

5 Governing fisheries

Good governance is fundamental to ensuring the equitable and sustainable management of global fisheries and to facilitate policy change. This chapter presents the results of two OECD surveys which collected data on key elements of governance systems for national and multilateral fisheries. It examines decision-making processes, the use of data for evidence-based policymaking, the role of advisory groups to facilitate stakeholder participation and to increase transparency of fisheries governance, and the role of primary institutions in charge of fisheries policy with a view to increasing policy coherence between different sectors of the blue economy.

Key recommendations

- Better scientific and socio-economic data should be integrated into fisheries governance systems by embedding the use of data into policy-making processes (where possible) and investing in data collection.
 - In national fisheries, increasing the use of evidence to make policy can help to avoid negative outcomes from policy change and increase legitimacy. The use of commitment mechanisms, where governments commit to review or change policies (such as using data to automatically adjust harvest controls), can facilitate the integration of data into the governance process.
 - In multilateral fisheries, the automatic sharing and recognition of data on IUU fishing, such as vessels lists, can reduce opportunities for products of IUU fishing to enter fisheries value chains. The harmonisation of standards for collecting scientific data and the sharing of best practice for the implementation of technology are important for improving fisheries management.
- Transparent mechanisms for stakeholder participation in the governance process (e.g. advisory groups) should be more widely used. These mechanisms are crucial for building legitimacy for fisheries policy and policy change. Governments should also carefully review and manage the balance of stakeholders in each group, which depends on the policy areas it is advising on.
- The decision-making processes in RFMOs should be reviewed to find more efficient pathways than consensus-based decisions. Voting mechanisms combined with objection processes that are limited in scope and automatic reviews of objections offer a promising approach to representative and efficient decision making in RFMOs.
- To improve fisheries governance, further analysis of institutional arrangement of fisheries governance is needed to better understand how different structures impact policymaking. In particular, it would be interesting to investigate how institutions can facilitate increased co-ordination and coherence between policies for all the sectors using marine resources.

5.1. Governance systems are fundamental to fisheries policy and policy change

Creating and implementing fisheries policy is complicated because governments need to balance multiple social, economic and environmental objectives which may not be mutually compatible. For example, economic objectives such as increasing food production or employment may not be compatible with the goal of improving the environmental sustainability of fisheries if achieving them requires increased harvesting of stocks resulting in overfishing. Policies to address these multiple objectives and to achieve SDG 14 include reducing potentially harmful support (Chapter 4), improving science-based fish stock management (Chapter 2) and fighting IUU fishing (Chapter 3). However, the complex interactions between the ecosystems, communities and businesses that comprise fisheries also mean the impacts of policy changes are hard to predict. Moreover, the nature of the resources mean where policy changes have been made, their impacts are challenging and expensive to observe. For effective policy creation, change, and implementation, countries require a governance process that integrates information on the impacts of existing policies and the views of a wide range of stakeholders marshalled by institutions that can respond to the specific context of individual fisheries (Delpeuch and Hutniczak, 2019^[1]).

Fisheries “governance” covers the full set of institutions and rules which govern the design, adoption and implementation of fisheries policy. Effective systems of governance are, therefore, central to equitable and sustainable fisheries management and fisheries policy change. Given the need for governance systems to respond to specific local contexts there is a wide variety of systems in place for fisheries policy and it is important to identify general rules on what constitutes a good governance system. However, measuring the effectiveness of governance systems for policy change is challenging as the variety of different national approaches makes it difficult to identify comparable metrics. Further, the complexity of governance systems and the mediating impacts of the policies themselves mean it is difficult to link specific aspects of the policy-making process to measurable outcomes in the socio-economic or environmental dimensions of fisheries. Delpuech and Hutniczak (2019^[1]) identify some of the components required in fisheries governance systems for effective policy change. These include:

- Create a robust evidence base to better motivate, design and implement policy change through investment in the collection of socio-economic and biological data
- Make greater use of commitment mechanisms, such as adaptive policies, which build in rationale and mechanisms for automatic policy change in the face of possible evolutions. They may prove particularly helpful in contexts of uncertainty, such as data-poor fisheries or fisheries deemed to be most affected by climate change
- Implement a whole-of-government approach to fisheries policymaking, which engages multiple ministries and agencies to increase the legitimacy of policy changes for fisheries and help to address their socio-economic impacts (including through policy domains other than fisheries)
- Engage in inclusive and transparent dialogues with stakeholders involved in the policymaking process, including through the creation of inclusive and representative advisory groups, inter-governmental co-operation groups and adherence to the OECD’s key principles on transparency and integrity in lobbying.

Similarly, research into the properties of effective fisheries governance systems identify the importance of transparency, participation and coherence (Belschner et al., 2019^[2]). Many fisheries policies involve the distribution of resources, and changes to those policies, which often occur on an annual basis (e.g. TAC limits and the allocation of quotas), will have both positive and negative consequences for multiple stakeholders. Transparent and inclusive processes that integrate the best available scientific data for making these kind of decisions are essential for their legitimacy with stakeholders, especially if there are negative impacts. It is important that information on how decisions are taken, by whom and based on what data is publically available. Further, transparency on the influence of external lobby groups on the policy-making process is needed to ensure the influences of different stakeholders are appropriately balanced when taking decisions. An inclusive process, which incorporates data and views from the full range of impacted stakeholders both within and outside government, is essential to ensure policies and policy changes are accepted and upheld by fisheries actors. Failure to do this can cause important stakeholders to become marginalised (or feel marginalised) (EC, 2001^[3]).

The results of an OECD survey presented in this chapter are used to make inferences about some of the institutions and the mechanisms for the policy-making process in 31 OECD countries and key partner economies in 2019. It also uses the survey results presented in Hutniczak, Delpuech and Leroy (2019^[4]) to examine several important aspects of governance in multilateral fisheries.¹ The analysis aims to understand some aspects of evidence-based policymaking and participation, as well as transparency in national and multilateral governance processes. It presents information on the institutions in charge of fisheries policy across the survey respondents. While it is not possible to link these components of governance systems to fisheries policy outcomes, a better understanding of these aspects of governance is important to improve the effectiveness of fisheries policy and policy change.

Key findings and recommendations

The importance of basing fisheries policies on sound scientific evidence is universally recognised and all the countries and economies surveyed use scientific data at some stage of the fisheries policy-making process. The widespread use of both scientific and socio-economic data in fisheries management decisions is positive inasmuch as it facilitates evidence-based policymaking. However, while data are used to some extent across all the survey respondents, understanding how that translates into evidence-based policymaking is challenging. For example, while all survey respondents used scientific data in some capacity, the use of commitment mechanisms is not widespread. Only 28% of respondents have systems where harvest limits are specifically tied to changes in those data, indicating there are still opportunities to further integrate data into the fisheries governance process. Secondly, the use of socio-economic data is less frequent than scientific data despite the importance of understanding the impacts of fisheries policy change on broader socio-economic systems. Finally, systems for integrating data into the fisheries governance process are only as good as the data they are integrating and – as highlighted elsewhere – there are still significant gaps in the data on fisheries.

At the international level (i.e. in multilateral fisheries), there are mechanisms for co-operation on the listing of IUU vessels which could be a cost effective mechanism to prevent products of IUU fishing from entering fisheries value chains. However, these policies are applied inconsistently and often allow for objections from member countries, which has limited their utility for fighting IUU fishing so far. Further, increased co-operation and the sharing of experience between RFMOs on the implementation of new remote monitoring technologies and governance reforms could be a valuable pathway for improving compliance monitoring and the management of multilateral fisheries.

Participation by stakeholders in fisheries governance has been highlighted as an essential component for success (Pita, Pierce and Theodossiou, 2010^[5]; EC, 2001^[3]; Kaplan, 2004^[6]). In recognition of this, 81% of the survey respondents have at least one advisory group for fisheries policy, with the majority having more than one. Advisory groups are a promising mechanism for facilitating a transparent dialogue between stakeholders and policy makers and can allow a broad range of stakeholders to have a direct influence on policy areas that may impact them. Across all advisory groups, commercial fishing interests were the most frequently represented group, followed by scientific entities. These were the only two interest groups represented in the majority of advisory groups. Downstream industry was the third most frequently represented group. The prominent role played by the fishing industry (commercial fishers and downstream processing) in advisory groups is unsurprising given the direct impact fisheries policy changes could have on their operations. Further, the frequent representation of scientific bodies, particularly on advisory groups related to identifying technical parameters and the creation of management plans, is a promising indication for the use of data and expertise in fisheries management. More generally, the transparency provided by the advisory group process can have positive impacts on the legitimacy of policy change and ensure that the views of important stakeholders who are not part of industry groups are included.

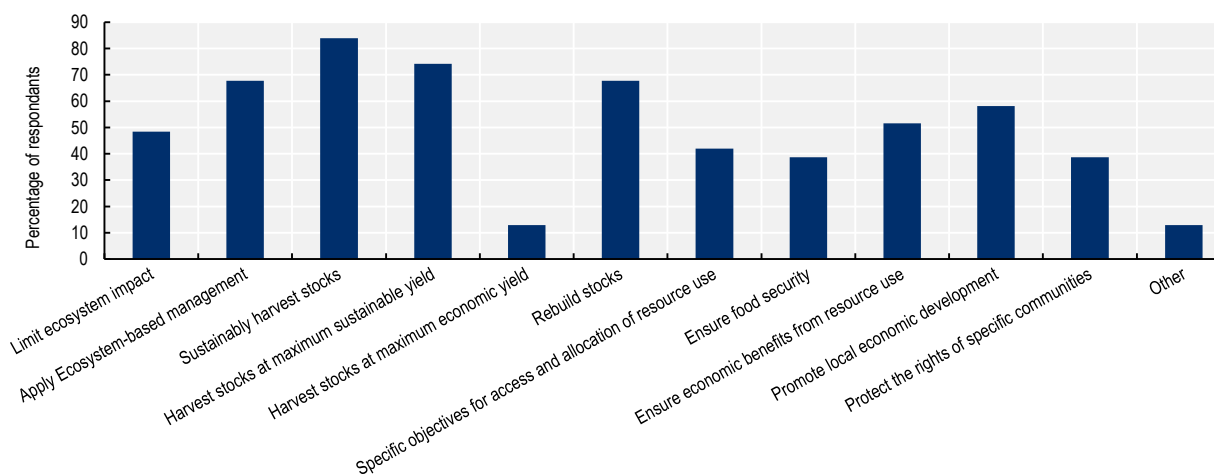
Multilateral fisheries face different challenges concerning stakeholder participation and transparency in decision making. While many RFMOs allow for majority voting in decision making, the desire to find a consensus among members is still widespread. The desire to find a consensus likely stems from a desire within RFMOs to create a sense of shared ownership over resources among members, which is thought to increase compliance. This, in turn, is important as the enforcement capacity of RFMOs is generally low. In RFMOs which allow voting, mechanisms for objections can hamper decision making if the conditions under which members can object are not limited in scope. In all cases bar one, RFMOs do not have mechanisms for automatically reviewing objections by member states. The need to examine decision-making processes within RFMOs to facilitate decision-making has been highlighted by the COVID-19 pandemic, which has resulted in delays and deferrals of decisions with the switch to virtual meetings.

The entity in charge of creating fisheries policy is the foundational component of governance systems. Ensuring coherence between fisheries and other related sectors, particularly those that use ocean resources, is key for the sustainable use of marine resources. Housing several related policy areas within the same ministry can aid with policy co-ordination, and in recognition of the unique challenges faced by sectors that use marine resources, several countries have created ministries related to the ocean or ocean economy. Across all survey respondents, the entity in charge of fisheries policy was also in charge of other policy areas, most commonly aquaculture (90%) and agriculture (65%). However, despite the fundamental role institutions play in fisheries governance, the impacts of different institutional arrangement remain largely unknown.

5.2. Effective and transparent use of data is key for achieving multiple policy goals

The importance of basing fisheries policies on sound scientific evidence is universally recognised. Robust scientific and socio-economic data is key for designing effective policies and building legitimacy amongst stakeholders (Delpeuch and Hutniczak, 2019^[1]). Effective use of data can also help fisheries managers and policy makers to identify where existing policies may not be achieving their stated goals and avoid unforeseen negative impacts on economic, environmental or social sustainability. This is particularly important as fisheries policies need to balance multiple objectives, which are not necessarily compatible in all contexts (Figure 5.1).

Figure 5.1. Overall objectives of fisheries policies amongst survey respondents



Scientific and socio-economic data allow policy makers and fisheries managers to identify trade-offs and synergies between different policy objectives. Careful use of data can increase the efficiency and efficacy of fisheries policy and facilitate policy change. Further, when combined with commitment mechanisms, such as harvest controls, that are adjusted automatically based on scientific data, evidence-based policymaking can be embedded into fisheries governance. Understanding how and where scientific and socio-economic data are used is key to improving fisheries governance systems.

In national fisheries the use of scientific and socio-economic data is widespread, but how data are used in the governance process varies

All the countries and economies surveyed use scientific data at some stage of the fisheries policy-making process. However, fisheries are embedded in wider socio-economic systems, and understanding the impacts of fisheries policies on these systems is crucial for equitable and sustainable fisheries management. In recognition of this, nearly all the survey respondents (97%) use socioeconomic data in some capacity in the decision-making process. For effective evidence-based policymaking, a range of different data sources are needed to understand why existing policies may have adverse impacts and what (if any) changes are needed to address these. Globally, there are significant gaps in fisheries data, for example no data are available on the biological status of stocks that account for 22% of global fish catch (Costello et al., 2016^[7]).

The use of scientific data is binding or consultative in 26% and 55% of countries and economies, which is more frequent than for socio-economic data which is binding or consultative in 10% and 45% of cases. The binding use of data indicates the entity in charge of fisheries is legally bound to follow scientific or socioeconomic advice and consultative means the same entity is legally bound to request the advice. The extent to which fisheries policy decisions are evidence-based varies across respondents is, at least partially, a factor of data quality, coverage, and mechanisms for integrating different data sources into the fisheries governance process. The survey results highlight important differences in how scientific and socio-economic data are used across the respondents.

Correspondingly, the optional use of socio-economic data is more prevalent (48% of respondents) than the optional use of scientific data (26% of respondents), indicating that scientific data are more regularly used than socio-economic data for fisheries policymaking as scientific data are more likely to be binding or consultative than optional. The three countries to require the binding use of socio-economic data are Costa Rica, Estonia, and Thailand. In Estonia, the binding use of socio-economic data happens through the formation of an advisory fisheries council, which among other responsibilities is responsible for analysing the economic activity of the fisheries and provides recommendations concerning the production and the preferred direction of development over the following year.

Table 5.1. The role of scientific and socio-economic data in the fisheries policy process

	Scientific (%)	Socio-economic (%)
Binding	26	10
Consultative	55	45
Embedded	29	NA
Optional	26	48

Note: The categories are not mutually exclusive so percentages will not sum to 100.

The categories are defined as follows:

Binding: The main entity in charge of fisheries management is legally bound to follow scientific or socio-economic advice when making some management decisions.

Consultative: The main entity in charge of fisheries management is legally bound to request scientific or socio-economic advice when making some management decisions.

Embedded: Harvest control rules are in place, which lead to automatic adjustment of management tools on the basis of stock assessments.

Optional: The main entity in charge of fisheries management does not have an obligation to request scientific or socioeconomic advice to make some management decisions.

A more detailed look at the use of data reveals further variations between how data are used by different countries and economies. For example, even when the use of scientific data is binding, the requirement might be to consider rather than strictly follow, as is the case for EU countries under the common fisheries

policy. In Korea, the use of scientific data is binding if the stock in question is subject to a TAC, or if a TAC is being developed to aid the recovery of the stock. If the stock is not subject to a TAC, the use of scientific data for fisheries management is optional. In addition, the use of scientific data is also binding when developing the Master Plan for the Management of Fishery Resources and when protected or management waters are designated. In Chile, scientific data are used to assess the status of the fishery, determine the biological reference points, and determine the range within which the overall catch quota may be set, which shall maintain or lead the fishery to the maximum sustainable yield.

An important use of scientific data for fisheries management is to provide reference points for setting harvest control rules (such as TACs, quotas and effort controls). Harvest controls that are adjusted automatically based on scientific data are present in 29% of survey respondents. In New Zealand, the Harvest Strategy Standard in place since 2008 provides targets and limits for all inshore fisheries based on four measures of performance. Several countries and economies have tools in place to control the impacts of fisheries and help ensure sustainability (Chapter 2), but this is not reflected in binding commitments to use data to set the limits for these tools. This suggests that the limits set by many of the management tools may not be based on scientific evidence, which could lead to over harvesting of stocks.

Despite the universal use of scientific data, less than half (45%) of the countries and economies surveyed used scientific data to regularly evaluate the impact of management measures. Regular impact assessments of existing policies are vital for linking management decisions to outcomes in fish stocks, and without these assessments it can be difficult to identify where sub-optimal management may be having a negative impact on fish stocks. Regular impact assessments can also provide evidence in support of policy change, which is essential for building consensus among stakeholders.

Where policy changes are necessary, understanding the impact of proposed management changes, where possible, is a key component of evidence-based policymaking for fisheries. Just over half (55%) of the survey respondents require impact assessments when regulatory or policy changes are envisioned. While it may not be possible (or even desirable) to assess the impacts of every policy or management change, having processes in place to facilitate regular impact assessment is important to avoid negative biological impacts from policy changes and ensure understanding any potential distributional impacts.

The widespread use of both scientific and socio-economic data in fisheries management decisions is positive inasmuch as it facilitates evidence-based policymaking. However, while data are used to some extent across all the survey respondents, understanding how that translates into evidence-based policymaking is challenging. For example, while all survey respondents used scientific data in some capacity, only 28% have systems where harvest limits are specifically tied to changes in those data, suggesting there are opportunities to further integrate data into the fisheries governance process. Secondly, the use of socio-economic data is less frequent than scientific data. Finally, systems for integrating data into the fisheries governance process are only as good as the data they are integrating and as highlighted elsewhere, there are significant gaps in the data on fisheries. In particular, detailed data and evidence on the socio-economic impacts of fisheries management and policy changes are missing in many parts of the world.

Co-operation and data sharing are vital for the effective governance of multilateral fisheries

The sharing of information, and more generally co-operation, between Regional fisheries management organisations (RFMOs) is important for effective management. Collecting, aggregating and analysing data on the health of fish stocks and catch effort in their areas of competence is an important part of an RFMO's role (Box 5.1). The sharing of some data and co-operation in data collection can help to enhance the governance of multilateral fisheries by facilitating the monitoring of compliance and scientific variables.

Box 5.1. Regional Fisheries Management Organisations

Many fish stocks straddle the exclusive economic zones of several countries (EEZ), or occur predominantly in areas beyond national jurisdiction (ABNJ). Effective management of these fish stocks and the fisheries that exploit them, so-called “multilateral fisheries”, generally requires the co-operation of several countries and in many cases regional fisheries management organisations (RFMOs) have been formed to co-ordinate their management. The first RFMOs were established in 1949 (International Commission for the Northwest Atlantic Fisheries and the Inter-American Tropical Tuna Commission) and have since increased to 16 established RFMOs in 2020 worldwide, 13 of which have been surveyed as part of this chapter (Annex Table 5.A.1). By bringing together countries that have a common interest in the sustainable management of high seas and migratory stocks, RFMOs are a key part of global fisheries governance and an essential tool for meeting SDG 14.

An example is the exchange of information between RFMOs on vessels which have been listed as engaged in IUU fishing. The use of IUU vessel lists has been highlighted as a cost effective way of preventing IUU fishing by stopping vessels which have been sanctioned from continuing to fish in an RFMOs areas of competence. Making these lists available to the public would increase the transparency of RFMO management action and sharing data and information between RFMOs on these lists could act as a cost efficient way of preventing IUU fishing in their areas of competence. However, despite the advantages of mutual IUU vessel list recognition, only the South Pacific RFMO automatically recognises the vessels list of all other RFMOs. To date, cross-listing of vessels is inconsistent across RFMOs; several allow for conditional cross-listing,² whereby vessels listed by other RFMOs are only included in their own lists if there is no objection from their members, and others³ do not practice cross-listing at all. In practice, this places significant constraints on the listing of vessels, which hampers the prevention of IUU fishing. Therefore, there is opportunity to reform the sharing of data on IUU vessel lists to improve the governance of multilateral fisheries.

Greater co-operation and the sharing of best practices between RFMOs could also benefit other areas of RFMO functioning and multilateral fisheries governance. As mentioned above, while the SPRFO implements many best-practices for decision making, other RFMOs have less innovative decision models; understanding how to implement reforms to decision making and sharing experiences with different mechanisms around voting and objection procedures would be beneficial. Further, the harmonisation of protocols for the collection of scientific data could improve the evidence base for management decisions within RFMOs. In particular, the implementation of new technologies, such as satellite monitoring and on-board cameras, is a challenge that many RFMOs are facing or will face. The importance of integrating new technologies into existing MCS systems has been highlighted by the COVID-19 pandemic, which has disrupted in-person on-board observation in many RFMOs.

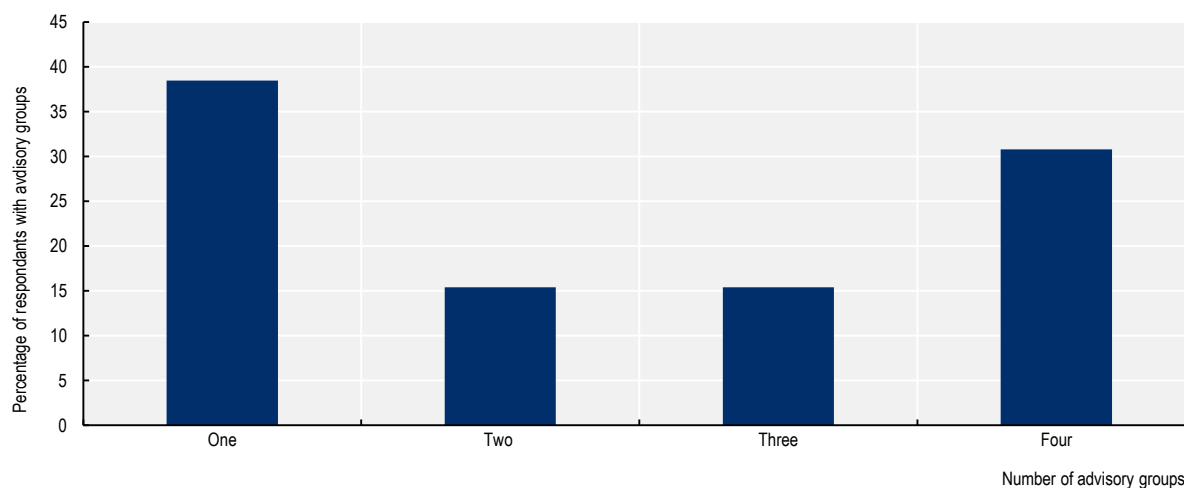
5.3. Stakeholder participation is needed to build legitimacy for fisheries policies

Stakeholder advisory groups are a popular tool for facilitating transparent participation in national fisheries governance.

In recognition of the importance of transparency to good fisheries governance, 84% of the survey respondents have at least one advisory group for fisheries policy. Advisory groups are a promising mechanism for facilitating a transparent dialogue between stakeholders and policy makers and can allow a broad range of stakeholders to have a direct influence on policy areas that may impact them. As the rules around participation and decision making are agreed in advance, advisory groups can allow for more

transparent and inclusive governance than more traditional forms of lobbying, where the influence exerted by individual stakeholders can be difficult to understand. The multi-stakeholder nature of advisory groups offers an opportunity for dialogue between interest groups with opposing views. Advisory groups are flexible and are often created for specific instances of policy change; hence the creation of several different advisory groups for specific aspects of the governance process is possible and the majority of respondents using advisory groups have more than one (Figure 5.2).

Figure 5.2. Number of advisory groups per survey respondents



Note: The survey was limited to four advisory groups per respondent; the final bar therefore depicts the countries or economies with at least four advisory groups, and not necessarily exactly four.

In general, integrating stakeholders into fisheries governance systems is thought to have several important benefits, including: the resolution and avoidance of conflicts; increased trust; facilitating a common understanding between stakeholders and policy makers; and improved legitimacy and acceptance of reforms (Pita, Pierce and Theodossiou, 2010^[5]). For these reasons, the participation of stakeholders can lead to increased compliance and improved efficiency of management tools such as TACs, input-output controls and discard bans. The increased participation of stakeholders in fisheries governance is generally considered a positive policy development, e.g. reforms to the EU's Common Fisheries Policy (CFP) in 2002 and 2012 included guidance on the creation and role of Advisory Councils partly in response to criticisms that the CFP had excluded stakeholders in the past. However, understanding the actual impact of stakeholder participation on fisheries governance and management outcomes is challenging due to the complex interplay of elements in governance systems. Crucially, stakeholder participation involves the redistribution of decision-making power amongst stakeholders and consequently, the impacts of mechanisms for participation such as advisory groups depends on the extent to which and where these powers are redistributed (Arnstein, 1969^[8]). Information on the composition of advisory groups and where they are used in the policy process is, therefore, a prerequisite for understanding their impact.

Transparency regarding the composition and role of advisory groups is key for understanding the different roles stakeholders play in fisheries policy creation, but can be a sensitive issue for fisheries. The composition of advisory groups can raise questions of balance if a particular group of stakeholders is (or is perceived to be) favoured over others, or questions of legitimacy if they include non-sectoral stakeholders, most notably NGOs (Linke and Jentoft, 2016^[9]). While the inclusion of NGOs in advisory groups has been controversial in some cases, their participation can help avoid future conflicts over issues

such as environmental sustainability. Information on the make-up of advisory groups is, therefore, important for understanding the fisheries governance process. It is important to note that the composition of advisory groups will vary depending on the socio-economic and environmental context of the fisheries and the particular area of policy on which it is giving advice. The information presented here cannot be used to make normative judgements on what the composition of advisory groups should be, but instead describe the situation as it is currently reported.

In the survey, a total of 62 advisory groups were reported across 26 countries and economies. Across all advisory groups, commercial fishers were the most frequently represented group, present in 63% of groups, followed by scientific entities which were present on 52% (Figure 5.2). By contrast, civil society organisation were represented on 31% of advisory groups and sub-national bodies 27%. However, many respondents have more than one advisory group, so frequency of representation across all groups does not necessarily reflect participation in the policymaking process across survey respondents.

Table 5.2. Representation of different stakeholders across all advisory groups reported

Stakeholder	Number of groups in which they are represented	% of groups in which they are represented
Commercial fishers	39	63
Scientific entities	32	52
Downstream industry	26	42
Other commercial activity	21	34
Entities in charge of other policy	20	32
Other	20	32
Civil society	19	31
Artisanal fishers	18	29
Sub-national bodies	17	27
Recreational fisher	14	23

Note: Advisory groups contain multiple stakeholders, therefore percentages will not sum to 100.

“Other” stakeholders includes a variety of groups, such as the coast guard in Turkey, fisheries managers and fisheries economists in Australia, labour unions in Belgium and First Nations governments in Canada.

Given the presence of multiple advisory groups in many countries and economies, averaging across all groups could hide important trends on the frequency with which stakeholders are included in national governance processes. Another way to consider the data is in terms of what proportion of countries and economies include a specific group of stakeholders in at least one advisory group. From this perspective, scientific entities and commercial fishers are the most frequently represented, being included in advisory groups in 85% of respondents (Table 5.3). Comparing the frequency of representation by group to by respondent suggests that commercial fishers are more likely to be represented across multiple advisory groups in countries and economies.

Inclusion in advisory groups (both across all groups and by respondent) highlights that scientific entities and commercial producers are the most frequently represented stakeholders. While this is indicative of the important role these groups play in the formulation of fisheries policies, understanding where in the policy process this influence is exerted is critical for transparency. The first step is to understand what advisory groups are being used for; all respondents which reported advisory groups used them for general questions of fisheries management. After general questions on fisheries management, advisory groups on identifying technical parameters are the second most common, followed by groups for the management of specific stocks and the preparation of management or rebuilding plans (Table 5.4).

Table 5.3. Frequency of representation of different stakeholders in at least one advisory group of individual countries and economies

Stakeholder	% of respondents including each stakeholder in at least one advisory group
Commercial fishers	85
Scientific entities	85
Downstream industry	54
Entities in charge of other policy	54
Other commercial activity	46
Sub-national bodies	46
Artisanal fishers	42
Recreational fisher	42
Civil society	42
Other	42

Note: Advisory groups contain multiple Stakeholder therefore percentages will not sum to 100.

"Other" stakeholders includes a variety of groups such as the coast guard in Turkey, fisheries managers and fisheries economists in Australia, labour unions in Belgium and First Nations governments in Canada.

Table 5.4. Policy areas addressed by advisory groups

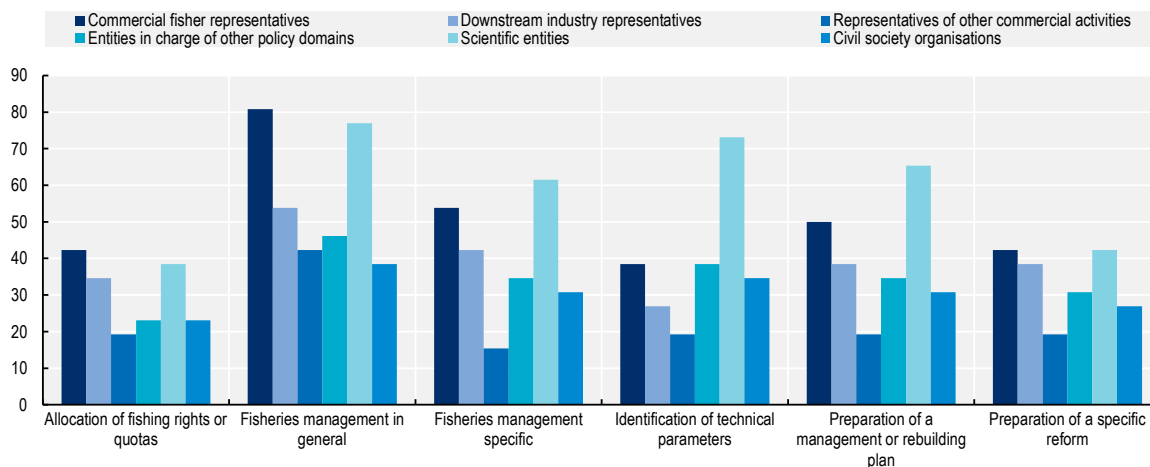
Policy area	% of respondents with advisory groups
Fisheries management in general	100
Identification of technical parameters	73
Fisheries management specific	69
Preparation of management or rebuilding plan	69
Preparation of specific reform	57
Allocation of fishing rights or quotas	54
Other	42

Knowledge of the policy areas that specific stakeholders are advising on is an important component of transparent fisheries governance. For example, 81% of respondents with advisory groups included commercial fishers in advisory bodies related to fisheries management (Figure 5.3). In contrast, 38% of respondents with advisory groups included civil-society organisations in advisory bodies related to fisheries management. Downstream industry was represented in the same groups in 54% of respondents, suggesting, in terms of frequency, the fishing industry are more represented than civil society in fisheries management decision (Annex Table 5.A.2). Looking across all policy areas in the survey (Figure 5.3), scientific entities were the most frequently represented stakeholder in advisory groups related to the identification of technical parameters and the preparation of management plans (73% and 65% of respondents with advisory groups, respectively), indicating respondents are adapting the members of advisory groups to the questions being asked. Scientific entities and commercial fishers are the two most frequently represented groups in every policy area, showing these two stakeholders have the most input into fisheries policymaking processes.

Translating the frequency of representation in advisory groups to actual influence on policy decisions is challenging as the nature of how and where advisory groups are used varies across respondents. Consequently, it is difficult to understand the impact of these groups and the extent to which they conform to best practice, since the best practice will vary with how and where the groups' advice is being used. For example, advisory groups can become lobbying channels for vested interests if certain groups are over represented. While the transparency afforded by advisory groups is positive, it does not preclude the existence of more opaque lobbying channels that can give individual stakeholders a disproportionate influence on the policy process. In cases where respondents do not use advisory groups (five countries in

the case of this survey), this does not necessarily mean there are no mechanisms for representing various stakeholders; such mechanisms may be in place, but simply not captured by the survey. In the cases of countries and economies with no advisory groups, it is not possible to make inferences on the representativeness or inclusivity of the fisheries policy process.

Figure 5.3. Frequency of representation of different stakeholders in at least one group by policy area



Note: The lowest represented stakeholders have been omitted from the chart for readability, these are representatives of recreational and artisanal fishers, sub-national bodies and other. The category of 'Other' policy areas has also been omitted.

Consensus-based decisions are common in Regional Fisheries Management Organisations

Decisions on the management of multilateral fisheries are often taken at the RFMO level. For example, the adoption of conservation and management measures (CMM), MCS procedures, the validation of IUU vessels list and the allocation of catch quotas generally need to be agreed by RFMO members. The decision-making processes at RFMOs are therefore, a vital component of global fisheries governance and understanding the strengths and weaknesses of these processes is important. The risks associated with different decision models, voting systems, and objection processes all have important implications for the management of fisheries.

Of the 13 RFMOs surveyed by Hutniczak, Delpuch and Leroy (2019^[41]) (Annex Table 5.A.1), five rely on consensus-based decision making while eight allow for some form of majority voting (Table 5.5). Consensus decision making, where all parties need to be in agreement before a decision is made, is one of the most co-operative forms of decision-making. Consensus decisions ensure that the interests of minority parties are protected in RFMOs and should, in theory, foster a sense of ownership among the members of the shared resource and its management. This sense of ownership should increase compliance as all the resource users have understood and agreed with the rationale for any management actions taken (Leroy and Morin, 2018^[10]). This sense of ownership is of particular importance for multilateral fisheries and RFMOs as their ability to enforce regulations can be limited, meaning they rely on members to ensure their own compliance. Where there are conflicting interests, however, consensus decisions tend to support the status quo, hampering decision-making and the adoption of changes to management regimes. Further, the need to find a position on which all parties agree can require a

substantial amount of negotiation and lead to recommendations or changes based on a consensus that are watered down and not fully aligned with the scientific advice that was the basis of the negotiations. The drawbacks of making decisions by consensus has been highlighted by COVID-19 and the need for RFMO meetings to take place online, significantly reducing negotiating time.

In majority voting all members are equally powerful, thus individual members are not able to impede decisions on management measures they may disagree with. However, while many RFMOs allow for majority voting in principle, in practice they often try to find a consensus (Leroy and Morin, 2018^[10]). This preference is likely linked to objection procedures, which can allow RFMOs members to opt out of decisions with which they disagree. These procedures, which are part of the voting processes in many RFMOs, can undermine decisions made by voting, and if they relate to the allocation of fishing opportunity can complicate the goal of achieving sustainable catches in the area of competence.

Table 5.5. Decision-making processes in Regional Fisheries Management Organisations

RFMO	Procedure	Objection	Justification of the objection	Specific framework for the objection	Objection review process	Comments
CCSBT	Consensus	-	-	-	-	Rules of procedure updated in 2017.
GFCM	Majority vote	Allowed	Required	Not specified	Not specified	Agreement amended in 2014.
IATTC	Consensus	-	-	-	-	Performance Review from 2016 highlights the limitations of the IATTC's model of governance (Moss Adams LPP, 2016 ^[11]).
ICCAT	Majority vote	Allowed	Required	Specified	Not specified	However, decisions are normally reached by consensus (e.g. to date voting has not been required for IUU list).
IOTC	Majority vote	Allowed	Not specified	Not specified	Not specified	
NAFO	Majority vote	Allowed	Required	Specified	Established (at the request of a CP)	However, decisions are normally reached by consensus. The NAFO Convention was amended in 2017.
NEAFC	Majority vote	Allowed	Not specified	Not specified	Not specified	Amendment on required justification of objection proposed in 2003 but not adopted to date.
NPFC	Majority vote	Allowed	Required	Specified	Established (at the request of a CP)	Some decisions require consensus, e.g. on terms and conditions for any new fisheries in the Convention Area (including allocation of fishing opportunities). Commission invites minimum two non-member experts for a requested review.
SEAFO	Consensus	-	-	-	-	Decisions on matters of substance are taken by consensus and default to consensus in case of lack of agreement on the importance of the decision.
SIOFA	Consensus	-	-	-	-	Decisions on matters of substance are taken by consensus and default to consensus in case of lack of agreement on the importance of the decision.
SPRFMO	Majority vote	Allowed	Required	Specified	Established (automatic)	However, decisions are normally reached by consensus.
WCPFC	Majority vote	Allowed	Required	Specified	Established (at the request of a CP)	However, decisions are normally reached by consensus.
CCAMLR	Consensus	-	-	-	-	

Note: Text in bold indicates best practice.

Source: Hutniczak, Delpuech and Leroy, (2019^[4]), *Intensifying the Fight Against IUU at the Regional Level*.

All RFMOs surveyed by Hutniczak, Delpuch and Leroy (2019^[4]) allow for objections as part of the voting process; however, in two cases (IOTC and NEAFC) the objection process is unconditional and no formal justification is required. The lack of transparency in unconditional objection processes does not contribute to building a common understanding nor increases trust between members required to manage stocks jointly. Mandating justification for objections in RFMOs voting processes can increase transparency and in theory improve the management of stocks in their areas of competence. For this reason, the majority of RFMOs that use voting processes require objections to be justified (e.g. GFCM, ICCAT, NAFO, NPFC, SPRFMO and WCPFC).

Specifying the grounds on which objections can be made can further facilitate decision making by RFMOs. Several RFMOs, for example, only allow objections on the grounds of discrimination against the member or inconsistency with the convention (ICCAT, NAFO, NPFC, SPRFMO and WCPFC). Further, four RFMOs (ICCAT, NAFO, NPFC and SPRFMO) require the objecting parties to present an alternative which is consistent with the CMM being discussed. Another best practice for transparent objection processes is the establishment of a panel to review the objection. Several RFMOs allow for the formation of a review panel, if requested by the member, but only the SPRFMO has a process to form a panel and review the objection automatically. The SPRFMO is the only RFMO reviewed with an automatic review process, majority voting and a limited scope for objections.

Finding a consensus continues to be a common approach for decision-making in RFMOs, even when the mechanisms for majority voting are in place. For example, ICCAT has never used the option to vote on the validation of IUU lists (Hutniczak, Delpuch and Leroy, 2019^[4]). The weaknesses in some voting processes likely explain this continued reliance, as RFMOs try to manage the risks of members opting out of individual CMMs. Nonetheless, the example of the SPRFMO highlights a promising mechanism for ensuring a voting process can represent the views of all members while ensuring timely decisions. The inherent challenges with respect to decision making and the opportunities for reform to facilitate the process are also highlighted by the COVID-19 pandemic. The cessation of in-person meetings has led to the deferral of important but non-urgent decisions as virtual meetings face technological, temporal, and social constraints (Box 5.2). The longer in-person meetings remain impossible, the more important it will be for RFMO to review their decision-making processes to ensure they can continue to manage stocks in their areas of competence effectively.

Box 5.2. Impact of COVID-19 on decision-making in Regional Fisheries Management Organisations

A recent survey of 13 RFMOs by the OECD has shown that the COVID-19 pandemic has had significant impacts on decision making in RFMOs (Annex Table 5.A.1). Notably, travel restrictions implemented in response to the spread of COVID-19 have prevented many RFMOs from holding planned in-person meetings. As of July 2020, nearly all RFMOs (92%) had experienced disturbances to their scheduled meetings. As travel restrictions continue into 2021, understanding how to use virtual meetings effectively for all decisions, and not just a subset of the most urgent issues, will become increasingly important. Countries and RFMOs need to co-operate and communicate regularly to identify and resolve potential disagreements, and to advance policy development and implementation, outside of the scheduled meeting times. The sharing of best practices between RFMOs (and with their members) on the most effective tools and methods to facilitate negotiations in a virtual setting is also important.

The switch to virtual meetings has exacerbated existing issues around RFMO decision making, with 85% of surveyed RFMOs reporting disruptions in their decision-making processes. For example, virtual meetings have usually had reduced agendas, which has limited discussion of important but not urgent issues. For example, discussion of scientific work on the basis of research surveys (i.e. CCBST, NPFC

and IOTC), the agreement on new conservation and management measures (CMMs) or quotas (i.e. NEAFC and WCPFC), and strategic discussions (i.e. GFCM) have been deferred by various RFMOs. Delaying decisions on topics not considered urgent could undermine the management of multilateral fisheries if this leads to delays in the adoption of new CMMs and to changes of existing management where necessary.

Decisions on what items to include on truncated meeting agendas, and which to defer, can have important consequences for fisheries management. For example, some RFMOs have been under pressure to allocate time to particular topics of interest to some parties, such as expanding catch quotas, but which may crowd out other important issues. Transparency in the setting of agendas is crucial to ensure the interests of all parties are considered and there is broad agreement among members on the topics to be covered.

In general, virtual meetings have limitations beyond reduced agendas, which may have important impacts for decision making and the governance of multilateral fisheries. The participation of countries in virtual meeting can suffer from technological constraints. Internet connections can be unreliable, particularly in developing countries and regions such as the Pacific or West Africa, limiting the ability of certain members to participate in discussions. For example, WCPFC and ICCAT have experienced disrupted online communication with members from those regions. If some parties are unable to partake in the discussions, this could reduce the chance of reaching consensus and delay decisions, or undermine equality by leading to better connected countries achieving more favourable decisions.

Secondly, the switch from in-person to virtual meetings has social impacts that are difficult to measure. The richness of the communication medium impacts the speed and outcomes of negotiations, and electronic negotiations can lead to reduced levels of trust, less co-operation, and lower levels of satisfaction with results compared to face-to-face negotiations. Several RFMOs and countries also noted how the switch to virtual meetings means informal conversations and side meetings are no longer possible, or considerably more complicated to arrange. The loss of these communication channels can make negotiations of contentious issues more challenging and additional efforts are required by members to address these issues through other communication channels. Equally important, the longer face-to-face meetings continue to remain impossible, the more likely it is that members become alienated from decisions. This could lead to tensions that would undermine the legitimacy of any decisions taken (if majority decisions are allowed), with consequences for the organisation and fisheries in question.

The sharing of best practices between RFMOs for negotiating CMMs and other issues in a virtual setting is vital to help overcome these issues. Understanding why some RFMOs have been more effective at using the virtual tools than others, which tools are most effective and how to facilitate virtual negotiations is key. Initiatives such as the FAO's Regional Fisheries Bodies Secretariats' Network (RSN) could act as an important forum for discussion and sharing of best practices. Further, the review of intersessional decision-making processes (rarely used at present) to make decisions on topics which cannot be covered in virtual meetings would help ensure issues are negotiated and implemented in a timely manner. For example, integrating new technology, and reviewing decision timelines could help RFMOs adapt to the rapidly evolving situation. Formalising an extraordinary process, such as introducing special clauses or frameworks for similar events in the future, would help increase RFMO's resilience to shocks.

Source: OECD (forthcoming^[12]) *COVID-19 and Multilateral Fisheries Management*.

5.4. Institutional arrangements for coherent and effective fisheries governance

Institutions are central to fisheries governance. However, linking institutional arrangements to measurable policy outcomes is challenging given the wide range of other factors involved and the difficulties in understanding how institutions differ across countries and economies. A first step is to collect data on the types of institutions involved in fisheries policy and the role they play in fisheries governance. These data are key to understanding how different institutional arrangement influence fisheries policy outcomes.

In the majority of survey respondents (94%), the main entity in charge of fisheries policy is part of the government, i.e. a ministry or sub-ministerial agency. However, in Sweden and Costa Rica, fisheries are under the responsibility of public independent agencies, the Swedish Agency for Marine and Water Management (*Havs- Och Vattenmyndigheten*) and INCOPECA (*Instituto Costarricense de Pesca y Acuicultura*) respectively. These agencies are bodies which implement government policies but do not have a vertically integrated hierarchical relationship with a parent ministry or department (Laking, 2006^[13]). The use of such agencies is thought to lead to better management as organisations with clear and specific objectives will out-perform those with unclear or multiple objectives. Secondly, independent agencies also lead to increased legitimacy, as the decisions made should (in theory) be free from direct political interference. However, this legitimacy depends on the ability of these agencies to balance stakeholder influences effectively (see above). Also, the formation of an agency in the first place is a strong signal of the regard in which a particular issue is held by the government (Laking, 2006^[13]).

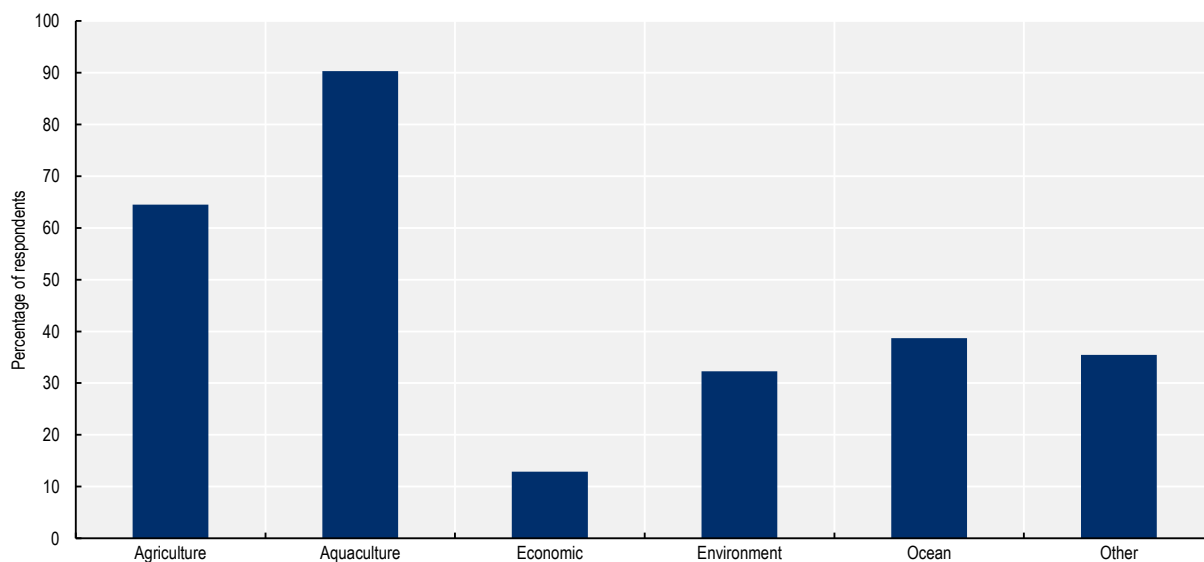
In general, the main entities in charge of fisheries are national entities. The exception is Belgium, where the main fisheries body is the *Vlaamse overhead – Departement Landbouw en Visserij* (Flemish authorities — Department for agriculture and fisheries). The overwhelming preference for national-level entities is a reflection of the geographic spread of marine resources and the societal (and sometimes strategic) importance of fisheries. Belgium is an exception – most likely the result of decentralisation and geography – as its entire coastline is part of the Flemish region.

For 55% of the survey respondents, responsibility for fisheries management was shared with sub-national entities. The decentralisation of responsibility for fisheries management can allow for a more nuanced approach to policy creation and implementation with the adoption of context appropriate solutions to management challenges. However, the high mobility of marine resources and the legal complexities related to managing coastal and marine areas mean the responsibility for managing fisheries can be shared (and sometimes overlap) between regional, national, provincial, and municipal agencies. Complicated institutional structures can create issues of policy coherence, especially if the different institutions have divergent policy objectives. National level entities can play an important co-ordinating role in the formation and implementation of fisheries policies and ensure the consistent application of norms and regulations. Moreover, given that the collection of fisheries data often occurs locally, the harmonisation of data standards and the aggregation of local data by national entities is vital for evidence-based policymaking (see above). Effective co-ordination of local implementation and data collection are essential to ensuring management decisions in one area do not have negative impacts in another.

Coherence with other policy domains is important for effective fisheries governance. All of the entities in charge of fisheries are also responsible for other policy portfolios, the most common area being aquaculture (90%) (Figure 5.4). For 65% of survey respondents, the entity in charge of fisheries was also in charge of agriculture, reflecting a general grouping of sectors which relate to food production. Multiple sectors use marine resources (e.g. fisheries, maritime transport, extractive industries), and while each individual industry may not have a major detrimental impact on marine resources if considered individually, this could change if considered collectively as the impact of each sector can either act additively or synergistically on marine resources. Indeed, the impacts of all the sectors using marine resources may be greater than the sum of the individual sectors, highlighting the importance of managing the impacts of the economy on marine resources in a coherent way.

Differences between ocean and land based sectors of the economy result in different sets of challenges for policy makers. In particular, the intrinsic connection between ocean-based sectors and their dependence on the environment can complicate policymaking (OECD, 2016^[14]). In recognition of the unique governance challenges faced by marine areas, several countries have ministries dedicated to the ocean, the most recent of which is the *Ministère de la Mer* (Ministry of the Sea) created by France in 2020.⁴ The grouping of sectors under the same ministerial portfolio should allow for greater coherence between the various sectors relating to the use of marine resources, as well as help governments to ensure the combined impact of these sectors does not negatively impact marine resources.

Figure 5.4. Additional areas of responsibility for the main entity in charge of fisheries



Note: “Other” policy areas listed are broad and include rural development in Viet Nam, forestry in Argentina, and Turkey and trade in Norway.

For 32% of the survey respondents, the entity in charge of fisheries is also in charge of environmental policy, and in 13% that entity is also responsible for economic policy. For 39% of respondents, the main fisheries entity is in charge of other policy areas, beyond agriculture, aquaculture, economy, environment and ocean. These other areas are broad and include rural development in Viet Nam, forestry in Argentina, New Zealand and Turkey and trade in Norway.

Having multiple policy portfolios in a single ministry can help co-ordinate policy actions, particularly if the areas have shared features; for example, entities for marine (and ocean) policy are present in Korea, Poland, Sweden, Canada and France. However, ministerial portfolios change frequently and the movement of fisheries between different ministries is relatively common (Delpuech and Hutniczak, 2019^[11]). A good example of this is Korea, where the Ministry of Maritime affairs and fisheries was established in 1996, then merged with the Ministry of Construction and Transportation in 2008 to form the Ministry of Land, Transport and Maritime Affairs, with the fisheries portfolio instead being merged with the Ministry of Agriculture and Forestry. In 2013, it was re-established as the Ministry of Oceans and Fisheries. Irrespective of the institution in which related policy areas are housed, specific mechanisms for co-ordinating policymaking, such as inter-agency groups, are required for effective co-ordination of fisheries policies with other areas. Co-ordination mechanisms can be created at all levels of government involved

in fisheries policy (national, provincial, municipal) to help keep local implementation of fisheries policy consistent with national norms and regulations.

5.5. Conclusion

Good governance is fundamental to good fisheries management. The importance of basing fisheries policies on sound scientific evidence is universally recognised. In particular, SDG target 14.4 calls for the implementation of science-based management plans. There is a need to integrate better scientific and socio-economic data into fisheries governance systems by embedding the use of data into policy-making processes (where possible) and investing in data collection. Increasing the use of evidence to make policy can also help avoid negative outcomes from policy change and increase legitimacy. All the countries and economies surveyed use scientific data at some stage of the fisheries policy-making process.

The widespread use of both scientific and socio-economic data in fisheries management decisions is positive inasmuch as it facilitates evidence-based policymaking. However, while data are used to some extent across all the countries and economies responding to the survey, understanding how that translates into evidence-based policymaking is challenging. Secondly, the use of socio-economic data is less frequent than scientific data despite the importance of understanding the impacts of fisheries policy change on broader socio-economic systems.

Transparent mechanisms for stakeholder participation in the governance process are crucial for building legitimacy for fisheries policy and policy change. Advisory groups are a promising mechanism for facilitating an open dialogue between stakeholders and policy makers, and can allow a broad range of stakeholders to have a direct influence on policy areas that may impact them. In recognition of the important role stakeholder participation plays in fisheries governance, 81% of the survey respondents have at least one advisory group for fisheries policy and the majority of these respondents have more than one advisory group. Governments must also carefully manage the balance of stakeholders in each group, which depends on policy area(s) it is advising on. Across all advisory groups, commercial fishing interests were the most frequently represented group, followed by scientific entities. These were the only two interest groups represented in the majority of advisory groups. More inclusive and transparent mechanisms for participation in governance could improve the legitimacy of reforms.

The entity in charge of creating fisheries policy is a foundational component of governance systems. Institutional structures can be complicated, and a better understanding of how different structures impact policymaking is crucial to improving fisheries governance, in particular how institutions can facilitate increased co-ordination and coherence between policies for all the sectors using marine resources. Housing several related policy areas within the same ministry can aid with policy co-ordination, and across all survey respondents the entity in charge of fisheries policy was in charge of other policy areas, most commonly aquaculture (90%) and agriculture (65%). However, despite the fundamental role institutions play in fisheries governance, the impact of different institutional arrangements remains largely unknown.

Multilateral fisheries governance, in particular by regional fisheries management organisations (RFMOs), faces different challenges around the use of data, transparency, and stakeholder participation in decision making. Many RFMOs, for example, have mechanisms for co-operation on the listing of IUU vessels (i.e. cross listing) which can be a cost effective mechanism to prevent the products of IUU fishing from entering fisheries value chains. However, listing practices tend to be applied inconsistently and often allow for objections from RFMO member countries, and thus limits their utility for fighting IUU fishing. Further, while RFMOs increasingly allow for majority voting in decision making, the desire to find a consensus among member is still widespread, potentially hampering and slowing the adoption of policy change. Such issues have become more apparent with the COVID-19 pandemic, which has resulted in delays and deferrals of decisions with the switch to virtual meetings and increased opportunities for IUU fishing in

multilateral fisheries. RFMOs could examine data-sharing and decision-making processes to facilitate decision making and fight IUU fishing.

Creating governance systems that allow for a data-driven, transparent, and inclusive process of policy change, while carefully balancing the inputs of interested stakeholders is a challenging task for governments and RFMOs. Building an evidence base of the types of institutions and mechanisms used to achieve good governance globally is key for identifying opportunities to reform the governance systems of both national and multilateral fisheries to achieve equitable and sustainable policy outcomes. The survey evidence provided in this chapter represents a first step in this direction.

Annex 5.A. Additional data and information

Annex Table 5.A.1. Regional Fisheries Management Organisations included 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

Annex Table 5.A.2. Representation of stakeholders on advisory groups for a specific policy area across survey respondents, %

	Allocation of fishing rights or quotas	Fisheries management in general	Fisheries management specific	Identification of technical parameters	Preparation of a management or rebuilding plan	Preparation of a specific reform	Other policy
Artisanal fisher representatives	23.1	42.3	26.9	15.4	23.1	11.5	3.8
Civil society organisations	23.1	38.5	30.8	34.6	30.8	26.9	19.2
Commercial fisher representatives	42.3	80.8	53.8	38.5	50.0	42.3	26.9
Downstream industry representatives	34.6	53.8	42.3	26.9	38.5	38.5	11.5
Entities in charge of other policy domains	23.1	46.2	34.6	38.5	34.6	30.8	23.1
Recreational fisher representatives	26.9	38.5	26.9	26.9	30.8	19.2	7.7
Representatives of other commercial activities	19.2	42.3	15.4	19.2	19.2	19.2	11.5
Scientific entities	38.5	76.9	61.5	73.1	65.4	42.3	26.9
Sub-national bodies	26.9	42.3	38.5	26.9	34.6	30.8	15.4
Other	11.5	34.6	30.8	23.1	26.9	26.9	23.1

Note: Each cell shows the percentage of survey respondents with an advisory group for a policy area that contains a specific stakeholder. The percentage is based on the number of respondents that use advisory groups (26), and excludes those that do not (5).

References

- Arnstein, S. (1969), “A Ladder Of Citizen Participation”, *Journal of the American Institute of Planners*, Vol. 35/4, pp. 216-224, <http://dx.doi.org/10.1080/01944366908977225>. [8]
- Beghin, J. et al. (2012), *Welfare Costs and Benefits of Non-tariff Measures in Trade: A Conceptual Framework and Application*. [29]
- Belschner, T. et al. (2019), “Evaluating fisheries systems: A comprehensive analytical framework and its application to the EU’s Common Fisheries Policy”, *Fish and fisheries* 20(1), pp. 97-109. [2]
- Burgess, M. et al. (2018), “Protecting marine mammals, turtles, and birds by rebuilding global fisheries”, *Science*, Vol. 359/6381, pp. 1255-1258, <http://dx.doi.org/10.1126/science.aao4248>. [19]
- Costello, C. et al. (2016), “Global fishery prospects under contrasting management regimes”, *Proceedings of the National Academy of Sciences*, Vol. 113/18, pp. 5125-5129, <http://dx.doi.org/10.1073/pnas.1520420113>. [7]
- Delpuech, C. and B. Hutniczak (2019), *Encouraging policy change for sustainable and resilient fisheries*, OECD Publishing, <https://doi.org/10.1787/31f15060-en>. [1]
- EC (2001), “European Governance: A White Paper”, Commission of the European communities COM 428 Final, Commission of the European Communities (EC). [3]
- FAO (2020), *The State of World Fisheries and Aquaculture 2020*, FAO, <http://dx.doi.org/10.4060/ca9229en>. [15]
- Henderson, B. and J. Lankoski (2019), *Evaluating the environmental impact of agricultural policies*, OECD Publishing, <https://doi.org/10.1787/add0f27c-en>. [24]
- Hilborn, R. et al. (2020), “Effective fisheries management instrumental in improving fish stock status”, *Proceedings of the National Academy of Sciences*, Vol. 117/4, pp. 2218-2224, <http://dx.doi.org/10.1073/pnas.1909726116>. [16]
- Hutniczak, B., C. Delpuech and A. Leroy (2019), “Intensifying the Fight Against IUU Fishing at the Regional Level”, *OECD Food, Agriculture and Fisheries Papers*, No. 121, OECD Publishing, Paris, <https://dx.doi.org/10.1787/b7b9f17d-en>. [4]
- Kaplan, I. (2004), “Cooperative research, co-management and the social dimension of fisheries science and management”, *Marine Policy*, Vol. 28/3, pp. 257-258, <http://dx.doi.org/10.1016/j.marpol.2003.08.003>. [6]
- Kauffman, B. (1997), “Cost-recovery as a fisheries management tool”, *Marine Resource Economics*, Vol. 1/12, pp. 57-66. [21]
- Laking, R. (2006), “Agencies: Their Benefits and Risks”, *OECD Journal on Budgeting*, Vol. 4/4, <https://dx.doi.org/10.1787/budget-v4-art19-en>. [13]

- Leroy, A. and M. Morin (2018), “Innovation in the decision-making process of the RFMOs”, *Marine Policy*, Vol. 97, pp. 156-162, <http://dx.doi.org/10.1016/j.marpol.2018.05.025>. [10]
- Linke, S. and S. Jentoft (2016), “Ideals, realities and paradoxes of stakeholder participation in EU fisheries governance”, *Environmental Sociology*, Vol. 2/2, pp. 144-154, <http://dx.doi.org/10.1080/23251042.2016.1155792>. [9]
- Martini, R. and J. Innes (2018), “Relative Effects of Fisheries Support Policies”, *OECD Food, Agriculture and Fisheries Papers*, No. 115, OECD Publishing, Paris, <https://dx.doi.org/10.1787/bd9b0dc3-en>. [31]
- Moss Adams LPP (2016), “Inter-American Tropical Tuna Commission and Agreement on the International Dolphin Conservation Program – Performance Review”. [11]
- OECD (2020), *Agricultural Policy Monitoring and Evaluation 2020*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/928181a8-en>. [26]
- OECD (2020), *Fisheries, aquaculture and COVID-19: Issues and policy responses*, OECD Publishing, Paris, https://read.oecd-ilibrary.org/view/?ref=133_133642-r9ayjfw55e&title=Fisheries-aquaculture-and-COVID-19-Issues-and-Policy-Responses. [17]
- OECD (2020), *Government support and the COVID-19 pandemic*, OECD Publishing, <http://www.oecd.org/coronavirus/policy-responses/government-support-and-the-covid-19-pandemic-cb8ca170/>. [20]
- OECD (2020), “Non-tariff Measures in Agriculture”, [TAD/TC/CAWP(2019)12/REV1], [https://one.oecd.org/document/TAD/TC/CAWP\(2019\)12/REV1/en/pdf](https://one.oecd.org/document/TAD/TC/CAWP(2019)12/REV1/en/pdf). [27]
- OECD (2020), “Principles for Policy Coherence”, *Food Systems and the Challenge of Coherent Policies*, [TAD/CA/APM/WP(2020)4], [https://one.oecd.org/document/TAD/CA/APM/WP\(2020\)4/en/pdf](https://one.oecd.org/document/TAD/CA/APM/WP(2020)4/en/pdf). [25]
- OECD (2020), “The Performance of the Global Food System”, *Food Systems and the Challenges of Coherent Policies*, [TAD/CA/APM/WP(2019)29/FINAL], [https://one.oecd.org/document/TAD/CA/APM/WP\(2019\)29/FINAL/en/pdf](https://one.oecd.org/document/TAD/CA/APM/WP(2019)29/FINAL/en/pdf). [23]
- OECD (2016), *The Ocean Economy in 2030*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264251724-en>. [14]
- OECD (2009), *Reducing Fishing Capacity: Best Practices for Decommissioning Schemes*, Paris, OECD Publishing, <https://doi.org/10.1787/9789264044418-en>. [32]
- OECD (2006), *Financial Support to Fisheries: Implications for Sustainable Development*, <https://doi.org/10.1787/9789264036642-en>. [22]
- OECD (forthcoming), “COVID-19 and multilateral fisheries management”. [12]
- Parker, R. et al. (2018), “Fuel use and greenhouse gas emissions of world fisheries”, *Nature Climate Change*, Vol. 8/4, pp. 333-337, <http://dx.doi.org/10.1038/s41558-018-0117-x>. [18]

- Pita, C., G. Pierce and I. Theodossiou (2010), "Stakeholders' participation in the fisheries management decision-making process: Fishers' perceptions of participation", *Marine Policy*, Vol. 34/5, pp. 1093-1102, <http://dx.doi.org/10.1016/j.marpol.2010.03.009>. [5]
- Sumaila, U. et al. (2010), "A bottom-up re-estimation of global fisheries subsidies", *Journal of Bioeconomics*, Vol. 12/3, pp. 201-225, <http://dx.doi.org/10.1007/s10818-010-9091-8>. [28]
- van Tongeren, F., J. Beghin and S. Marette (2009), "A Cost-Benefit Framework for the Assessment of Non-Tariff Measures in Agro-Food Trade", *OECD Food, Agriculture and Fisheries Papers*, No. 21, OECD Publishing, Paris, <https://dx.doi.org/10.1787/220613725148>. [30]

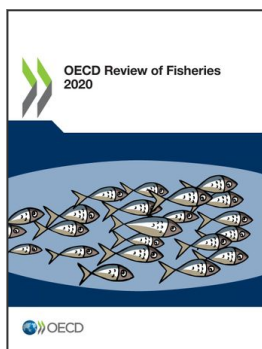
Notes

¹ While the survey data provide insights into some crucial elements of the fisheries governance system (institutions, transparency, participation and the use of evidence), there are other important aspects that are not covered. The level of coherence of fisheries policy with other policy areas (e.g. environmental and social policies) and mechanisms for accountability of policy creators to stakeholders were not measured by the survey despite being important components of fisheries governance. Neither did the survey collect data on the simplicity of fisheries' rules (the ease with which they can be understood and complied with by fisheries actors) nor the mechanisms for compliance, both of which are crucial for effective policy implementation and change. So while the data highlighted below are a good basis on which to understand the fisheries governance systems across a range of countries and economies, more data are required to make concrete links between these systems and fisheries policy outcomes.

² The Commission for the Conservation of Southern Bluefin Tuna, The General Fisheries Commission for the Mediterranean, The International Commission for the Conservation of Atlantic Tunas, The Indian Ocean Tuna Commission, The Northwest Atlantic Fisheries Organization, The South East Atlantic Fisheries Organisation, and The Southern Indian Ocean Fisheries Agreement.

³ The Commission for the Conservation of Antarctic Marine Living Resources and The Western and Central Pacific Fisheries Commission.

⁴ This ministry existed from 1981 to 1991.



From:
OECD Review of Fisheries 2020

Access the complete publication at:
<https://doi.org/10.1787/7946bc8a-en>

Please cite this chapter as:

OECD (2020), "Governing fisheries", in *OECD Review of Fisheries 2020*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/094ae77e-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.