In addition, although all RFMOs have undergone some sort of performance review, only three (CCSBT, IATTC, and IWC) have officially committed to a regular schedule of performance reviews.

RFMOs generally performed poorly with respect to reporting against outcomes. In other words, while all of the organizations publicly identify their general objectives (Question 3.1.1), a number of those organizations (IATTC, ICCAT, IOTC, NEAFC, SEAFO,

SPRFMO, and WCPFC) fail to identify quantitative indicators against which its outcomes can be assessed (e.g. “targets”, Question 3.1.2) and two more (CCAMLR and CCSBT, in addition to the RFMOs mentioned above) failed to produce regular reports on the state of the resource and the organization’s progress towards meeting its objectives (Question 3.1.3).

In summary, some of the key areas where RFMO transparency is weakest include: lack of publicly available scientific data; allowing a minority of member States to block an NGO’s application for observer status; not allowing observers to serve on subcommittees or working groups; lack of independent verification of MCS measures; weak or nonexistent commitments to regularly scheduled performance reviews; and generally failing to report against objectives.

#### 4. Discussion

Recent scholarship suggests that RFMOs are failing to meet their conservation and management mandates [9,13,17–19] and further identifies transparency as a critical element of RFMO

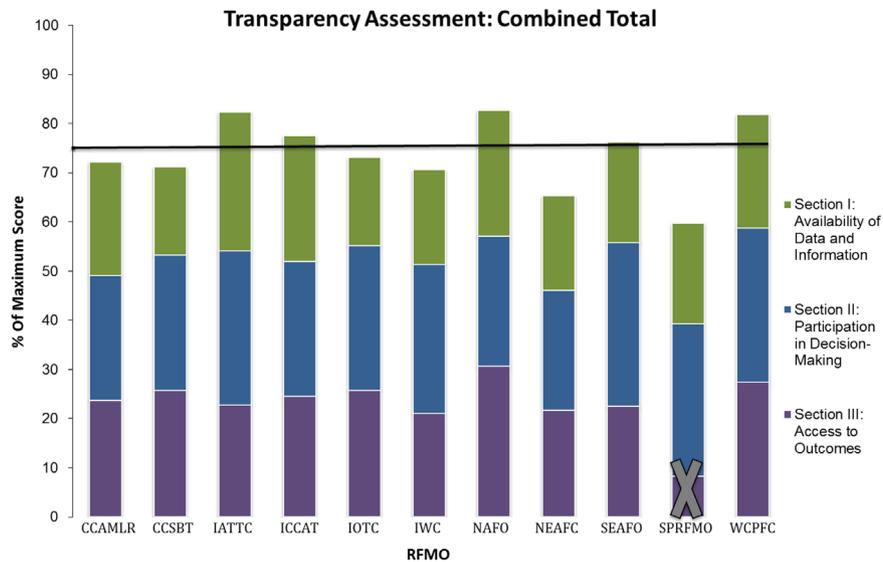


Fig. 5. Total results from transparency questionnaire, divided by section. Average score was 76% of the maximum available points, indicated by the horizontal line. SPRFMO was removed from analysis for this section because too few questions were applicable.

performance [9,30,26]. With respect to the transparency of RFMOs, Lodge et al. [26] claim, “some RFMOs have been slow to embrace a more transparent and inclusive approach to their work, [although] there are signs that they are moving in this direction.” In their comprehensive evaluation of the transparency in information on compliance for WCPFC, Gilman and Kingma [20] found that the organization was only fully transparent for 28% of the elements of their transparency standard, which also included enforcement and compliance indicators.

The current study differs from other assessments of RFMOs [20,13] in that it compares all large high seas RFMOs (as well as CCAMLR and IWC), rather than focusing on one RFMO in particular, and it only evaluates indicators of the transparency of those RFMOs. Our study focuses exclusively on the *transparency* of organizations, and does not presume to evaluate the overall *performance* of the organization. If organizations openly acknowledge that they are not meeting their objectives, they would receive a high score in our study even though criteria used in performance-based studies, such as that conducted by Cullis-Suzuki and Pauly [13], would regard them as failing. For example, in the self-assessment portion of their performance review, CCSBT commented “the estimates of the depletion of the spawning stock biomass suggest that, in terms of outcomes, the CCSBT has not been successful in managing [Southern Bluefin Tuna]” [31]. Although the CCSBT would receive poor marks for performance, they received a full score in our study for the question on reporting against objectives.

It is possible for an RFMO to be transparent and also fail to meet its conservation and management goals. Indeed, a recent (2014) study concludes that RFMOs are still not fully meeting their requirements to protect *vulnerable marine ecosystems* [16]. The 2009 performance review of ICCAT was notoriously critical of that RFMO [32]; yet, ICCAT scored above-average in our transparency assessment, receiving just shy of 78% of the total available points. Thus, it is worth highlighting that while transparency may be necessary for long-term effective management, alone it is insufficient. Accountability mechanisms, for example, are also required.

Similar to the ICCAT example, WCPFC received a more positive review of its transparency in this study (82–83% of the total possible points, depending on weighting) than in an earlier study by Gilman and Kingma [20]. There, it was found that the RFMO was not transparent for 36% of the criteria; partially transparent for 36% of the criteria; and fully transparent for 28% of the criteria

[20]. The stark difference in results lies, in part, due to the different scope of the studies. The Gilman and Kingma assessment focused specifically on the transparency of information with respect to compliance, whereas our study looks at transparency more generally, with only one subsection (3.3) focusing on compliance. The criteria in Gilman and Kingma’s study were also much more detailed, and tailored to that one RFMO, than those used in our study, which were necessarily broad in order to ensure that the questions asked would be applicable to a greater number of RFMOs. Finally, the analytical approaches between the two studies differed. Gilman and Kingma’s assessment was more qualitative in nature (e.g. for each criteria, WCPFC was recorded as having no transparency, partial transparency, or full transparency) whereas this study was more quantitative in nature (e.g. for each question, RFMOs were assigned a numerical score that fell within a specified range for that particular question). The differences between Gilman and Kingma’s in-depth review of WCPFC’s transparency and our more general assessment suggest that while most RFMOs now incorporate the basic elements of transparency into their operations, an in-depth assessment would likely identify further transparency gaps specific to each organization.

Our results suggest that RFMOs are more *generally* transparent than might be expected based upon previous scholarship, with three caveats. First, this transparency assessment is very broad in nature and considers many very basic elements of transparency (e.g. Question 1.1 “Does the organization have a website”). Secondly, even though our questions are very basic, still no RFMO received full scores (or nearly so) across all categories, suggesting that for each RFMO some basic practices still need improvement. Finally, in accommodating the objections of the Secretariats to certain questions and giving organizations the benefit of the doubt, it should be recognized that this scoring-system is generous towards what RFMOs say they are doing. Even though transparency has been a topic of discussion for over twenty years [23], RFMO transparency is in some respects still very rudimentary. It is to be expected that as RFMO practices become more sophisticated, so will the techniques and criteria of future transparency assessments.

This study had a 100% response rate and generally benefited from the comments and feedback from the Secretariats. Indeed, through informal communication between the authors and Secretariats (carried out for the purposes of completing this assessment), many expressed interest in improving their own transparency. Some indicated that they

would explore options for adopting some of the transparency practices used as the standard for this study. Admittedly, many of the changes needed to improve the transparency of these organizations require the consent of the States that are contracting parties to that RFMO, rather than simply administrative will. Nevertheless, Secretariats' interest in making organizational changes to increase their transparency combined with NGO and individual States' calls for greater RFMO transparency are promising indications that (at least some) RFMOs will continue to take steps to improve their transparency.

## 5. Conclusions: improving transparency in RFMOs

This study was the first of its kind, and as such had to make a number of judgment calls. The authors erred on the side of caution, setting the bar rather low, and taking RFMO Secretariats at their word on a number of critical points. Even so, none of the RFMOs received a perfect score. That said, at least one RFMO achieved a maximum score for all but one of the thirty-four questions in our questionnaire. Therefore, the collective best practices of all RFMOs combined received 49 of 50 total points (98%), suggesting that significant improvement is not only feasible, but could be achieved just by sharing knowledge and best practices within the RFMO community. The FAO facilitates dialogue between RFMOs and has also established general best-practices guidelines for RFMOs [7]. The FAO, therefore, could be the venue for circulating detailed measures RFMOs can take to improve their transparency, facilitating conversation among RFMOs, and providing logistical support to those organizations that wish to adopt better practices.

The total scores in this study reflect transparency as measured against current good practices in RFMOs as a whole. In order to apply to all of the RFMOs equally, the questions were necessarily broad and aimed to evaluate practices generally, rather than the specific mechanisms by which those practices are carried out. Each question should therefore be seen as a diagnostic tool that gives an initial indication of where some RFMO(s) fall short and how they might correct the shortfall based on the practices of their peers. A more in-depth transparency analysis that focuses exclusively on a single RFMO (e.g. [20]) would undoubtedly highlight more specific actions an organization could take to behave more transparently.

The results of this study have highlighted a number of good practices amongst RFMOs, with no egregious examples of non-transparent behavior that need singling out. On the other hand, there were no clear winners either, and all RFMOs still have room to improve upon their basic transparency practices. Although transparency is critical to the success of RFMOs, it is not the only requisite element. Looking to the future, we would therefore suggest that RFMO transparency become better-linked to accountability measures, including an elucidation of Flag State monitoring and reporting requirements, independent scientific peer-review, and meeting reporting that ascribes comments (stated positions, etc.) to the parties who made them. Transparent behavior is a first step towards providing civil society the means to hold its governments (and, subsequently, industry) accountable for actions taken under the auspices of RFMOs in the management and exploitation of our common property resources.

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## Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at <http://dx.doi.org/10.1016/j.marpol.2015.03.003>.

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