

COVID-19 and multilateral fisheries management

22 January 2021



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The management of multilateral fish stocks is suffering from the COVID-19 pandemic. The pandemic has disrupted the operations of Regional Fisheries Management Organisations (RFMOs), which have jurisdiction over fish stocks that either straddle the exclusive economic zones of several countries or are predominantly in the high seas. This is largely because of reduced monitoring, control and surveillance capacity due to limitations imposed on the operations of observer and surveillance programmes and the challenges of decision making in virtual meetings. A survey undertaken in July 2020, to which 13 RFMOs and nine OECD members responded, reveals that: i) over two-thirds of RFMOs have reduced in-person and on-board observation of vessels, increasing the opportunity for unscrupulous operators to engage in illegal, unreported or unregulated (IUU) fishing; ii) almost all (92.3%) RFMOs surveyed have experienced disruption to their regular scheduled meetings and 84.6% reported disturbance to regular decision making; iii) on a positive note, the COVID-19 pandemic may spur the uptake of new technologies for virtual meetings and the monitoring of fishing activities.

Key messages

A brief assessment

- The COVID-19 pandemic has disrupted the operations of Regional Fisheries Management Organisations (RFMOs), which have jurisdiction over fish stocks that either straddle the exclusive economic zones (EEZs) of several countries or are predominantly in areas beyond national jurisdictions (ABNJ).
- The pandemic has made the fight against illegal, unreported and unregulated (IUU) fishing more difficult. This is largely due to the reduced monitoring, control and surveillance (MCS) capacity, with limitations imposed on the operations of on-board observer programmes, and in-port and at-sea inspections. Consequently, there is increased scope for IUU activities to go unnoticed and unpunished. Evidence of increased IUU fishing remains anecdotal, being notoriously difficult to observe and estimate. The actual impacts on multilateral fisheries will depend on how fishers react to changes in MCS and how the socio-economic context of fisher operations has changed due to the crisis (i.e. seafood prices, fishing costs, and changes to management and support measures made in response to COVID-19).
- Other aspects of multilateral fisheries management are also affected. It has been difficult for RFMOs to collect the necessary data required to assess the health of stocks, and the state of ecosystems, leading to greater uncertainty around management decisions. In addition, consensus-based decision making, used by most RFMOs – combined with the technical limitations some members face in attending virtual meetings and the inherent challenges of negotiating in virtual meetings – have resulted in many RFMOs deferring, or intending to defer, decisions until in-person meetings can resume. Several RFMOs have limited any decisions taken to budget issues or to essential conservation and management measures (CMM). The medium-to-long-term costs of deferring decisions on issues such as the allocation of total allowable catch (TAC) or the adoption of new CMMs, could be significant if they lead to adverse impacts on fish stocks thereby reducing the profitability of the fisheries sector.

Recommendations

- In the short term, RFMO parties could work together to minimise the impact of the COVID-19 pandemic through the following measures:
 - RFMO parties can co-operate to ensure observer programmes function effectively by facilitating the safe transportation of fisheries observers both to the vessels they are to embark and back to their point of origin. This would include exempting such observers from travel restrictions and border controls, in line with the recommendations of the International Maritime Organization (IMO).
 - RFMO parties can implement best practices to prevent IUU fishing by adopting legal arrangements that would deny the products of IUU fishing access to fish value chains and public support and services, such as market measures and port state measures.
 - Share best practices and experiences on the tools and strategies that have successfully overcome the limitations to effective decision making in virtual meetings (i.e. time constraints, participation limitations, and inter-personal issues). Collaboration frameworks, such as the Regional Fisheries Bodies Secretariats' Network (RSN) facilitated by the FAO, can play an important role in this regard.
- In the medium-to-long term, RFMO parties could strengthen the functioning and governance of RFMOs through the following changes:

- Implement timely and effective monitoring mechanisms by investing in the capacity for remote monitoring and control of fishing activity (i.e. accelerated uptake of electronic monitoring systems). The better co-ordination of data collection and standards for both compliance and scientific purposes between regions, with a view to promoting the global exchange of information is important.
- Review and reform (where necessary) decision-making processes. Integrating new technologies, reviewing decision timelines, establishing efficient voting protocols and objection procedures, or formalising extraordinary processes, such as introducing special clauses or frameworks for similar events in the future, would help to increase the effectiveness of RFMOs and improve the sector's resilience to shocks.

Introduction

The COVID-19 pandemic has had significant impacts on the management of fisheries worldwide. In response, governments have implemented a mix of policy responses as they try to mitigate the social and economic damage (OECD, 2020_[1]). However, many fish stocks straddle the exclusive economic zones (EEZs) of several countries or are predominantly in areas beyond national jurisdiction (ABNJ) and require a regional approach to management.

The so-called “multilateral fisheries” require different governance approaches and the COVID-19 pandemic has posed a different set of challenges. Many of the fisheries targeting these stocks are under the jurisdiction of an RFMO.¹ An assessment issued by the Food and Agriculture Organization of the United Nations (FAO) in May 2020 highlighted the potential negative consequences of the pandemic on MCS and on scientific research undertaken by RFMOs (FAO, 2020_[2]). Crucially, the reduced monitoring and enforcement in multilateral fisheries could increase the opportunity for unscrupulous operators to engage in IUU fishing (OECD, 2020_[1]). Understanding what these impacts are and how to mitigate them effectively is vital to the sustainability of multilateral fisheries.

Based on a survey undertaken in July 2020 of 13 RFMOs² (Table 1) and to which nine OECD members responded, as well as discussions with experts, this paper identifies on-going disruptions to the work of RFMOs caused by the pandemic and assesses the potential implications they have had on IUU fishing, sustainable resources management, and on the functioning of RFMOs. It provides recommendations for policy makers and managers working in multilateral fisheries on the policies and strategies that can safeguard the effective management of these areas.

¹ The creation of RFMOs is mandated under the United Nations Convention on the Law of the Sea (UNCLOS) and the United Nations Fish Stock Agreement (UNFSA).

² As the survey was conducted amongst RFMO Secretariats, the views expressed do not necessarily reflect those of the RFMO parties.

Table 1. Participating RFMOs in the OECD survey

Acronym	Organisation name	Type of mandate
CCAMLR	The Commission for the Conservation of Antarctic Marine Living Resources	Generic
CCSBT	The Commission for the Conservation of Southern Bluefin Tuna	Tuna
GFCM	The General Fisheries Commission for the Mediterranean	Generic
IATTC	The Inter-American Tropical Tuna Commission	Tuna
ICCAT	The International Commission for the Conservation of Atlantic Tunas	Tuna
IOTC	The Indian Ocean Tuna Commission	Tuna
NAFO	The Northwest Atlantic Fisheries Organization	Generic
NEAFC	The North East Atlantic Fisheries Commission	Generic
NPFC	The North Pacific Fisheries Commission	Generic
SEAFO	The South East Atlantic Fisheries Organisation	Generic
SIOFA	The Southern Indian Ocean Fisheries Agreement	Generic
SPRFMO	The South Pacific Regional Fisheries Management Organisation	Generic
WCPFC	The Western and Central Pacific Fisheries Commission	Tuna

Note: Although CCAMLR is a conservation organisation and not strictly an RFMO, it is included in this table in view of its mandate to monitor fisheries in the area of its competence.

Source: Based on communication with relevant RFMOs and Løbach et al. (2020^[3]).

Effects of the COVID-19 pandemic on the ability of RFMOs to combat IUU fishing in multilateral fisheries

Restrictions on travel imposed by many countries to combat the spread of COVID-19 have severely impacted in-person observation in multilateral fisheries by preventing observers³ from embarking on vessels. Except for GFCM, all RFMOs surveyed have observer requirements,⁴ and for 69% of these some form of human observation was suspended, either of transshipments, port inspections, or the presence of observers on fishing vessels (Figure 1).

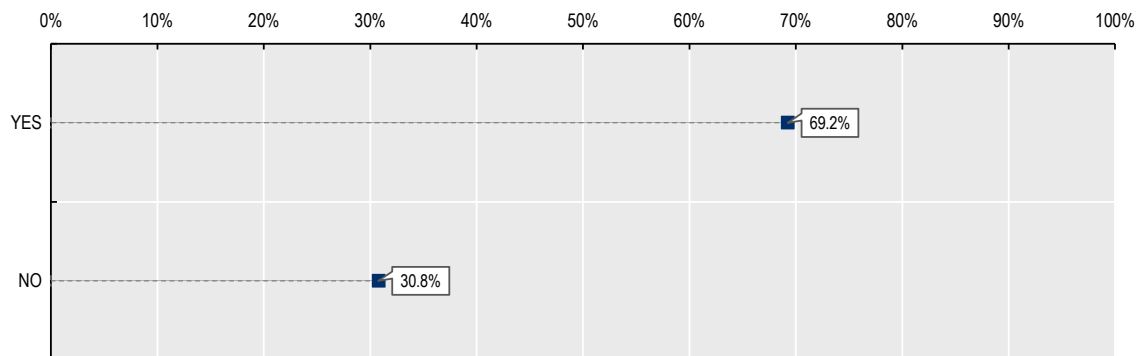
As the pandemic continues, finding pathways to restart international observer programmes and return compliance monitoring to agreed-upon levels will become more urgent. Countries should identify multilateral fisheries observers as “key workers” providing an essential service, and exempt them from the travel restrictions and border controls that may prevent them from doing their work (IMO, 2020^[4]) (Annex B). Appropriate health and safety precautions would be required to ensure fisheries observers can travel safely and do not become vectors of COVID-19 (ICS, 2020^[5]). Without such actions, countries and RFMOs risk increases in IUU fishing.

Reduced levels of compliance monitoring in multilateral fisheries highlight the role of countries in preventing IUU fishing by enforcing management measures that are consistent with international instruments, such as the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) (FAO, 2001^[6]) and the Port State Measures Agreement (PSMA) (FAO, 2016^[7]).

³ Independent specialists are typically employed or mandated by governments to collect information whilst on board vessels in order to support fisheries science and monitor compliance with regulations and to better understand at-sea operations.

⁴ At present, NEAFC has observer requirements only with regards to exploratory bottom fisheries (the scientific observer) in the context of the protection of vulnerable marine ecosystems in the NEAFC Regulatory Area.

Figure 1. Has your organisation had to reduce observation or monitoring activities due to COVID-19?



Source: OECD survey.

Furthermore, a set of principles developed by New Zealand in co-operation with the European Union regarding policy responses to limit the impact of the COVID pandemic on multilateral fisheries provides useful guidance for policy makers (Box 1).

Box 1. New Zealand and EU principles regarding policy responses to the COVID-19 pandemic in multilateral fisheries

New Zealand has developed a set of principles to guide the country's assessment of responses to the impact of COVID-19 on international fisheries. The aim is to ensure that COVID-19 responses are justified, proportionate and temporary – and developed through international collaboration and appropriate processes.

The principles are that COVID-19 responses should:

- Be developed by States and RFMOs in a transparent way and, where possible, through international collaboration.
- Relate specifically to the COVID-19 situation: preventing the spread of COVID 19, or responding to the implications of COVID-19.
- Be consistent with international law.
- Be justified by the COVID-19 situation and temporary, with a specified timeframe for expiry, and subject to periodic review.
- Be proportionate and do not unnecessarily undermine existing measures or the wider management regime.
- Wherever possible offer alternative means to replace the measures that are temporarily being suspended or not being complied with due to the COVID-19 situation.

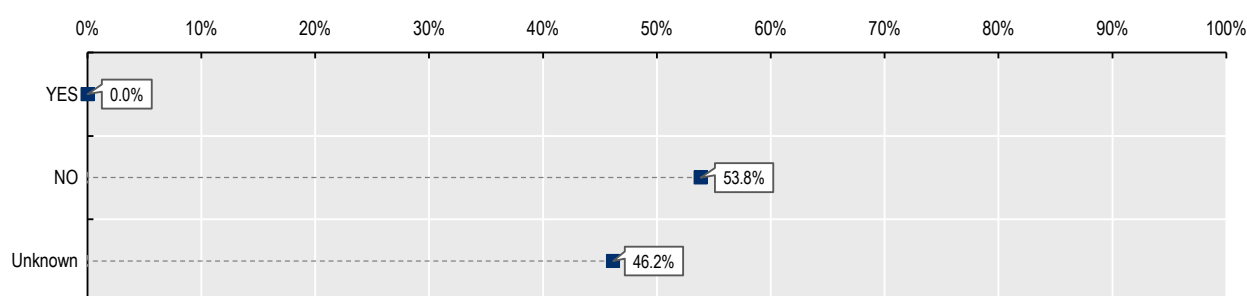
Where possible provide opportunities to improve the functioning of RFMOs such as, for example, offering means that are less susceptible to disruption due to a future pandemic or the use of electronic processes for consultations and decisions.

The waiving of or reduced compliance with observer and surveillance programmes in multilateral fisheries has two major impacts: it increases the possibility for IUU fishing to occur and it reduces the ability of many

RFMOs to detect IUU fishing. The FAO found 87% of RFMOs are experiencing, or expecting negative consequences on monitoring, control and surveillance (MCS) of fishing activities and the fight against IUU fishing due to the COVID-19 pandemic (FAO, 2020^[2]). This is of concern for many RFMOs, which have limited capacity to enforce their regulations via technological solutions, such as the use of electronic monitoring systems.

The impact of the pandemic on IUU fishing will depend on the type and the stringency of the observer requirements waived, and how fishers respond to changes in prices and costs generated by the crisis. For example, some tuna RFMOs surveyed (CCSBT, IATTC and WCPFC) require on-board observers on up to 100% of vessels (in the case of purse seiners for IATTC, ICCAT, WCPFC, as well as all carrier vessels authorised for transshipment at sea from large-scale long liners for CCSBT and IATTC). The waiving of on-board observation in Pacific tuna fisheries – high-value industrial fisheries – could have significant impacts on IUU fishing. If IUU fishing does increase in this area, it may undermine the sustainability of these fisheries, with long-term economic and ecological consequences. This is a particular concern for species of Bluefin Tuna, which already face sustainability concerns in some regions.

Figure 2. Has your organisation seen changes in the level of IUU fishing in the fisheries/areas managed by your organisation since the beginning of the COVID-19 pandemic?



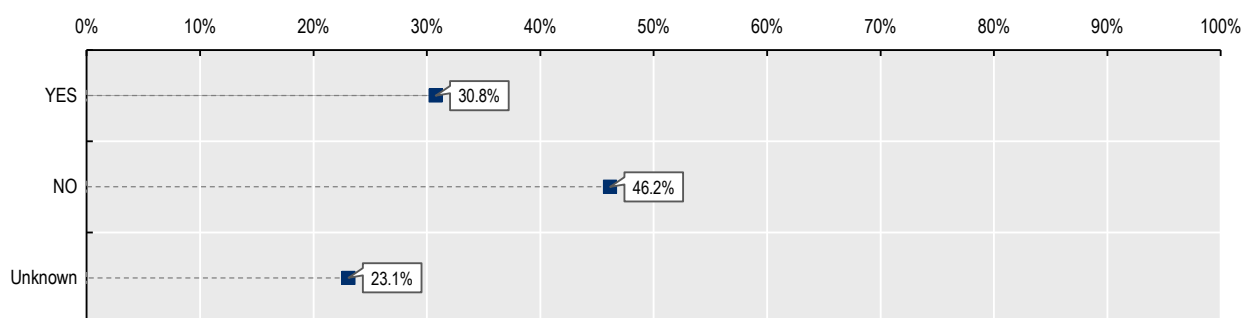
Note: “Unknown” refers to RFMOs who answered unknown or not yet known due to the lack of institutional abilities or the absence of associated datasets supplied from contracting parties (CPs) and non-contracting parties (NCPs) in a timely manner.

Source: OECD survey.

Despite the widespread expectation of increased IUU fishing, no RFMOs surveyed has observed an increase in the level of IUU fishing as of July 2020 (Figure 2). There are likely large differences between changes in IUU fishing across multilateral fisheries due to differences between compliance measures waived and the specific socio-economic context of individual fisheries. For example, in areas where observer and surveillance programmes have continued largely as normal (ICCAT,⁵ NEAFC, GFCM, SEAFO and SIOFA), levels of IUU fishing may have remained stable. In others, increases in IUU fishing may have been offset (at least partially) by an overall reduction in fishing effort (Figure 3). However, in regions where on-board observation has been waived and fishing effort has remained stable, there may be stronger incentive to engage in IUU fishing to increase profits since the risk of detection is reduced. Given IUU fishing is difficult to detect, the lack of an observed increase at a time of reduced compliance monitoring is not surprising. As such, some countries surveyed highlighted the need for RFMOs to scrutinise this possibility in their compliance analytics.

⁵ In case of ICCAT, while there is a waiver on observers only 1% of trips took place without the normally mandated observation (communication with the ICCAT Secretariat).

Figure 3. Has your organisation seen changes in the level of fishing effort/catch in the fisheries/areas that you manage since the beginning of the COVID-19 pandemic?



Note: Unknown" refers to RFMOs who answered unknown or not yet known due to the lack of institutional abilities or the absence of associated datasets supplied from CPs and NCPs in a timely manner.

Source: OECD survey.

Remote electronic monitoring⁶ (REM) of vessels has been proposed as an alternative (or supplementary) method to ensure compliance in multilateral fisheries. Two of the surveyed RFMOs (ICCAT and SIOFA)⁷ have policies on the use of REM, allowing electronic monitoring to replace human observer coverage for compliance monitoring (Ewell et al., 2020_[8]).⁸ However, neither of these RFMOs impose penalties for disrupting REM coverage nor have centralised systems in place to review REM footage.⁹ Significant investment in technical and human capacities is needed to analyse the data produced by these systems if they are to be used for compliance purposes. In view of this, while REM systems are a promising tool for compliance monitoring in the medium-to-long term, at present they are unlikely to play a major role ensuring compliance in the absence of human observers.

In addition to REM systems, other forms of remote sensing – notably satellite data – are used to monitor fishing effort and IUU fishing (i.e. Global Fishing Watch). The uptake of these technologies by RFMOs has been slow, with only three of the surveyed RFMOs having a centralised vessel monitoring system (VMS)¹⁰ (i.e. directly feeding data to the RFMO), while others only require VMSs monitored by flag states. In the latter cases, RFMOs are not able to independently verify vessel positions,¹¹ hampering remote review of

⁶ It usually requires an integrated system of cameras, gear sensors, video storage and GPS units on vessels (Michelin, Sarto and Gillett, 2020_[14]).

⁷ Although the paper (Ewell et al., 2020_[8]) includes NAFO in a list of RFMOs with a regional level policy for the use of REM systems across CPs, the NAFO Secretariat confirms that it is not the case.

⁸ While SPRFMO does not have an REM policy, it does allow electronic monitoring to replace human observation for compliance monitoring (Ewell et al., 2020_[8]).

⁹ In practice, REM footage is typically stored on a hard drive that is collected at the end of fishing trips and can then be reviewed by an onshore analyst given the high costs and technological challenges associated with transmitting data via satellite, Wi-Fi or cellular networks in real-time (Michelin, Sarto and Gillett, 2020_[14]).

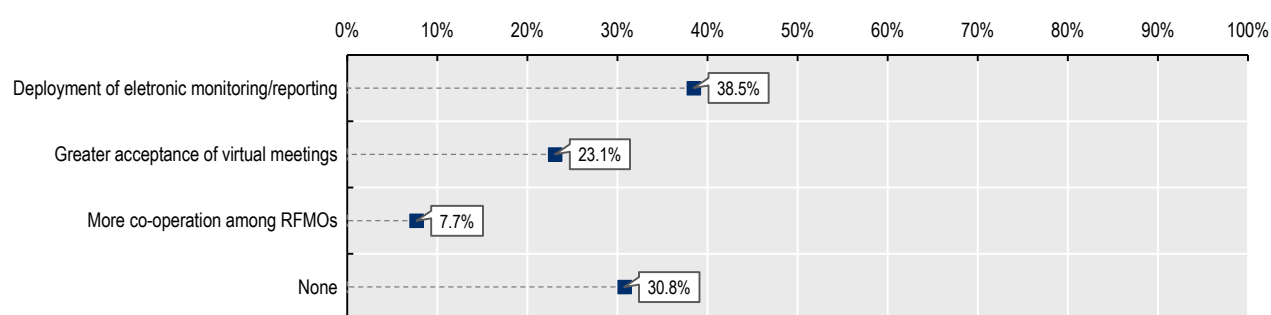
¹⁰ Centrally managed VMS has been practised by SPRFMO and WCPFC, and NPFC plans to develop a similar scheme (Hutniczak, Delpeuch and Leroy, 2019_[15]).

¹¹ While some commercial data providers (i.e. Global Fish Watch) can supply relevant vessel information (mostly based on the automatic identification system - AIS), data from such commercial platforms are usually not as detailed the VMSs data of CPs.

fishing activity.¹² Moreover, in some cases VMS data from satellites are directly administered and controlled by governments and are only provided to RFMOs as aggregated values with a time lag of several months due to confidentiality requirements (Taconet, Kroodsmas and Fernandes, 2019^[9]).

Several of the surveyed RFMOs and countries expressed hope that the COVID-19 pandemic will spur the uptake of these technologies (Figure 4).¹³ However, REM systems are generally considered to be expensive (although costs would decrease if deployment became widespread), and their use requires the development of legal frameworks and standards at regional levels to ensure consistent quality, confidentiality, and usability of data. This is true for other forms of remote sensing – without adequate data-sharing agreements overcoming the issue of data security and penalties for non-compliance, RFMOs will not be able to exploit their full potential.

Figure 4. In your opinion, what positive mid- to long-term outcomes of the COVID-19 pandemic can be anticipated with regard to the role of RFMOs in the sustainable management of multilateral fisheries?



Source: OECD survey.

Ensuring the pandemic will lead to the uptake of technology to monitor IUU fishing, and fishing effort in multilateral fisheries will require a concerted effort by both RFMOs and their contracting parties (CPs). Sharing best practices amongst RFMO parties on the use of remote sensing technologies could help increase their uptake and overcome resistance to their use amongst fisheries actors. Co-operation between RFMOs and their CPs is also needed to develop the regulatory frameworks, such as data-sharing and access agreements, required to implement these technologies effectively.

Co-operation and resource sharing between CPs and non-contracting parties (NCPs)¹⁴ can play a role in ensuring observer programmes function effectively while COVID-19 vaccines become available in the medium term. For example, the co-ordination of data collection and alternative measures between regions and countries, as well as bilateral and multilateral agreements on sharing of MCS data and procedures, could help fill geographical gaps in monitoring capability of high seas fishing. The Niue Treaty Subsidiary

¹² Some RFMOs such as NEAFC and NAFO receive the position of vessels (VMS data) in real time from CPs and NCPs. For example, NEAFC operates a joint inspection system in which the fisheries inspectors at sea rely on NEAFC systems to get up-to-date relevant information (through VMSs of CPs) on the activities of other NEAFC fishing vessels (Communication with the NEAFC Secretariat).

¹³ RFMOs: CCSBT, GFCM, IATTC, NPFC, SPRFMO and WCPFC; OECD countries: Australia, Canada, Chile, Korea, Mexico, New Zealand, and the United Kingdom.

¹⁴ Countries or economies which adhere to CMMs set by RFMOs, but are not formally bound by adopted CMMs via a membership agreement (Hutniczak, Delpeuch and Leroy, 2019^[15]).

Agreement (NTSA), for example, is a regional agreement in which members of the Pacific Islands Forum Fisheries Agency agree on common MCS policies and enhance co-operative efforts in monitoring, prosecuting and penalising operators of IUU fishing vessels (FFA, 2019^[10]). The International MCS Network, which currently has 59 countries, the European Union and two RFMOs (CCAMLR and CCSBT) as members, offers a multilateral forum for the exchange of information and experience with respect to MCS measures combatting IUU fishing, as well as the development of MCS capacity through training opportunities.¹⁵

The pandemic has highlighted the need for timely and effective monitoring mechanisms for RFMOs. This could be an opportunity to build consensus toward improving data transparency between RFMOs and beyond. For example, establishing global databases for IUU vessels (cross-listing)¹⁶ and for catch documentation (possibly building on existing platforms such as the FAO's global record and the PSMA global information exchange system). Co-ordinated data standards could help increase the efficacy of monitoring by RFMOs, although this is still some way off.

Effects of the pandemic on the capacity for decision making regarding sustainable resources management and the functioning of RFMOs

The majority of RFMOs (85%) and countries (88%) surveyed think that the current pandemic has revealed institutional limitations of RFMOs. The pandemic therefore offers an opportunity to address these limitations and strengthen RFMOs processes, for example by reforming decision-making processes.

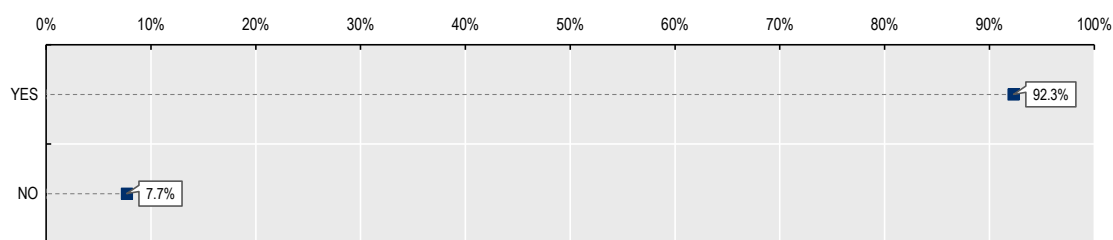
The COVID-19 pandemic has potentially undermined the ability of RFMOs to manage multilateral fisheries by reducing the evidence base for decisions, impacting decision making and disrupting the functioning of RFMOs themselves. Several restrictions adopted by national health authorities in response to the spread of COVID-19, including travel but also social distancing and the use of indoors facilities, have prevented many RFMOs from holding planned in-person meetings. As of July 2020, nearly all RFMOs (92%) have experienced disturbances of their scheduled meetings due to the pandemic (Figure 5). All RFMOs have held virtual meetings, often with reduced agendas. As the restrictions continue in 2021, understanding how to use virtual meetings effectively for all decisions and not just for the most urgent matters is increasingly important. The sharing of best practices between RFMO parties on the most effective tools and methods for facilitating negotiations in virtual settings is crucial for the effective management of multilateral fisheries.¹⁷

¹⁵ http://www.imcsnet.org/wp-content/uploads/2013/09/Governing-Framework_English_2013.pdf

¹⁶ Protocols for sharing IUU vessel lists currently in place are not standardised and practices vary across RFMOs (Hutniczak, Delpeuch and Leroy, 2019^[15]).

¹⁷ For example, in response to a lack of specific provisions in the existing rules of procedure concerning the holding of virtual meetings, IATTC adopted a set of *ad hoc* rules of procedure for the meeting of its bodies in 2020 and established a working group to develop permanent rules of procedure on virtual meetings in the future.

Figure 5. Has your organisation experienced any impacts of COVID-19 with regards to holding scheduled meetings such as scientific committees and compliance committees?



Source: OECD survey.

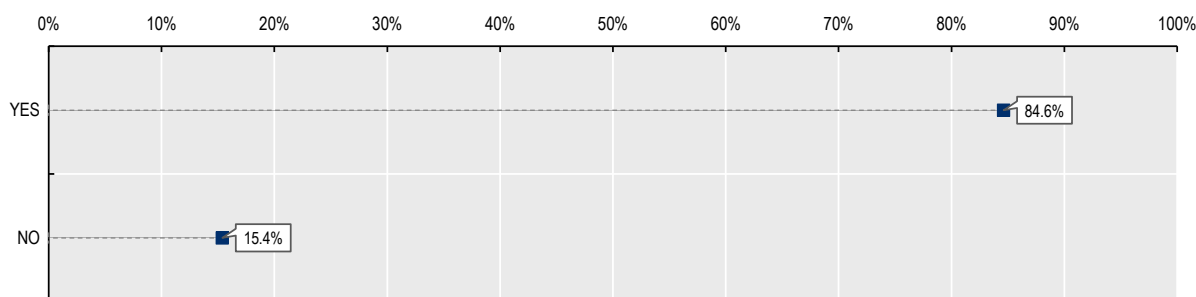
The need to reduce the agendas of virtual meetings has limited discussions of important but not urgent issues. For example, discussion of scientific work based on research surveys (i.e. NPFC), on agreement of new CMMs or quotas (i.e. IOTC), and on strategic issues (i.e. GFCM). This is not universal, however. For example, CCSBT set a three-year global TAC limit and its allocation on southern bluefin tuna for 2021-2023 on schedule. Delaying decisions on topics not considered urgent could undermine the management of multilateral fisheries if this to delays in the adoption of new CMMs and to changes to existing management where necessary. Decisions on which items to include in truncated meeting agendas and on which to defer can have important consequences for fisheries management. Transparency in agenda setting is crucial to ensure the interests of all parties are considered and there is broad agreement on the balance of topics to be covered.

The switch to virtual meetings has exacerbated existing issues¹⁸ around RFMO decision making, with 85% of surveyed RFMOs reporting disruption to their decision-making processes (Figure 6). While many RFMOs and CPs have found virtual meetings challenging, for RFMOs with a small number of CPs the switch to virtual meetings may be associated with greater efficiency or accessibility (i.e. NEAFC¹⁹ and SIOFA²⁰), especially if all delegates have a reasonable proficiency in a common language (i.e. NAFO and NEAFC).

¹⁸ As RFMOs commonly rely on consensus-based decision-making even when their procedures allow for voting, the diverse interests of the large membership tends to induce the high transaction costs of making decisions, requiring a substantial amount of negotiations and discussions among parties in the margin of official meetings (Hutniczak, Delpuech and Leroy, 2019^[15]). Even a consensus is reached, it may come at the cost of avoiding the resolution of fundamental issues with competing positions, such as the TAC and allocation mechanisms, making it difficult to generate momentum for further changes on the basis of original scientific advice (OECD, 2009^[16]).

¹⁹ NEAFC has held meetings more frequently with higher registrations particularly from less-affluent members in the virtual setting.

²⁰ SIOFA has been discussing greater use of the virtual meeting as a cost-saving option for a few years.

Figure 6. Has the COVID-19 pandemic complicated or delayed decision-making?

Source: OECD survey.

In general, virtual meetings have limitations beyond reduced agendas, with important impacts on decision making and the governance of multilateral fisheries. The participation of countries in virtual meetings can suffer from technological constraints. Internet connections can be unreliable, particularly in developing countries and regions such as the Pacific or West Africa, limiting their ability to participate. For example, WCPFC and ICCAT have experienced disruptions in online communication with members from those regions. When some parties are not able to fully participate in discussions, this can reduce the chance of reaching consensus and delay decisions. It can also undermine equality by enabling the better connected countries to achieve more favourable decisions.

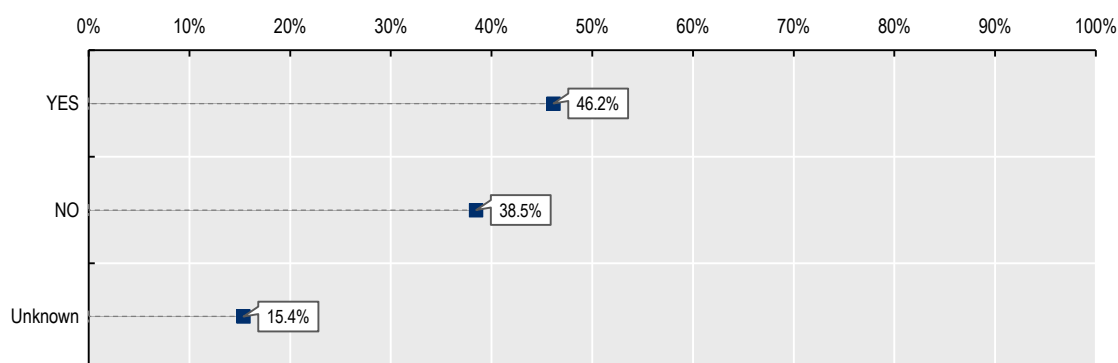
The switch to virtual meetings has social and political impacts that are hard to measure. Electronic negotiations can lead to reduced levels of trust, less co-operation, and lower levels of satisfaction with results when compared to face-to-face negotiations (Naquin and Paulson, 2003^[11]). Several RFMOs and countries²¹ have noted that the switch to virtual meetings has made informal conversations and side meetings between parties considerably more complicated to arrange. The loss of these communication channels can make negotiations of contentious issues more challenging and additional effort is required by parties to address these issues through other communication channels. This may exacerbate power imbalances by making it more difficult for smaller economies to develop collective negotiating strategies (Davis and Hanich, 2020^[12]).

The pandemic has also affected evidence production, with 46% of RFMOs experiencing negative impacts from the cancellation or postponement of research surveys (i.e. biological sampling) and scientific meetings (Figure 7). These problems are exacerbated in the regions where observer requirements have been disrupted.²² A reduction in available evidence and an increase in the uncertainty of the data on which to base management decisions can have important consequences for the management of stocks.

²¹ NEAFC, NPFC, WCPFC, Canada, Chile, New Zealand, and the United Kingdom.

²² Among the five RFMOs reporting that their evidence production have not been affected by COVID-19, in-person observer requirements in four of these RFMOs have been either uninterrupted (CCAMLR, SPRFMO, SEAFO) or disrupted only to a very limited extent (NAFO).

Figure 7. Has evidence production been affected by the implications of the pandemic?



Note: Unknown²³ refers to RFMOs who answered unknown or not yet known due to the lack of institutional abilities or the absence of associated datasets supplied from CPs and NCPs and compliance reviews in a timely manner.

Source: OECD survey.

The sharing of best practices between RFMOs for negotiating CMMs and other issues in a virtual setting is vital to help overcome the problems they face when undertaking such meetings. Understanding why some RFMOs have been more effective in using virtual tools, which tools are the most effective,²³ and how to facilitate virtual negotiations is key. Initiatives such as the FAO's Regional Fisheries Bodies Secretariat Network (RSN) could act as an important forum for discussion and sharing of best practices (Box 2).

Further, the existing decision-making mechanisms (mostly consensus-based) should be reviewed and reformed where necessary to facilitate timely decision making when in-person meetings are not possible.²⁴ The development of intersessional decision-making processes (rarely used at present) to make decisions on topics which cannot be covered in virtual meetings would help to ensure issues are negotiated and implemented in a timely manner. Some RFMOs already have such processes, but there are limits on the type of issues that can be agreed upon.²⁵ For example, integrating new technologies (i.e. the use of conference software) and reviewing decision timelines could help RFMOs adapt to a rapidly evolving situation. Moreover, establishing more efficient voting protocols combined with adequate objection procedures²⁶ would help increase the effectiveness of RFMOs. When considering such decision-making provisions, care should be taken to ensure transparency and legitimacy of the processes.

RFMOs can prepare for similar events in the future by formalising extraordinary processes, such as introducing special clauses (*force majeure*) or frameworks applied in the crisis. In this regard, CCSBT's

²³ Some RFMOs have managed to allow for more normal experience including the opportunity for bilateral and side meetings via the use of advanced conference software.

²⁴ Such review and reform can entail a modification of the basic instrument of the RFMO, with all the political and legal implications that such a process may have, including in terms of the time needed.

²⁵ In case of IATTC, all questions related to budget and conservation and management measures can be discussed and agreed.

²⁶ SPRFMO's voting mechanism combined with the limited scope for objection (formal obligation for justification and specified grounds on which the objection can be made) and an automatic objection review process are considered to be an exemplary model (Hutniczak, Delpeuch and Leroy, 2019^[15]).

new guidelines²⁷ setting clear principles and procedures applied in extraordinary circumstances offers best practices as to how RFMOs can strengthen their accountability and transparency associated with CMMs.

Potentially, the largest impact of the pandemic on the functioning of RFMOs is financial uncertainty. As countries try to cut costs in the wake of the economic impacts of COVID-19, they may defer or reduce contributions to RFMOs. However, some RFMOs benefit from savings on the costs of cancelled physical meetings and as of August 2020 only one country has publicly requested a deferral of RFMO fees,²⁸ and another has expressed concern about meeting future financial obligations. These issues may worsen if more countries choose to make similar requests as the economic crisis associated with the pandemic continues. The distribution of these financial impacts will not be uniform, with the largest impacts most likely occurring in the regions with the lowest management capacity already. It is vital, therefore, that the international community co-operates to ensure recent progress in fisheries management at the regional level is not lost due to the economic impacts of the COVID-19 pandemic.

Box 2. FAO's Regional Fisheries Bodies Secretariats' Network (RSN)

The Regional Fisheries Bodies Secretariats' Network (RSN), in place since February 1999,¹ provides a forum for promoting policy harmonisation, consultation and regional dialogue, addressing priority issues of common concern, and fostering ongoing cooperation and exchange of information among the secretariats of regional fisheries bodies (Løbach et al., 2020^[3]). RSN currently has 58 key fisheries and aquaculture actors, covering both RFMOs and regional fisheries advisory bodies (RFABs) from across the globe, collectively referred to as Regional Fisheries Bodies (RFBs). FAO provides venue and key secretariat services to RSN meetings, including the biennial RSN global meeting (FAO, 2020^[13]).

1. Meetings of FAO and Non-FAO Regional Fishery Bodies (RFBs) or Arrangements have taken place in the margins of the FAO Committee on Fisheries (COFI) since 1999 and the meeting title was changed to "Regional Fishery Body Secretariats' Network (RSN)" in 2005. The first meeting with the title of RSN was held in March 2007 as the fifth biennial meeting among RFBs.

²⁷ "Guideline on principles for action and steps to be taken in relation to extraordinary circumstances", adopted at the Twenty-Seventh Annual Meeting: 12-16 October 2020 (https://www.ccsbt.org/sites/default/files/userfiles/file/docs_english/operational_resolutions/CPG5_ExtraordinaryCircumstances.pdf).

²⁸ The Republic of Seychelles, in its letter to the IOTC on 4 June 2020, requested a 50% waiver of its annual contributions payment for three years (2020-22) to allow the country to use its scant foreign currency resources to readjust its economy (IOTC CIRCULAR 2020-27: <https://iotc.org/documents/communication-seychelles-regarding-iotc-contributions>).

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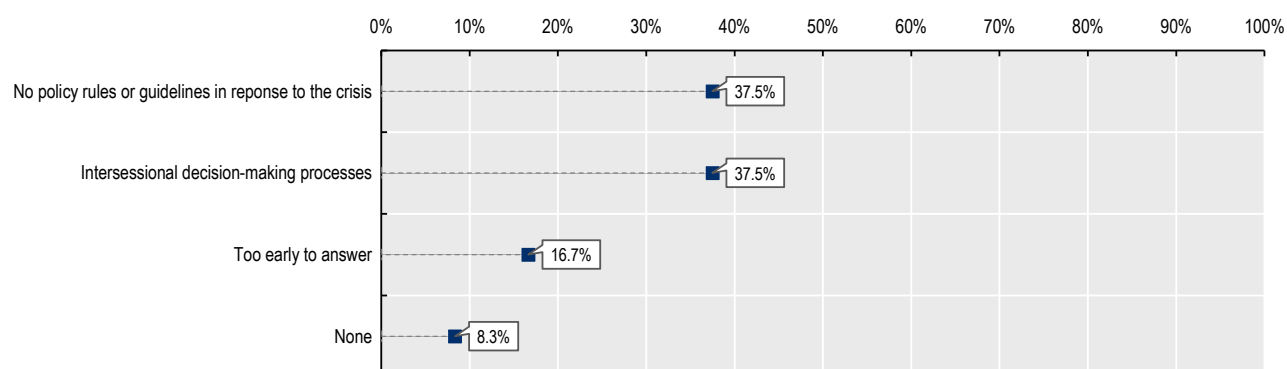
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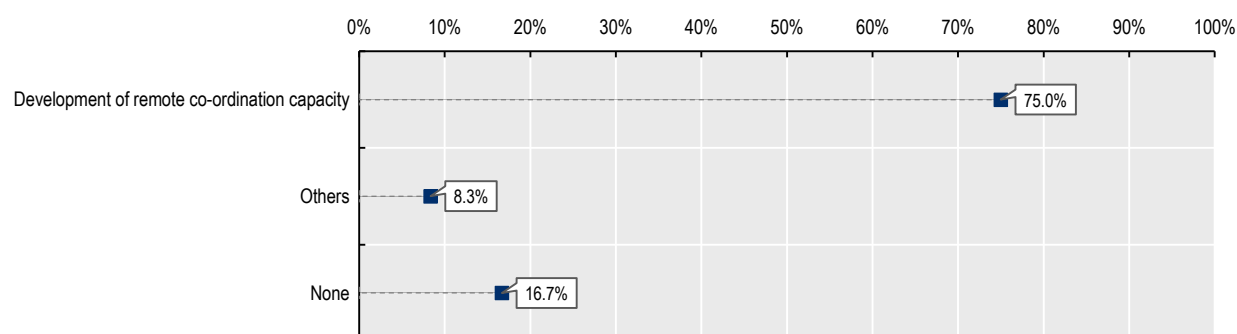
Annex 1.A. Summary of responses from RFMOs to OECD's survey

Annex Figure 1.A.1. In your opinion, has the pandemic revealed some limitations/weaknesses in RFMO governance, operations or processes, which can be addressed to improve both the handling of the pandemic and also improve the overall functioning of your organisation in the future?



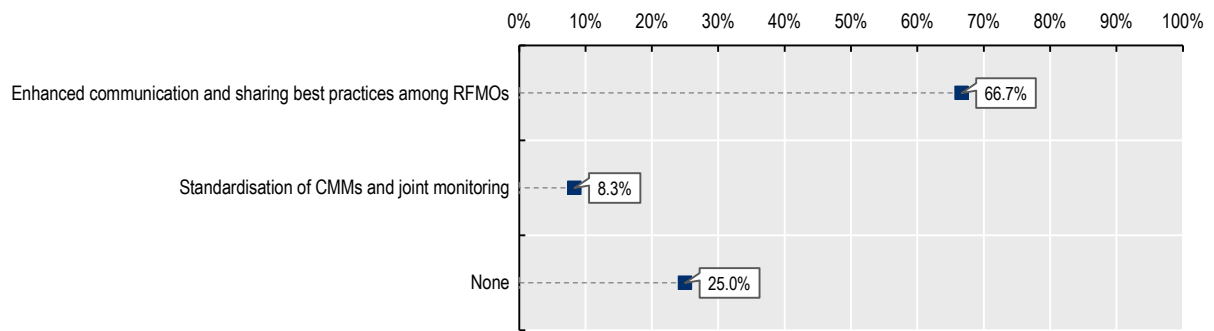
Source: OECD survey.

Annex Figure 1.A.2. In your opinion, what positive mid-long term outcomes from the COVID-19 pandemic can be anticipated with regards to your operation?



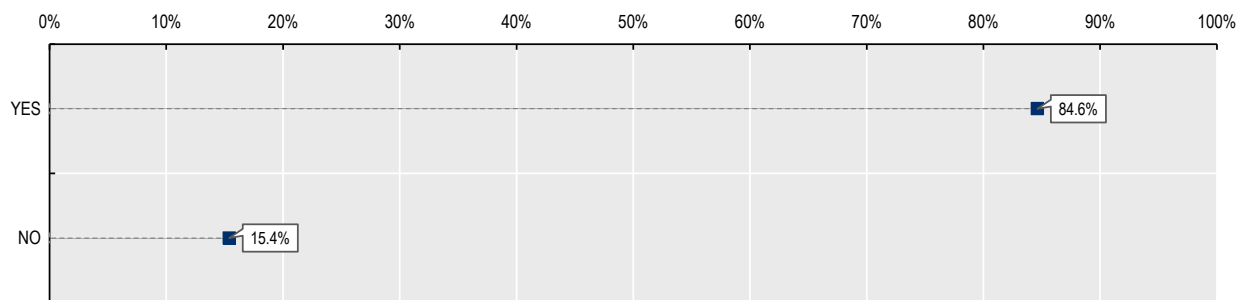
Source: OECD survey.

Annex Figure 1.A.3. In your opinion, what positive mid-long term outcomes of the COVID-19 pandemic can be anticipated with regards to co-operation with other parties?



Source: OECD survey.

Annex Figure 1.A.4. In your opinion, has the pandemic revealed some limitations/weaknesses in RFMO governance, operations or processes, which can be addressed to improve both the handling of the pandemic and also improve the overall functioning of your organisation in the future?



Source: OECD survey.

Annex 1.B. IMO's recommendations as to measures to facilitate crew changes in port

IMO Circular Letter No.4204/Add.6 of 27 March 2020²⁹ contained the following recommendations to member states about measures to facilitate ship crew changes in seaports:

- Designate professional seafarers and marine personnel, regardless of nationality when in their jurisdiction, as “key workers” providing an essential service.
- Grant professional seafarers and marine personnel with any necessary and appropriate exemptions from national travel or movement restrictions in order to facilitate their joining or leaving ships.
- Accept, inter alia, official seafarers' identity documents, discharge books, STCW certificates, seafarer employment agreements and letters of appointment from the maritime employer, as evidence of being a professional seafarer, where necessary, for the purposes of crew changes.
- Permit professional seafarers and marine personnel to disembark ships in port and transit through their territory (i.e. to an airport) for the purposes of crew changes and repatriation.
- Implement appropriate approval and screening protocols for seafarers seeking to disembark ships for the purposes of crew changes and repatriation.
- Provide information to ships and crews on basic protective measures against COVID-19 based on WHO advice.

²⁹<https://wwwcdn.imo.org/localresources/en/MediaCentre/HotTopics/Documents/CircularLetterNo.4204Add.6CoronavirusCovid-19PreliminaryListOfRecommendations.pdf>

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