

AQUACULTURE GOVERNANCE INDICATORS HANDBOOK

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Developed by the Environmental Policy Group at Wageningen University and Research
with support from Monterey Bay Aquarium Seafood Watch Program

Note: please check the AGI project website for the latest version

Preface

The Monterey Bay Aquarium [Seafood Watch® program](#) (Seafood Watch) has engaged and empowered US consumers and businesses to purchase seafood that is fished or farmed in ways that minimize environmental impacts since 1999. Through science-based assessments and by working directly with seafood businesses and producers, as well as working to influence consumers, Seafood Watch aims to foster improvements in the sustainability of the fishing/aquaculture sector, while increasing consumer awareness with regard to seafood sustainability as a whole.

In producing assessments for sustainability in aquaculture, the Seafood Watch team identified a need for a comprehensive framework for defining “responsible aquaculture management” through existing legal frameworks and supporting governance structures. The team posed the question to researchers from the [Environmental Policy group](#) (ENP) at Wageningen University and asked them to contribute to the development of a performance framework/gap analysis that can identify regulatory coverage and enforcement for aquaculture at the country level, and guidance to formulate improvements.

The ENP team then conducted a thorough assessment of existing governance frameworks and associated academic literature, leading to the identification of key gaps, which informed the development of the Aquaculture Governance Indicators (AGI) framework. The development of the framework was led by Hilde M. Toonen and Simon R. Bush. The methodology is modelled after the Fishery Performance Indicators (FPIs) (Anderson et al., 2015).

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ACRONYMS

| | |
|---------------|--|
| AGIs | Aquaculture Governance Indicators |
| CA | Collaborative arrangement |
| ENP | Environmental Policy Group, Wageningen University, The Netherlands |
| FAO | Food and Agricultural Organization of the United Nations |
| FPI | Fisheries Performance Index |
| Seafood Watch | Monterey Bay Aquarium's Seafood Watch® |
| UNCLOS | United Nations Convention on the Law of the Sea |
| WGIS | Worldwide Governance Indicators |
| WTO | World Trade Organization |

INTRODUCTION

The sustainability of the aquaculture industry is an imperative of governments and markets around the world. The aquaculture industry has undergone massive expansion over the last three decades, growing at an average rate of 8.2% per annum, and now provides more than half of the fish destined for direct human consumption (FAO 2016). With this expansion has come a range of concerns over the environmental and social impact of seafood production.

In response, governments, industry and civil society groups have developed a range of tools and mechanisms to assess the environmental and social performance of the industry. These tools and arrangements are made up of a mix of state rules and legislation (see Bankes et al. 2016), as well as over 30 voluntary farm level standards (e.g. Aquaculture Stewardship Council) and involuntary recommendation lists (e.g. Seafood Watch) (see Bush and Roheim 2018).

The scope of these state and private mechanisms are focused to a large extent on the environmental performance of primary production. Certification focuses on a mix of farm level metrics, based on direct measurements and/or reporting, and compliance to stakeholder prescribed standards and/or legislated metrics of performance (Hatanaka et al. 2005). Recommendation lists, such as Seafood Watch, are based on methodologies that utilize information from multiple sources, including aggregated farm level data, to synthesize an assessment of a “typical” farm in a given region or country. Like certification schemes, recommendation lists also refer to prescribed standards and/or legislated metrics of performance (de Vos and Bush 2011; Parkes et al. 2010).

While still expanding, it is likely that voluntary, farm level certification will have limited impact on steering improvements in global aquaculture in the future (Bush et al. 2013). This is in part because of the lack of apparent market demand for certified product in the largest fish consuming markets in the world, as well as the cost incurred by individual farmers to comply and undergo assessment.

The ‘involuntary’ character of recommendation lists mechanism means they are able to advocate for improved performance to not only consumers, but buyers, industry and governments. In doing so, they provide a basis upon which to assess and advocate for broad scale improvement of an industry.

What recommendation lists and certification do not thoroughly assess is the ‘governance’ of the industry. By governance we do not just mean the capacity of governments to make and enforce rules, and to deliver services. Instead, we refer to aquaculture governance as the range of social processes and practices involved “in solving societal problems and creating societal opportunities through interactions among civil, public and private actors” (Kooiman et al. 2008, p. 17). In assessing the governance of the aquaculture industry, we move beyond the assessment of how production is performed to instead assess the capacity of *public and private* governance arrangements; that is, how rules and actors organise the identification, assessment, and responses to solving sustainability challenges.

The Aquaculture Governance Indicators Framework

The Aquaculture Governance Indicators (AGIs) are based on four governance dimensions relevant for steering towards responsible aquaculture in a country. Each governance dimension is assessed against three overarching normative governance principles (legitimacy, effectuation and coordination) (see Figure 1).

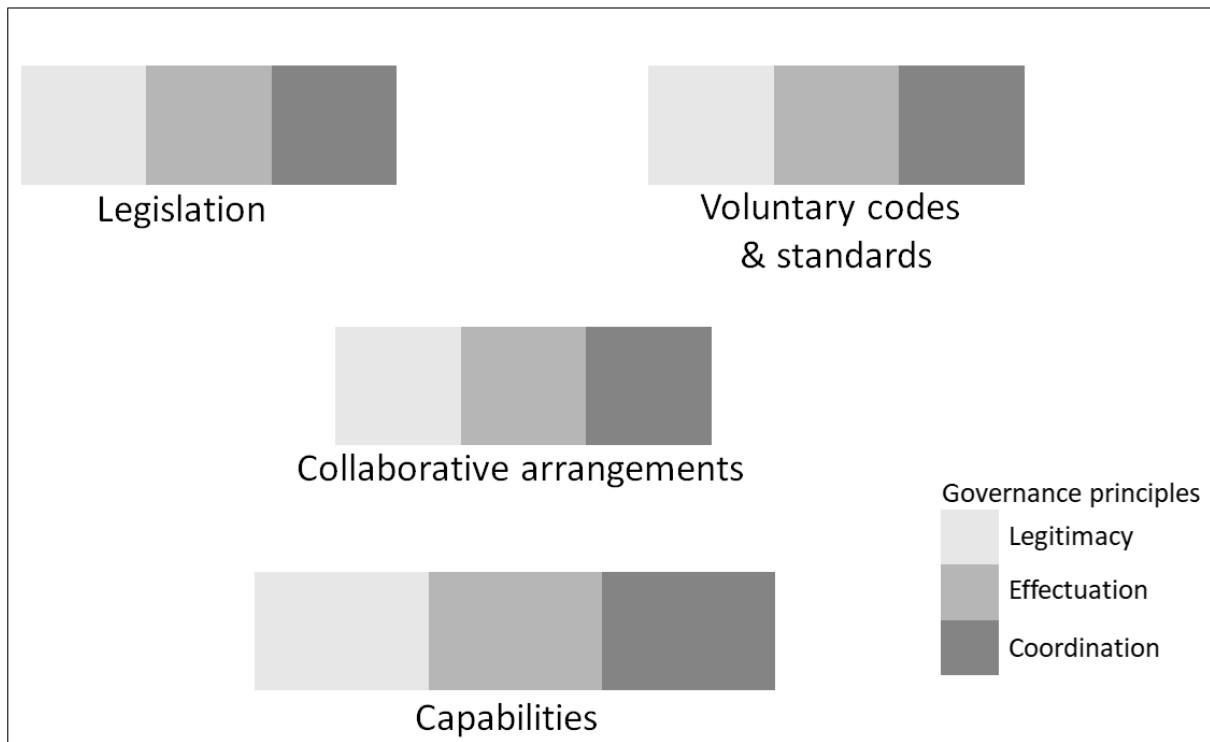


Figure 1. AGI integrative framework

The four dimensions are ordered on three levels (see Figure 2). Level one focuses on governance 'outputs' in the form of legislation and prescriptive codes and standards. Levels two and three, in contrast focus on governance 'inputs'. Level two assesses collaborative arrangements between public and private actors, while level three assesses the capabilities of these actors to engage in governance.

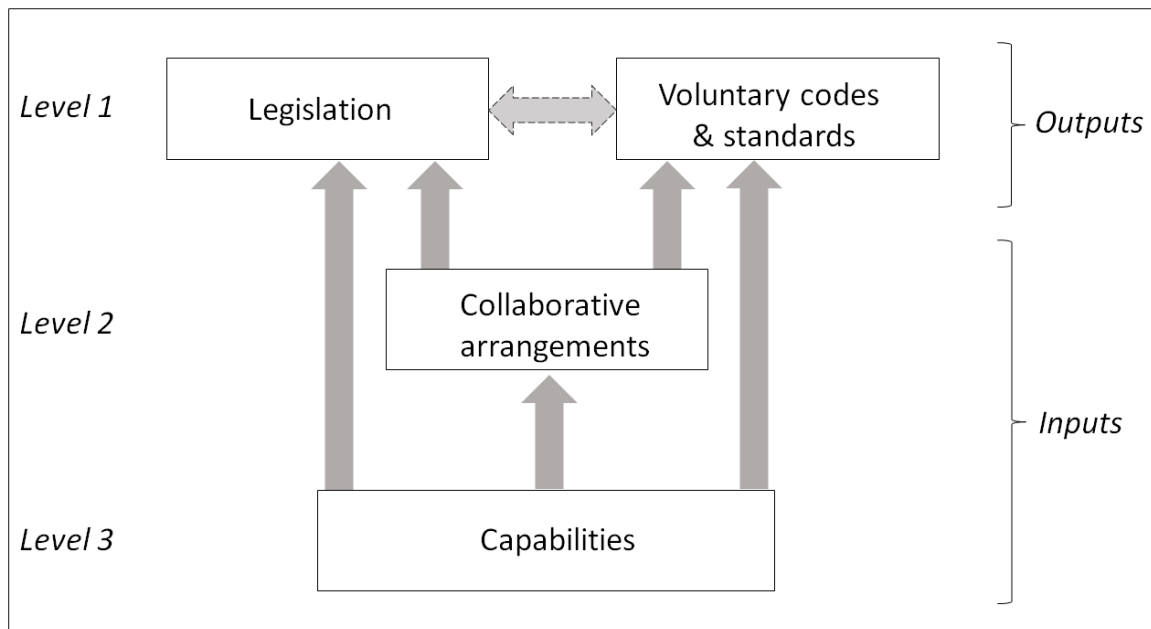


Figure 2. Relationship between the four governance dimensions.

1. Legislation

Legislation is regarded as the basis for steering the aquaculture industry within national jurisdictions. If legislation is in place, and is effectively implemented, targeting key issue areas in a way that is coherent with broader normative goals and principles, then the capacity of a given country is deemed to be high enough to steer the aquaculture sector to responsible production practices.

2. Voluntary codes and standards

Voluntary codes and standards are commonly developed by civil society and/or industry either in the absence of state regulation and/or enforcement of regulation, or where regulation holds the potential to undermine good industry practice (Vandergeest 2007; Ponte et al. 2011). By assessing the content and performance of these codes and standards the AGIs provide insights into the degree to which state legislation is supplemented, replaced, and/or challenged to improve. Legislation and codes and standards are therefore related but still mutually exclusive. Thus, even though a country can have weak legislation, it can still be deemed to be performing well in case it has strong (voluntary) codes and standards in place.

The assessment of codes and standards does not hold countries to account for the content or performance of the non-state codes and standards. Instead, the framework views these codes and standards as a constituent part of the governance arrangements within a country. This means that regardless of whether a country contributes to the content of the codes and standards in place or not, the aquaculture industry within their borders will be subject to the norms and principles upon which they are based.

3. Collaborative arrangements

In addition to the tools of governance, such as legislation and codes and standards, the governance of any sector is also dependent on the existence and quality of collaboration within and between public and private actors. Collaboration is as such a key measure of the capacity of the sector to identify, deliberate over and contribute to the resolution of key environmental issues. Collaboration is independent but related to legislation and codes and standards. For example, in the absence of strong legislation and/or codes and standards, collaborative arrangements between industry actors may enable a high degree of problem resolution. A collaborative arrangement is defined as an organized group of actors with different rights, interests and responsibilities, but who share, to a large extent, the same policy objectives (Van Tatenhove et al, 2000).

4. Capabilities

This dimension focuses on the capability of key actors in aquaculture governance to observe, define, and understand problems, and to (re)act in a suited way within conditions shaped by their organization and (political) position (Termeer et al, 2016; Termeer and Dewulf, 2014). If actors have the freedom to choose how they define and deal with problems, they will exhibit a higher probability of resolving those issues. Governance capabilities are highlighting the ability of actors to contribute to improvement within legislation, prescriptive codes and standards, and collaborative arrangements. Independent assessment of the governance capabilities allows for a comprehensive view on the agency of individual organizations important in a country's aquaculture sector. The capabilities of industry actors may in fact be very strong while legislation remains weak and standards not effective. It would be less likely, however, that in case of strong capabilities of industry, collaborative arrangements in which these industry actors participate are weak. Furthermore, by assessing capabilities, identification of actors needed to make a change goes beyond the mapping of (formal) positions in the governance landscape and provides information on the ability of actors to develop and employ strategies to enhance their (governance) performance.

Integral to each of these governance dimensions are three overarching normative governance principles, that provide propositions to guide for assessing the quality of governance:

Principle 1 – Legitimacy: The establishment of governance arrangements should be both legitimate in the eyes of those that subject themselves to its outputs (rules and norms), including the scope of issue areas, actors, and environmental goals the arrangement covers.

Principle 2 – Effectuation: The implementation and enactment of a governance arrangement should entail clear procedures and systems for implementation and the result of the governance arrangement

should foster a process of reflexive learning (adaption of existing arrangements and/or the emergence of new arrangements through a process of innovation).

Principle 3 – Coordination: Governance arrangements should foster interactions with other (and different kinds of) governance arrangements to coordinate in their wider institutional environment to ensure consistency and/or complementarity.

These principles are addressed through indicators and criteria in each of the four governance dimensions assessed. The AGI framework consists of 26 indicators (and 76 criteria) (Figure 3).

| Governance principles | Governance dimensions | | | |
|-----------------------|--|---|---|-----------------------------|
| | 1. Legislation | 2. Voluntary codes and standards | 3. Collaborative arrangements | 4. Capabilities |
| LEGITIMACY | Authority | Input legitimacy | Input legitimacy | Reflexivity |
| | Scope | Scope | Scope | |
| EFFECTUATION | Organization | Organization | Informational processes | Agility |
| | Enactment and Learning | Enactment and Learning | Enactment and learning | Innovation drive |
| COORDINATION | Coordination with global regulation and policy | Coordination between multiple codes & standards | Coordination between collaborative arrangements | Rescaling Responsiveness |
| | Coordination with regional regulation and policy | Coordination with state policy & regulation | Coordination with state policy and regulation | |
| | Exposure to trade regulation | Coordination with global frameworks | Attribution to change in codes and standards | |

Figure 3. AGI framework showing cross-cutting governance principles, dimensions, and indicators.

Theory of change

This handbook presents the AGIs for assessing the performance and capability of public and private actors to effectively identify, understand, and respond to sustainability challenges in the sector. By assessing indicators related to four governance dimensions (public and private rules, collaboration and capabilities) it is possible to understand the latent capacity within a country to resolve sustainability issues in the aquaculture industry. For Seafood Watch, understanding this capacity provides a basis to advocate for changes to the (public and private) rules, modes of cooperation, and informational and learning process that shape the environmental performance of aquaculture.

We envision the assessments generated can serve several goals:

- 1) The AGIs are a diagnostic tool, providing context and information prior to engagement.
- 2) The AGIs provide a basis for engagement. An assessment can be used to identify gaps in how aquaculture is governed in a country. This gap analysis can form the basis of discussions with governments, industry and/or civil society groups to identify where improvements can be made. Also, identification of also strong capabilities of actors gives an entry point to defining potential for change.
- 3) The AGIs allow for a broader understanding of how governance is related to environmental outcomes and trends. The assessments can be used to compare the governance performance of countries (or alternatively species or sub-sectors). By comparison, relationships between indicators can be analysed, contributing to a better insight in governing capacities in aquaculture.

- 4) The AGIs can be used for communication and education, and to raise awareness of the importance of governance for environmental reform in aquaculture. Assessment will provide examples of good governance.

Scope of AGIs assessment

The AGIs have been designed to serve as a broad analysis of the performance of aquaculture governance in a country, as well as to enable a more in-depth study of strengths and weaknesses within a country. The framework can be applied at a country scale, or on a specific species or even on one of the Seafood Watch issue areas.

A general overview captures the overall governance performance, generated by an assessment of legislation, voluntary soft law instruments, arrangements and actors in an aggregated way. For example, in assessing coverage by certification standards, the degree to which production systems are included, are taken together for all certification standards present in a country. Also, different production systems are jointly assessed at first. If such a bird's eye view shows low overall performance and/or much variation has been indicated (for example, much discrepancy between coverage by different standards; or big differences between production systems) a more detailed analysis can be conducted.

The AGIs allow for both a general and a comprehensive assessment. For example, arrangements can be scrutinized separately to detect their specific performance in deliberative processes, and capabilities of individual actors can be analysed to identify their abilities to steer for change. In the first round of assessments, we aim for an overall governance assessment.

The AGIs transcend issue areas of concern. For Seafood Watch, this consists of nine environmental issue areas (criteria 2 to 10). The data criterion (criterion 1) is reflected in several indicators throughout the dimensions (mostly referred to in terms of "transparency").

Table 1. Seafood Watch issue areas (criteria) and their descriptions.

| Seafood Watch issue areas | |
|---|---|
| C1 - Data/traceability | The quality of published information about the farm's impact on the environment. |
| C2 - Effluent | The impact of farm waste that is released into the environment. |
| C3 - Habitat | The impact a farm's location or amount of production has on natural habitats, such as mangroves or wetlands. |
| C4 - Chemical use | The environmental impact of antibiotics and other chemicals released by the farm. |
| C5 - Feed | The amount of wild fish and other sources of protein used to feed the farmed fish. |
| C6 - Escapes (cultured species) | The possibility that other non-native species, including pathogens and parasites, could be released into the environment. |
| C7 - Diseases, pathogens, and parasite interaction | Amplification of local pathogens and parasites on fish farms and their transmission or retransmission to local wild species that share the same water body. |
| C8 - Source of stock | The amount of wild eggs or young fish used to support farmed fish. |
| C9 - Predator and wildlife mortalities | Mortality of predators or other wildlife caused or contributed to by farming operations |
| C10 - Introduction (into the wild) of secondary species | A measure of the escape risk (introduction to the wild) of alien species other than the farmed species are introduced to an ecologically-distinct waterbody (i.e., one in which they are not native or present). This could include pathogens, parasites, or other secondary species unintentionally transported during live animal movements (e.g., eggs, juveniles or broodstock, cleaner fish, etc.), or the movements of other non-biosecure materials (e.g., baitfish or other unprocessed feed ingredients, farming equipment, etc.). |

Each point of assessment has been aggregated to cover generic categories and indicators that underlie the governance of all these issue areas. In principle, issue areas of concern can also be tailored, either by adding other issue areas (to include social issues for instance), or by narrowing down to some issue areas in particular. It is important to note that the AGIs are designed in such a way that they allow for an assessment of the ways in which various governance arrangements deal with these issue areas, but they do not go into a great level of detail into the issue areas themselves. For example, when mentioning the 'coverage' of issue areas, the AGIs do not look into detail into the specific criteria or rules set regarding the issue area, but only assess whether there is, for example, legislation in place that deals with the issue.

General methodology

The AGIs are based on a qualitative methodology, including a quantitative method (scoring) to strengthen systematic analysis and comparison (mixed-methods research design). The AGI framework is built upon an interpretive research paradigm. In other words, it involves reconciling subjective interpretations in certain aspects of governance (e.g. capabilities) and weighing various perspectives as part of the assessment. The use of different methods for data collection and analysis is to ensure validity of results (triangulation).

The starting point for an assessment is to define the objective (i.e. one or multiple goals mentioned above, which might be complemented with other objectives). At the same time, the scope of the assessment has to be defined (e.g. country and species; macro vs. micro). After a preparation phase, the assessor carries out the assessment, which will be reviewed by researchers from the Environmental Policy (ENP) group of Wageningen University. After revisions, there is a peer review process. The final report will be input for use, based on the defined goal. Figure 4 presents a general overview of the assessment process



Figure 4. Overview of the overall assessment process

The AGIs are modelled after the Fishery Performance Indicators (FPIs) developed by Anderson et al. (2015). The four governance dimensions are broken down into indicators, based on the organizing principles. The indicators are in turn broken down in several specific criteria. Each criterion is measured along a quintile ranking which are weighted equally to produce indicator classification. The resulting classification at each level enables the identification of strong and weak performing governance dimensions. The argumentation provided as a basis of the scoring allows for identification of 'gaps' that can in turn be used for engaging partner countries and other actors in discussions over governance improvement.

The indicators are scored on a Likert scale 1 to 5 using criteria that are designed to reflect the conditions of a broad range of countries, with diverse public and private governance settings. Even though using such standardized measures might suggest a calculative approach, the AGIs are not designed to provide a calculative assessment. The AGIs serve as an argumentative tool, based on an interpretative research paradigm: a country's aquaculture governance is perceived to be shaped by human action and embedded in a specific socio-political and historical context. The assessment of a country's performance is thus impossible to be cut loose from the social setting, including the diversity of perspectives of those involved. The systematic and transparent design of the framework, including scoring the indicators on a Likert scale, forces assessors to give a clear account of their interpretation, and strengthens rigor and validity of the assessment. In addition, each metric is also given a quality score to indicate how confident the scorer is regarding the accuracy of the score. Also, assessors have to be well-trained, and need to be experienced in, and confident with, conducting interpretative research, especially knowing how to reconcile or weigh diverse perspectives.

Like the FPIs, the AGIs are designed to not only rely on primary data collection, but as much as possible on information that is publicly available (e.g. legislation, standards) and/or open to expert assessment (Anderson et al. 2015). It is very likely that assessors have to fall back on expert opinion (their own, and informed by others) for scoring most indicators, though, if possible, triangulation with documented evidence

is preferred. Expert opinion can be collected through individual or group interviews. An interview guide for semi-structured individual interviews is added at the end of this document to assist assessors in collecting data. Also, workshops can be organized to create an interactive setting for a group interview. Again, the quality score to indicate the confidence of the assessor about the score is important: the assessor can use the quality score to reflect the reliability of information sources.

Before assessors can start scoring the indicators, they have to go through identification steps for each of the four governance dimensions, which allows them to identify what is to be assessed, so what law, regulations and state responsibilities (dimension 1); voluntary codes and standards (dimension 2); collaborative arrangements (dimension 3); respectively capabilities of which actors (dimension 4). The identification steps, including the selection procedure, are described in detail in the introduction to each dimension.

The practical scoring guidelines presented in the next section provides specific instructions for assessors to carry out the assessment.

PRACTICAL SCORING GUIDANCE

An overview of the assessment process for assessors conducting a country-species assessment is provided in Figure 5.

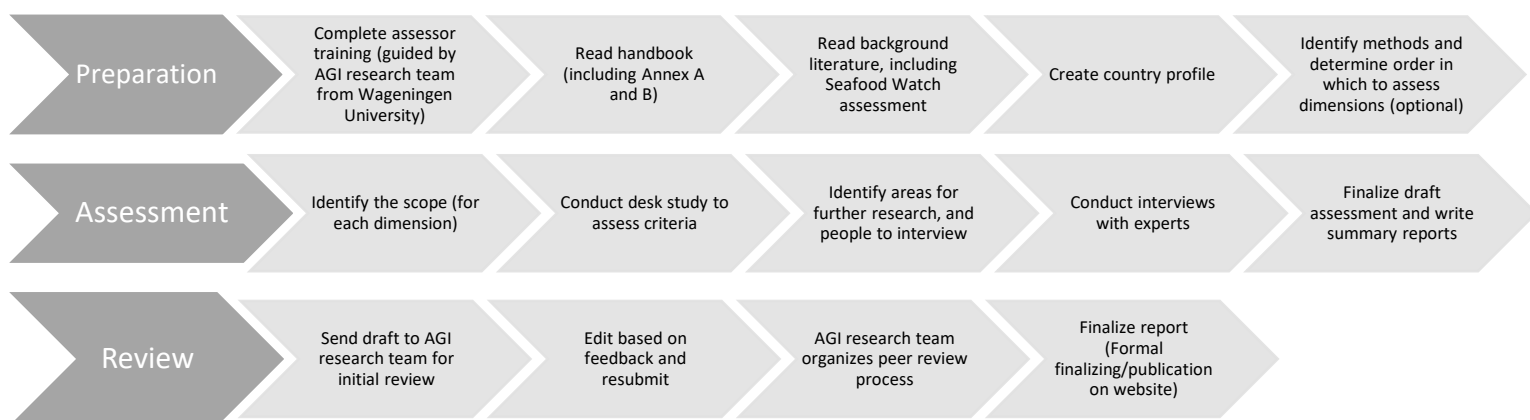


Figure 5. Detailed assessment process

Preparation

In preparation of the assessment, it is advised to complete an assessor training (as soon as these are available) and read the entire handbook. Specific instructions are presented under each criterion. The assessor should become familiar with the AGI Worksheet (to be filled in Excel). A template Worksheet is presented in **Annex A** (adapted from the FPIs; Anderson et al. 2015) and a template report in **Annex B**. The assessor needs to read relevant background literature to get acquainted with the context, including SAFAI and/or [STIP](#) country profiles if available. The [Seafood Watch assessment report](#) should also be read, because this forms a basis for identifying important issues. On the basis of this, the assessor should write a country profile as introduction to the assessment report. The assessor may now determine in which order (s)he wishes to assess the four dimensions of the framework. Important to note is that, although the dimensions are numbered 1 to 4, this does not automatically imply that an assessor needs to follow this sequence when doing the actual assessment. It might for example be useful to first identify actors (linked to the assessment of the capabilities (dimension 4) before identifying collaborative arrangements (dimension 3); or even assess dimension 4 before dimension 3. It might also depend on the expertise of the assessor: someone who is well-informed about for example a country's voluntary codes and standards (dimension 2) might want to start with that, as an easy way to become familiar with the framework. The identification steps (see next) will give the assessor a good idea about the best way to do the assessment. If an assessor does not have a clear preference, we recommend keeping the sequence 1 to 4. The assessor should identify the methods needed to carry out the assessment, which include a desk study, individual interviews, and additionally, workshops. Assessors can contact the AGI researchers from Wageningen University to discuss appropriateness and application of methods.

Assessment

Before scoring the indicators, assessors should identify what is to be assessed, so what law, regulations and state responsibilities (Dimension 1); prescriptive codes and standards (Dimension 2); collaborative arrangements (Dimension 3); and capabilities of which actors (Dimension 4). Assessors should provide a description of each identification step, to be included in the Worksheet (Annex A). It is important to note that identification of collaborative arrangements and actors leads to a selection of a specific subsample arrangements and actors, rather than a representative sample to assess the overall aquaculture governance performance in a country. Our selection approach however fits best in with the framework's set goals of fostering improvements and promoting learning by building upon a country's strengths. Assessors of course need to account for the inherent selection bias, and have to justify the selection of arrangements and actors (see detailed descriptions in the introduction of the dimensions). Also, an assessor might argue that it is useful to also make a selection of prescriptive codes and standards, again this has to be justified.

After the identification step, the assessor can start with the actual scoring of criteria in the Excel sheet, taking into account the following:

1. The first tab ("Cover Page") has to be filled in with basic information, such as country, focus on single or multi-species, location and date of assessment, and names of assessors.
2. A separate tab has been created for each dimension.
3. It is key to note the importance of giving the quality score. If uncertainty comes from difficulties with interpretation of an indicator or metric, an assessor should consult supporting materials or the AGI team from Wageningen University, rather than giving the score a lower quality. The possible quality scores are:

A: Reviewer is highly confident (95%) the indicated score (1, 2, 3,4 or 5) is correct. Confidence can come from familiarity with the country's aquaculture sector, the reliability of another expert source.

B: Reviewer feels the indicated score (1, 2, 3,4 or 5) is more likely than others.

C: Reviewer is making an educated guess based on best available information, but reviewer is not highly confident the true metric would be within one of the given score.

4. In scoring the indicators, possible scores are a 1, 2, 3, 4, 5 or NA. Intermediate scores of 1.5, 2.5, etc. are not acceptable. NA is only acceptable if the metric truly does not apply to the sector. If a score cannot be given due to missing data, the metric should not be left blank- an educated guess as to the score should be made and the metric should be given a quality score of C (cf. Anderson et al, 2015).
5. The justification and source columns should be filled in for each metric so that reviewers know the rationale behind the given score. Explanations can be brief but it should be clear from the justification and source column which information sources are being used.

It is advised to start the assessment through desk study. The next step is to identify criteria that need further research, and experts to contact to obtain the required information and/or insights. Based on interviews with experts, the scoring can be completed. To ensure the validity of the responses obtained through interviews, assessors should be familiar with social science methods. Such methods include triangulation of findings and conducting interviews until a certain level of saturation has been achieved, i.e. until the responses converge to a certain assessment score. Experts from different organizations should be consulted, including government, industry and civil society. An interview guide to help structuring individual interviews has been added in Annex C. In case a workshop is deemed useful, the format has to be tailored to the particular target group and topics to be addressed. The final step of the assessment is to write a summary report (see Annex B).

Review

The assessment report is to be reviewed by the AGI researchers from Wageningen University, and revised by the assessor, before being finalised. Before the final report will be published by Wageningen University and Seafood Watch, there will be a peer review process. This can be a desk-based peer review, or a panel-based evaluation.

Assessors may contact the AGI research team from Wageningen University (Furqan Asif, Hilde Toonen, Simon Bush) for assistance in using the framework, or for more explanation and help. If uncertainty in scoring comes from difficulties with interpretation of an indicator, an assessor should consult the Wageningen University research team, rather than giving the score a lower quality.

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THE INDICATORS

1. LEGISLATION

Rationale

Laws are the most explicit policy instruments for national governments to regulate aquaculture (-related) activities of individuals and groups within its jurisdiction. As a governance dimension, legislation is an important starting point to determine the primary capacity of states to set effective rules and norms for the aquaculture sector.

Legislation on aquaculture is in general highly complex. On/inshore water bodies, whether natural or man-made, are under full control of a nation state. While there is some reference to the use of water and biological resources relevant to aquaculture in the Exclusive Economic Zones under UNCLOS, more specific legal and regulatory frameworks for aquaculture, both on national and international level, are less clearly defined (Bankes et al, 2016). Many countries have difficulties in designing laws and regulations which could help to move towards sustainable governance of the industry. Also, there is by no means one single approach to taking aquaculture up into national legal systems (Ibid.).

The assessment of a country's legislation is divided into seven indicators, organized according to the three principles of legitimacy, effectuation and coordination. The first indicator is *authority*, referring to the general capacity of a government to make, implement and enforce legislation. The second indicator considers the *scope* of legislation in terms of coverage of issue areas and environmental principles, and applicability to appropriate actors. The third indicator is about the *organization* of legislation into practice, looking at how this is done and by whom. The subsequent indicator assesses the outcome of this organization in terms of *enactment and learning*, looking at compliance, monitoring and evaluation. The final three indicators consider the *coordination of legislation with global and regulation and policy* respectively, in addition to *exposure to trade regulation*. This is to recognize that the aquaculture industry is global, both in terms of production and consumption, and set within a wider set of international laws, treaties and norms (Bankes et al. 2016).

Identification

To delineate the extent of assessment, national legislation and regulations, as well as international and regional laws and agreements have to be identified. Focus is on legislation which is relevant and/or specific for a country's aquaculture sector. Also, legislation has to link up to the main sustainability issues for the country (and species) under assessment.

Table 2. Legislation identification fields descriptions.

| Field | Guidance |
|-----------------------------------|--|
| Name of legislation/regulation | Enter the full name of the legislation. Provide a link to online version either by a) right click on the cell > Link > Insert Link or b) put in references list in methodology tab |
| National, regional, international | Click <input type="checkbox"/> and select one of the three options as appropriate |
| Aquaculture specific? | Click <input type="checkbox"/> and select yes or no |
| Relevant to aquaculture? | Click <input type="checkbox"/> and select yes or no |
| Main issue area | Based on expert judgment the assessor defines the main issue areas, informed by the view on sustainability by the country's industry. The main issue areas must include the SFW issues that are flagged as 'red' in the SFW assessment report for that country & species (if applicable). |
| Seafood Watch issue area | See table 1 (page 9) |
| Sources | Indicate the source of information used to score and justify each criteria. Note: when referring to interviews or references, use the format "interview [number]" with the number referring to the appropriate interview listed in the methodology tab (use references section to include hyperlinks). |
| Justification | Provide rational and reasoning for the score given and be sure to explain whether a score is an average reflecting a high degree of variation, or a score that characterizes a majority. |

When filling the table, the assessor starts with listing national legislation and regulations, selects “national” in the second column, and fills out columns C to F. The last four columns can be used to serve the assessment of several criteria in this dimension, yet this is optional. If used, they will not be filled out in this identification step but when assessing this indicator.

Starting point for looking for laws and regulations can be the [FAO NALO country description](#) and governmental websites and documents (see Sources listed below). Information needed to fill columns C and D (“Aquaculture specific?” and “Relevant to aquaculture?”) helps the assessor to distinguish whether a law is to be included in the assessment, and provides the basis to assess indicator 1a2. A law is categorized as either aquaculture specific or relevant to aquaculture. Aquaculture specific legislation relates to laws that explicitly address the sector (not whether a law is ONLY about aquaculture, e.g. in Thailand there is the Royal Fisheries Ordinance, which deals with aquaculture separately). Also laws which are not specific or explicit on aquaculture can still be relevant for the sector, and have to be included in the assessment. For example, laws regarding water pollution, which are implicitly applicable to the aquaculture industry.

The assessor also fills in columns E and F, identifying “Main issue areas” and “Seafood Watch issue areas”. Based on expert judgment the assessor defines the main issue areas, informed by the view on sustainability by the country’s industry. The main issue areas must include the Seafood Watch issues that are flagged as ‘red’ in the Seafood Watch assessment report. Note that these main issues can, but do not necessarily have to be linked to Seafood Watch criteria for aquaculture.

Academic articles can help to find the main issues, or websites of, for example, producer organizations or the department of fisheries/environment/agriculture. When the main issue areas correspond with the Seafood Watch criteria, the assessor should use the same acronyms/numbers (see below, see also [Seafood Watch website](#) and documentation).

If the assessor identifies other main issue areas, this should be stated clearly. Please note that focus is on the nine environmental issue areas (criteria 2 to 10, see table 1). The data criterion is reflected in several indicators throughout the dimensions (mostly referred to in terms of “transparency”).

When the assessor has covered relevant national legislation, the international and regional laws and agreements has to be listed. In the second column, “international” or “regional” is selected. Also, column “Seafood Watch issue areas” has to be filled out. The other columns can remain blank.

Sources:

- NALO country description (FAO’s NALO website: <http://www.fao.org/fishery/nalo/search/en> – select the country under assessment).
- National databases, regional databases, academic articles, interviews
- Information can also be found in sources such as academic articles, or through (phone/virtual) interviews of actors in the sector.
- For more information about the Seafood Watch issue areas, check the website: <https://www.seafoodwatch.org/about-us/our-standards/standard-for-aquaculture>

Indicator 1.1 Authority

Authority generally refers to the power to govern. For the purpose of this framework, authority is regarded as the general ability of a government to design, implement and enforce legislation. Following the Fisheries Performance Index (FPI), the criteria in this indicator draw upon the [Worldwide Governance Indicators \(WGIs\)](#) developed by the World Bank (Anderson et al. 2015). The WGIs are based on more than 30 underlying data sources, which are rescaled and combined to create six aggregate indicators, which form the six criteria of the AGIs under *authority*.

The indicator consists of the following criteria:

- A. Voice and accountability
- B. Control of corruption
- C. Regulatory quality
- D. Rule of law
- E. Government effectiveness
- F. Political stability and absence of violence

A. Voice and accountability

The scoring of this indicator is based on one of the six World Bank Worldwide Governance Indicators (WGIs). *Voice and accountability* refers to “perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media” (World Bank, 2018). A 5 indicates a high level of accountability, while a 1 indicates significant room for improvement.

| Criteria score | WGI score |
|----------------|---|
| 5 | 1.02 and above (highest-performing 2010 quintile) |
| 4 | 0.44 to 1.02 |
| 3 | -0.21 to 0.44 |
| 2 | -0.95 to -0.21 |
| 1 | Below -0.95 (lowest-performing 2010 quintile) |

Scoring guidance

The WGI indicators can be found on the following website:
<https://info.worldbank.org/governance/wgi/Home/Reports>

- Click the “Table View” tab, select the country and choose the most recent year.
- Find the score for the following indicator: Voice and accountability
- Score the criteria according to table above.
- The assessor can mark an A as quality score for this indicator.

B. Control of corruption

The scoring of this indicator is based on one of the six World Bank Worldwide Governance Indicators (WGIs). *Control of corruption* refers to "perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (World Bank, 2018). A 5 indicates a high level of control of corruption, while a 1 indicates significant room for improvement.

| Criteria score | WGI score |
|----------------|---|
| 5 | 0.97 and above (highest-performing 2010 quintile) |
| 4 | 0.05 to 0.97 |
| 3 | -0.46 to 0.05 |
| 2 | -0.88 to -0.46 |
| 1 | Below -0.88 (lowest-performing 2010 quintile) |

Scoring guidance

The WGI indicators can be found on the following website:
<https://info.worldbank.org/governance/wgi/Home/Reports>

- Click the "Table View" tab, select the country and choose the most recent year.
- Find the score for the following indicator: Control of corruption
- Score the criteria according to table above.
- The assessor can mark an A as quality score for this indicator.

C. Regulatory quality

The scoring of this indicator is based on one of the six World Bank Worldwide Governance Indicators (WGIs). *Regulatory quality* refers to “perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development” (World Bank, 2018). A 5 indicates a high level of regulatory quality, while a 1 indicates significant room for improvement.

| Criteria score | WGI score |
|----------------|---|
| 5 | 0.98 and above (highest-performing 2010 quintile) |
| 4 | 0.31 to 0.98 |
| 3 | -0.36 to 0.31 |
| 2 | -0.88 to -0.36 |
| 1 | Below -0.88 (lowest-performing 2010 quintile) |

Scoring guidance

The WGI indicators can be found on the following website:
<https://info.worldbank.org/governance/wgi/Home/Reports>

- Click the “Table View” tab, select the country and choose the most recent year.
- Find the score for the following indicator: Regulatory quality
- Score the criteria according to table above.
- The assessor can mark an A as quality score for this indicator.

D. Rule of law

The scoring of this indicator is based on one of the six World Bank Worldwide Governance Indicators (WGIs). *Rule of law* refers to “perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence” (World Bank, 2018). A 5 indicates a high level of rule of law, while a 1 indicates significant room for improvement.

| Criteria score | WGI score |
|----------------|---|
| 5 | 0.95 and above (highest-performing 2010 quintile) |
| 4 | 0.16 to 0.95 |
| 3 | -0.45 to 0.16 |
| 2 | -0.91 to -0.45 |
| 1 | Below -0.91 (lowest-performing 2010 quintile) |

Scoring guidance

The WGI indicators can be found on the following website:
<https://info.worldbank.org/governance/wgi/Home/Reports>

- Click the “Table View” tab, select the country and choose the most recent year.
- Find the score for the following indicator: Rule of law
- Score the criteria according to table above.
- The assessor can mark an A as quality score for this indicator.

E. Government effectiveness

The scoring of this indicator is based on one of the six World Bank Worldwide Governance Indicators (WGIs). *Government effectiveness* refers to “perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies” (World Bank, 2018). A 5 indicates a high level of government effectiveness, while a 1 indicates significant room for improvement.

| Criteria score | WGI score |
|----------------|---|
| 5 | 1.01 and above (highest-performing 2010 quintile) |
| 4 | 0.16 to 1.01 |
| 3 | -0.44 to 0.16 |
| 2 | -0.87 to -0.44 |
| 1 | Below -0.87 (lowest-performing 2010 quintile) |

Scoring guidance

The WGI indicators can be found on the following website:
<https://info.worldbank.org/governance/wgi/Home/Reports>

- Click the “Table View” tab, select the country and choose the most recent year.
- Find the score for the following indicator: Government effectiveness
- Score the criteria according to table above.
- The assessor can mark an A as quality score for this indicator.

F. Political stability and absence of violence

The scoring of this indicator is based on one of the six World Bank Worldwide Governance Indicators (WGIs). *Political stability and absence of violence* refers to “perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism” (World Bank, 2018). A 5 indicates a high level of political stability and absence of violence, while a 1 indicates significant room for improvement.

| Criteria score | WGI score |
|----------------|---|
| 5 | 0.92 and above (highest-performing 2010 quintile) |
| 4 | 0.41 to 0.92 |
| 3 | -0.17 to 0.41 |
| 2 | -0.85 to -0.17 |
| 1 | Below -0.85 (lowest-performing 2010 quintile) |

Scoring guidance

The WGI indicators can be found on the following website:
<https://info.worldbank.org/governance/wgi/Home/Reports>

- Click the “Table View” tab, select the country and choose the most recent year.
- Find the score for the following indicator: Political stability and absence of violence
- Score the criteria according to table above.
- The assessor can mark an A as quality score for this indicator.

Indicator 1.2 Scope

Scope refers to the content, or the 'about what' and 'about whom' of legislation. The scope of legislation relates the coverage of legislation with respect to aquaculture and the Seafood Watch issue areas, and the coverage of appropriate actors. The rationale for this indicator is that the more explicit legislation on aquaculture, the more likely it is to enable the responsible performance of the sector in a given country.

Explicit attention can be covered in both a specific aquaculture laws, and/or wider pieces of legislation that either make explicit reference to aquaculture, or cover issues directly related to aquaculture. The scope of legislation also refers to the adoption of environmental principles such as precautionarity and attention for cumulative impacts.

Finally, scope also refers to the perceived relevance of (the scope of) legislation by industry actors.

The indicator consists of the following criteria:

- A. Existence and perceived relevance
- B. Coverage of issue areas
- C. Precautionarity and attention for cumulative impacts
- D. Appropriate actors

A. Existence and relevance

The relevance of the legislation is determined by expert judgement of those in or related to the industry. Clear evidence and examples should be provided by expert respondents demonstrating where legislation is NOT deemed relevant or contradictory leading to multiple interpretations of the law.

| Criteria score | Guidance |
|----------------|--|
| 5 | There is a specific aquaculture legislation in place that is deemed relevant to the main issues faced by the industry. |
| 4 | Legislation for a broad range of issues are explicitly linked to aquaculture production and deemed relevant to the main issues faced by the industry. |
| 3 | Legislation for key issues relevant to aquaculture production are in place, but there is not explicit mention of the aquaculture industry. |
| 2 | Legislation for key issues relevant to aquaculture production are in place, but there is not explicit mention of the aquaculture industry, and the industry questions the relevance of this legislation to their industry. |
| 1 | There is no applicable legislation to the aquaculture industry in place. |

Scoring guidance

Check and compare columns "Aquaculture specific/Relevant to aquaculture" and "Main issue area" legislation/regulation main table to determine if, and to what extent, the key issues area are addressed. If online sources (NALO website, national and regional databases) do not provide information to assess this criterion, interviews with appropriate government officials or a legal expert can be useful.

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- National and regional databases – e.g. InforMEA (Legislation) - https://www.informea.org/en/search?f%5B0%5D=type%3Alegislation&f%5B1%5D=field_informea_tags%3A6133
- Interviews

B. Coverage of issues areas

The coverage of issue areas is a measure of the extent of technical alignment between legislation and the Seafood Watch issue areas.

| Criteria score | Guidance |
|----------------|---|
| 5 | All of the Seafood Watch issue areas are explicitly covered in the existing legislation |
| 4 | The majority of the Seafood Watch issue areas, including the most important issues for the country under assessment, are explicitly covered in the existing legislation |
| 3 | A few of the Seafood Watch issues areas, including the most important issues for the country under assessment, are explicitly covered in the existing legislation |
| 2 | Some of the Seafood Watch issue areas, yet not the important issues for the country under assessment are explicitly covered in the existing legislation |
| 1 | None of the Seafood Watch issue areas are explicitly covered in the existing legislation |

Scoring guidance

Check the column "Seafood Watch issue area" the main legislation/regulation table, and assess 1) what are the Seafood Watch issue areas covered by law?; 2) whether the Seafood Watch issue areas addressed are the most important issues in the country; and 3) the extent to which the Seafood Watch issue areas are explicitly covered in legislation?

- 1) During the identification phase, Seafood Watch issue areas in the legislation have already been identified. The ten areas are explained in the introduction of this assessment guideline. The extent to which they are covered depends on the amount of detail the laws and regulations deal with the issue areas.
- 2) The second question can be traced back to the previous criterion (1.2-A: voice and accountability). If the main issues which are identified in this indicator are part of the Seafood Watch issue areas, the score is high(er).
- 3) The third question relates to the actual coverage of Seafood Watch issue areas in the laws. If none of the issue areas are explicitly covered, the score is low.

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- Legislation and/or policy documents

C. Precautionarity

The precautionary approach refers to the degree to which the law leaves room for risk or uncertainty, and if this is deemed acceptable. This translates into the degree to which evidence is needed to reduce risk; yet if the proof is not available, or risks and uncertainties are high, the most precautionary approach is to be followed, and (additional) investigation needs to be carried out.

| Criteria score | Guidance |
|----------------|--|
| 5 | Legislation is based on an explicit reference to a precautionary approach throughout all legislation. Where evidence of impacts are not available but there is no information available the law legislates to avoid risk of environmental impacts. |
| 4 | Legislation is based on an explicit reference to a precautionary approach in most legislation. When there is no information available, the law legislates to avoid risk of environmental impacts. |
| 3 | Legislation makes explicit or implicit reference to a precautionary approach in some legislation. When there is no information available the law makes some effort to avoid risk of environmental impacts. |
| 2 | Legislation holds implicit relevance to a precautionary approach in some legislation. When there is no information available the law makes some effort to avoid risk of environmental impacts. |
| 1 | There is no evidence that the legislation takes a precautionary approach. |

Scoring guidance

This criterion refers to two questions:

- 1) Does the law (in general) refer to the precautionary approach
 - If a text search is carried out, it can be useful to not only search for precautionary approach but also look for different wording such as 'prevention' or 'avoidance'.
- 2) What does the law prescribe when there is no information or evidence on environmental impact available?
 - The second part relates to the extent to which lack of information is considered a risk. For example, if aquaculture licenses are not provided when information about environmental impacts is missing or not clear, the precautionary approach is respected, resulting in a high score.

Sources:

- Legislation and policy documents
- NALO country description - <http://www.fao.org/fishery/nalo/search/en>

D. Attention for cumulative impacts

Attention for cumulative impacts refers to the degree in which legislation is also applicable beyond the level of production. High attention for cumulative impacts would, for example, mean regional planning. Low attention for cumulative impacts would mean that legislation is only applicable at a single production level.

| Criteria score | Guidance |
|-----------------------|---|
| 5 | There is high attention for cumulative impacts through regional planning, for all relevant issues. |
| 4 | There is attention for cumulative impacts through regional planning, for most relevant issues. |
| 3 | There is some attention for cumulative impacts through regional planning, but not for all relevant issues. |
| 2 | There is little attention for cumulative impacts, as legislation is mostly applicable at the level of production. |
| 1 | There is no attention for cumulative impacts. |

Scoring guidance

To score this criterion, the assessor has to answer the following question: what is the level at which the legislation is applicable? Search for explicit mention of landscape or regional planning, for example in the licensing process or water management requirements. Also search for any reference to separate pieces of legislation on regional planning. To score high, there should be attention for cumulative impacts for all relevant issues.

Sources:

- Legislation and policy documents
- NALO country description - <http://www.fao.org/fishery/nalo/search/en>

E. Appropriate actors

The scope of legislation also refers to the actors to whom the legislation is applicable. The appropriateness of actors included in the scope of legislation is determined by the degree of overlap between an issue area and the groups most closely connected to its cause, impact and/or solution. A low degree of overlap could mean over-inclusive legislation, which includes people who are not affected and/or required to resolve an issue area; or under-inclusive legislation, excluding people who are affected and/or needed to addressing key issues associated with aquaculture.

| Criteria score | Guidance |
|----------------|---|
| 5 | There is a complete overlap between the scope of the law and those groups associated with legislated issue area. There is no apparent reason that the law would overly bias the inclusion or exclusion of any specific group from complying to the law. |
| 4 | There is a high degree of overlap between the scope of the law and those groups associated with legislated issue area. There is no apparent reason that the law would overly bias the inclusion or exclusion of any specific group from complying to the law. |
| 3 | There is a high degree of overlap between the scope of the law and those groups associated with legislated issue area. There is evidence that the law would bias the inclusion or exclusion of some groups from complying to the law. |
| 2 | There is weak overlap between the scope of the law and those groups associated with legislated issue area. There is evidence that the law would bias the inclusion or exclusion of some groups from complying to the law. |
| 1 | There is no overlap between the scope of the law and those groups associated with legislated issue area. |

Scoring guidance

This criterion addresses two questions:

- 1) Is there overlap between the scope of law and the groups associated with the issue areas?
 - Considering the listed laws, assess whether actors (and if so, who) are mentioned in legislation. If specific groups are mentioned, it depends on expert judgment about the need for having them (involved) to solve particular issues whether this results in a high or low score. If no groups are mentioned, this could imply either that legislation is inclusive (open to all) or excluding actors who have difficulties to enter policy processes without legislative support.
- 2) Does the law exclude any specific group from complying to the law?
 - Refers to explicit exclusion of certain actors, or overly bias to a group of actors to comply, of which information is to be found in policy documents (e.g. on support programs, enforcement rules).

Sources:

- Legislation and policy documents
- Academic articles about inclusivity in aquaculture
- Interviews (questions on how of different actors view the law and how they or others are included or excluded, see questions listed at the end)

Indicator 1.3 Organization

Organization concerns the procedures in place to turn legislation into practice. Adequate organization occurs when roles and responsibilities are well-organized and clearly defined, industry actors receive support on how to implement legislation, and when there is transparency of information about the aquaculture industry.

The indicator consists of the following criteria:

- A. Responsibilities
- B. Implementation support
- C. Informational transparency

A. Responsibilities

The assessment of the organization of legislation addresses the extent to which the responsibilities of the state are organized in a clear, appropriate and suitable manner. This provides insight into whether rules are linked to application at the appropriate level, and are implemented by those governmental agencies who contribute to the highest possible probability of resolving an issue area. Appropriate responsibilities are thus understood as the suitability of rules and associated levels and actors of application, in providing the highest possible probability of resolving an issue area.

| Criteria score | Guidance |
|----------------|--|
| 5 | Responsibilities for the regulation of the aquaculture sector are clearly specified by the government. Jurisdictions are appropriate in terms of level of government. |
| 4 | Responsibilities for the regulation of the aquaculture sector are clearly specified by the government but are fragmented to a small degree. Jurisdictions are appropriate in terms of level of government. |
| 3 | Responsibilities for the regulation of the aquaculture sector are clearly specified by the government but are highly fragmented. Jurisdictions are appropriate in terms of level of government. |
| 2 | Responsibilities for the regulation of the aquaculture sector are not clearly specified by the government, and/or there is evidence of conflicts between different agencies responsible for implementing legislation. Jurisdictions are appropriate in terms of level of government. |
| 1 | No responsibilities are defined, and/or there are paralyzing conflicts between different agencies responsible for implementing legislation. |

Scoring guidance

This indicator is based on the identification of legislation combined with an assessment of the tasks and responsibilities of governmental actors. The indicator has two parts:

- 1) Are the responsibilities for the regulation of the aquaculture sector clearly specified in the law?
 - Whether responsibilities are clearly specified, should be judged when analysing the different laws. If there is a specific section which deals with different actors and their responsibilities, the score can be high. When it is unclear, or the responsibilities are not clearly defined, or if there is evidence of conflicts, the indicator is scored low.
- 2) Are the jurisdictions appropriate in terms of level of government?
 - The second part deals with the appropriateness of jurisdiction in terms of level of government. The assessor should use expert judgement when it comes to appropriateness. Are the responsibilities which are referred to in the first question given to the most appropriate actor/department?

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- Legislation and policy documents
- Information from implementation agencies
- Academic articles
- Interviews with government departments.

B. Implementation support

The organization of legislation into practice requires guidance on how to implement the measures needed to comply with legislation. Implementation support and guidance refers to the enabling of the organization of legislation into practice.

| Criteria score | Guidance |
|----------------|--|
| 5 | Industry actors such as producers and processors systematically receive practical support and guidance on how to implement the legislation in practice, both in the form of documented guidance as well as extension services. This support is accessible to all. |
| 4 | Industry actors such as producers and processors receive practical support and guidance on how to implement the legislation in practice, both in the form of documented guidance as well as extension services. However, extension services are not provided systematically. This support, when available, is accessible to all. |
| 3 | Industry actors such as producers and processors receive support and guidance on how to implement the legislation in practice, but this is not always practical and mostly limited to documentation. Support is not always accessible to all. |
| 2 | Industry actors such as producers and processors do usually not receive any support and guidance on how to implement the legislation in practice. If there is some form of support or guidance, this is non-systemic, inaccessible and/or non-practical. |
| 1 | There is no support or guidance provided. |

Scoring guidance

To score this criterion, the following questions need to be answered:

- 1) is documentation available that describes practical guidelines for implementation?;
- 2) does the government provide extension services?;
- 3) are these guidelines and services accessible and systematically available?

If there is no evidence for implementation, try to use academic articles or interviews to get an idea.

Sources:

- Policy documents
- Interviews with government agencies
- Academic articles

C. Informational transparency

Informational transparency addresses the degree to which information on the aquaculture industry is made publicly available by law. This includes information on input related information, including licencing and permits, as well as output information related to environmental impacts (related to the Seafood Watch issue areas).

| Criteria score | Guidance |
|----------------|---|
| 5 | Both input and output information on the aquaculture industry is required by law, and the information is publicly available via internet. |
| 4 | Both input and output information on the aquaculture industry is required by law, the information is not freely available to the public via internet. |
| 3 | Only output or input information on the aquaculture industry is required by law, the information is available to the public via internet. |
| 2 | No information on the aquaculture industry is required by law. Nevertheless, some information is freely available to the public via internet. |
| 1 | No information on the aquaculture industry is required by law, the information is not freely available to the public via internet. |

Scoring guidance

Three questions are to be answered:

- 1) Is input information on the aquaculture industry required by law?
 - Regarding requirements about input and output information, policy documents have to be analysed. The NALO country description can provide information about relevant and useful documents.
- 2) Is output information on the aquaculture industry required by law?; and
- 3) Is the information publicly available?
 - A simple method is to find out whether input and output information is publicly available, is to search websites of producers (producer organisations) for documents which contain input and output information, or government agency websites where the data could be published.

Sources:

- Legislation and policy documents
- NALO country description - <http://www.fao.org/fishery/nalo/search/en>

Indicator 1.4 Enactment and learning

Enactment and learning refers to the actual results of legislation. Results are broadly defined and consist of three aspects:

- First, results are understood in terms of compliance with legislation.
- Second, this indicator looks at the monitoring of legislation and the learning based on this monitoring.
- The third aspect of enactment and learning concerns the question whether a more fundamental reflection on legislation in the form of evaluation is taking place.

The indicator consists of the following criteria:

- A. Compliance
- B. Monitoring
- C. Evaluation

A. Compliance

Degree of enactment focuses on the extent to which legislation is complied with. Here the focus is on producers and other industry actors who are legally required to comply with legislation regarding the issue areas.

| Criteria score | Guidance |
|----------------|---|
| 5 | All producers and other industry actors required to resolve an issue area are complying with the legislation. There are no barriers to producer inclusion reported, such as cost of compliance or assessment. |
| 4 | The majority of producers and other industry actors comply with legislation regarding the issue areas. There are no obvious barriers to producer inclusion reported, such as cost of compliance or assessment. |
| 3 | The majority of producers and other industry actors comply with legislation regarding the issue areas. There is clear evidence of barriers to producer inclusion, such as cost of compliance or assessment. |
| 2 | Less than half of producers and other industry actors comply with legislation regarding the issue areas. There is clear evidence of structural barriers to producer inclusion, such as subsidies to specific sectors or producers, and/or the cost of compliance and assessment are prohibitive to the majority of producers. |
| 1 | A small number of 'front-running' producers and others industry actors are complying with legislation. There is clear evidence of structural barriers to producer inclusion, such as subsidies to specific sectors or producers, and/or the cost of compliance and assessment are prohibitive to the majority of producers. |

Scoring guidance

This indicator is based on the identification of legislation combined with an assessment of compliance to this legislation. The indicator refers to two questions:

1) Are all producers and other industry actors which are required to resolve an issue area complying with legislation?

- Producers which are required to resolve an issue area can be small, medium, and large scale producers. If factual information or expert judgment points to less than 100% compliance, the assessor should look into the different groups to assess whether a majority, minority or just "front runners" are complying with legislation. It should be noted that focus is on those producers who are required to resolve an issue area (so not on the general majority in terms of market share). The assessor can use the main issue areas (or select one or two) which are defined for the assessment of indicator 1a1.

2) Are there barriers to producer inclusion?

- The second part requires reports on any barriers to producers when complying to aquaculture law. It could be that a group of producers cannot bear the costs for getting licenced, for needed technologies or implementation. However, in some countries producers receive help from the government or support by third parties to comply. If there is evidence that a group is marginalized or excluded from participation or compliance in any way, the indicator will have a low score. If the government pays extra attention to specific groups such as small-scale farmers, the indicator will have a high score.

Sources:

- Legislation and policy documents
- Government websites
- Academic articles which deal with potential hardships for producers to comply with aquaculture legislation
- Interviews

B. Monitoring

Adequate enactment of legislation requires monitoring of the results of legislation and its implementation, and learning based on the information obtained through monitoring.

| Criteria score | Guidance |
|----------------|--|
| 5 | The effects of legislation are systematically monitored. Monitoring systems are extremely reliable and independent. The results of this monitoring are used for reflection and learning. |
| 4 | The effects of legislation are systematically monitored. Monitoring systems are generally reliable and independent. The results of this monitoring are sometimes used for reflection and learning. |
| 3 | The effects of legislation are sometimes monitored, but not systematically. Monitoring systems are not completely reliable and/or independent. The results of this monitoring may sometimes be used for reflection and learning. |
| 2 | The effects of legislation are sometimes monitored, but not systematically. Monitoring systems are unreliable and/or biased. The results of this monitoring are not used for reflection and learning. |
| 1 | The effects of legislation are not monitored and there is no learning. |

Scoring guidance

To assess whether legislation is systematically monitored, in a reliable and independent manner, the assessor can look for evidence such as government reports. This information can also be retrieved through interviews with government officials of implementing government bodies, and interviews with experts outside of government to ensure triangulation of findings. Reports can also be used to see if monitoring has resulted in learning. Reports that include an analysis and evaluation of monitoring results count as evidence of learning and reflection.

Sources:

- Interviews with government officials
- Reports of monitoring results
- Media/news articles
- Academic articles

C. Evaluation

Evaluation requires the capacity to reflect on uncertainties and mistakes made in the past, and proactive and strategic planning to deal with systemic issues. It goes beyond monitoring of legislation, as evaluation is about taking a step back and (re-)considering the appropriateness of legislation or implementation strategies.

| Criteria score | Guidance |
|----------------|---|
| 5 | Evaluations are carried out systematically and continuously. Evaluations reflect on uncertainties and mistakes made in implementation, and consider whether the legislation is still appropriate to achieve its objectives. Evaluations are based on strategic assessment of trends and proactively anticipate these trends, leading to changes when necessary. |
| 4 | Evaluations are carried out periodically. Evaluations reflect on uncertainties and mistakes made in implementation, and consider whether the legislation is still appropriate to achieve its objectives. Evaluations proactively anticipate some future trends. |
| 3 | Evaluations are sometimes carried out, but on an ad-hoc basis. Evaluations reflect on uncertainties and mistakes made in implementation, but do not consider whether the legislation is still appropriate to achieve its objectives. Evaluations do not always proactively anticipate future trends. |
| 2 | Evaluations are sometimes carried out, but on an ad-hoc basis. Evaluations do not reflect on uncertainties and mistakes made, and they do not consider whether the legislation is still appropriate to achieve its objectives. Evaluations do not proactively anticipate future trends. |
| 1 | Evaluations are not carried out. |

Scoring guidance

To score this criterion, the following questions need to be answered: 1) are evaluations carried out? 2) how often is this done and is this planned? 3) do the evaluations consider mistakes and uncertainties in implementation and reflect on the appropriateness of legislation? 4) do the evaluations proactively and strategically deal with future trends? Governments might publicize evaluation reports on their websites. If not, these might be requested, or the assessor will have to rely on interviews.

Sources:

- Evaluation reports
- Government websites
- Interviews with government agencies

Indicator 1.5 Coordination with global regulation and policy

Coordination with global regulation and policy refers to the alignment of state legislation to global treaties and/or agreements. Full coordination would correspond with the application of all international treaties and/or agreements on a national level, whereas a lack thereof would correspond with no mention of the identified international treaties and/or agreements at the national level.

Examples of key international treaties/agreements relevant to aquaculture include (but are not limited to):

- The Rome Declaration on the Implementation of the Code of Conduct for Responsible Fisheries – www.fao.org/3/X2220E/X2220E00.htm
- United Nations Convention on the Law of the Sea (UNCLOS) – http://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm
- Agreement for the Establishment of the Network of Aquaculture Centres in Asia and the Pacific (NACA) – http://www.fao.org/fileadmin/user_upload/legal/docs/021s-e.pdf
- Agreement on the Central Asian and Caucasus Regional Fisheries and Aquaculture Commission (CACFish) – <http://www.fao.org/treaties/results/details/en/c/TRE-000004/>
- Agreement for the Establishment of the International Organisation for the Development of Fisheries and Aquaculture in Europe (EUROFISH) – <http://www.fao.org/treaties/results/details/en/c/TRE-000049/>

The indicator consists of the following criteria:

- A. Commitment
- B. Intentionality

A. Commitment

The degree of commitment refers to the status of global treaties or agreements in national legislation. If a government has ratified all international treaties relevant to the Seafood Watch issue areas, meaning they have indicated consent to be bound to those treaties, the country is deemed to have a high level of commitment. If a country has signed but not ratified a number of treaties then they are deemed to have a medium level of commitment. Finally, if a country recognises treaties, but is not a signatory to the treaty or agreement they are deemed to have a low level of commitment.

| Criteria score | Guidance |
|----------------|---|
| 5 | The government has ratified international treaties or agreements relevant to all the Seafood Watch issue areas, or the majority of the Seafood Watch issue areas, including the issue areas deemed most important issue by Seafood Watch. |
| 4 | The government has ratified international treaties or agreements relevant to the some of the Seafood Watch issue areas. |
| 3 | The government has signed (and recognises) a number of relevant international treaties or agreements related to the Seafood Watch issue areas. |
| 2 | The government recognises (but not signed) a number of relevant international treaties or agreements related to the Seafood Watch issue areas. |
| 1 | The government gives no recognition to relevant international treaties or agreements related to the Seafood Watch issue areas. |

Scoring guidance

The scoring is based on the identification of relevant international treaties and agreements. If the government of the country under assessment has ratified international treaties which cover all Seafood Watch issue areas, the country will have a high score. In the scoring it is important to note the difference between signing and ratification of treaties and agreements.

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- Governmental websites
- Websites of international treaties and agreements (check member states) – e.g. International Environmental Agreements (IEA) database project - <https://iea.uoregon.edu/base-agreement-list> and country-specific membership - <https://iea.uoregon.edu/country-members>
- FAO Treaties database - <http://www.fao.org/treaties/en/>
- Academic articles

B. Intentionality

Intentionality refers to the degree to which a state integrates global agreements into national laws and policy. This indicator is complimentary to the commitment in that a country may have ratified a treaty, but is yet to translate that treaty into national legislation to meet their obligation.

| Criteria score | Guidance |
|----------------|--|
| 5 | The government has translated the most relevant international treaties related to the Seafood Watch issue areas into legislation and implemented programmes to meet their obligations. |
| 4 | The government has translated the most relevant international treaties related to the Seafood Watch issue areas into legislation. |
| 3 | There is documented evidence the government has engaged in internal discussion and external consultation over the implementation of the principles or requirements of international treaties related to the Seafood Watch issue areas. |
| 2 | The documented evidence the has engaged in internal discussion over the implementation of the principles or requirements of international treaties related to the Seafood Watch issue areas. |
| 1 | There is no documented evidence of discussion or implementation of principles or requirements from international treaties related to the Seafood Watch issue areas. |

Scoring guidance

This score is based on the identification of relevant international treaties and agreements and links up to the previous criterion (1.5A - Commitment). For this criterion, two questions are important:

- 1) Has the government of the country under assessment translated the identified international legislation into national legislation?
 - If national legislation refers to international treaties and agreements, or are based on these types of agreements, the assessor can assume the government has translated the international agreements into national legislation. If this is not the case, the assessor should search for other evidence that the government has participated or engaged in discussions on implementation of international agreements either on government websites or the websites of the treaties/agreements. Academic articles can help to find information if the aforementioned websites do not provide a clear answer.
- 2) Has it implemented programmes to meet their obligations?
 - If the law is translated into programmes, policies or agencies which help producers or other actors to meet the obligations of international treaties/agreements, the indicator will have a high score. If this is not the case, the indicator cannot score a 5.

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- Governmental websites
- Websites of international treaties and agreements (check member states) – e.g. International Environmental Agreements (IEA) database project - <https://iea.uoregon.edu/base-agreement-list> and country-specific membership - <https://iea.uoregon.edu/country-members>
- FAO Treaties database - <http://www.fao.org/treaties/en/>
- Academic articles

Indicator 1.6 Coordination with regional regulation and policy

Coordination with regional regulation and policy relates to the alignment of state legislation to regional treaties and/or agreements. While there are no obligations or requirements for states to seek regional collaboration with respect to aquaculture, some countries do so, for example by participating in regional fishery commissions in the Asia-Pacific region, the Mediterranean Sea, the North Atlantic and within the International Council for Exploration of the Sea (Dahl, 2016). Issues discussed within these regional bodies vary from reporting and sharing aquaculture data to space allocation with regard to other maritime activities, but also include concerns related to the Seafood Watch issue areas, such as the spreading of diseases and parasites, and prevention and minimizing of escapes.

The indicator consists of the following criteria:

- A. Commitment
- B. Intentionality

A. Commitment

The degree of commitment refers to the status of regional treaties or agreements in national legislation. If a government has ratified all international treaties relevant to the Seafood Watch issue areas, meaning they have indicated consent to be bound to those treaties, the country is deemed to have a high level of commitment. If a country has signed, but not ratified, a number of treaties, they are deemed to have a medium level of commitment. Finally if a country recognises treaties, but is not a signatory to the treaty or agreement they are deemed to have a low level of commitment.

| Criteria score | Guidance |
|----------------|--|
| 5 | The government has ratified regional treaties or agreements relevant to all the Seafood Watch issue areas, or the majority of the Seafood Watch issue areas, including the issue areas deemed most important issue by Seafood Watch. |
| 4 | The government has ratified regional treaties or agreements relevant to some of the Seafood Watch issue areas. |
| 3 | The government has signed (and recognises) a number of relevant regional treaties or agreements related to the Seafood Watch issue areas. |
| 2 | The government recognises (but not signed) a number of relevant regional treaties or agreements related to the Seafood Watch issue areas. |
| 1 | The government gives no recognition to relevant regional treaties or agreements related to the Seafood Watch issue areas. |

Scoring guidance

This score is based on the identification of relevant regional treaties and agreements. Like criterion 1.5A it is important to note the difference between signing and ratification of treaties and agreements.

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- Governmental websites
- Websites of regional treaties and agreements (check member states) – e.g. International Environmental Agreements (IEA) database project - <https://iea.uoregon.edu/base-agreement-list> and country-specific membership - <https://iea.uoregon.edu/country-members>
- FAO Treaties database - <http://www.fao.org/treaties/en/>
- Academic articles

B. Intentionality

Intentionality refers to the degree to which a state integrates regional agreements into national laws and policy. This indicator is complementary to the commitment criterion in that a country may have ratified a treaty, but is yet to translate that treaty into national legislation to meet their obligation.

| Criteria score | Guidance |
|----------------|---|
| 5 | The government has translated relevant regional treaties related to the Seafood Watch issue areas into legislation and implemented programmes to meet their obligations. |
| 4 | The government has translated relevant regional treaties related to the Seafood Watch issue areas into legislation. |
| 3 | There is documented evidence the government has engaged in internal discussion and external consultation over the implementation of the principles or requirements of regional treaties related to the Seafood Watch issue areas. |
| 2 | There is documented evidence the government has engaged in internal discussion over the implementation of the principles or requirements of regional treaties related to the Seafood Watch issue areas. |
| 1 | There is no documented evidence of discussion or implementation of principles or requirements from regional treaties related to the Seafood Watch issue areas. |

Scoring guidance

The score is based on the identification of relevant regional treaties and agreements, and links up to the previous criterion (1.6A). For this criterion, two questions are important:

- 1) Has the government of the country under assessment translated the identified regional legislation into national legislation?
 - If national legislation refers to regional treaties and agreements, or are based on these types of agreements, the assessor can assume the government has translated the regional agreements into national legislation. If this is not the case, search for other evidence that the government has participated or engaged in discussions on implementation of regional agreements either on government websites or the websites of the treaties/agreements. Academic articles can help to find information if the before-mentioned websites do not provide a clear answer.
- 2) Has it implemented programmes to meet their obligations?
 - If the law is translated into programmes, policies or agencies which help producers or other actors to meet the obligations of regional treaties/agreements, the indicator will have a high score. If this is not the case, the indicator cannot score a 5.

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- Governmental websites
- Websites of regional treaties and agreements (check member states) – e.g. International Environmental Agreements (IEA) database project - <https://iea.uoregon.edu/base-agreement-list> and country-specific membership - <https://iea.uoregon.edu/country-members>
- FAO Treaties database - <http://www.fao.org/treaties/en/>
- Academic articles

Indicator 1.7 Exposure to trade regulation

By exposure to trade law, producing countries might become subject to a wide range of measures brought against the aquaculture industry by importing countries either taken bilaterally (by setting tariffs) or multilaterally (through the WTO). Trade sanctions, whether deemed justified or not, can make an aquaculture industry become economically vulnerable. Governments may however, in turn, mediate such sanctions by setting new legislation or supporting the industry to improve practices to meet trade requirements.

The indicator consists of the following criteria:

- A. Vulnerability
- B. Proactivity

A. Vulnerability

Vulnerability refers to a country's exposure to trade sanctions. These measures can be justified or unjustified. Justified measures include those relating to technical issues such as food safety. Unjustified measures include those relating to normative claims such as sustainability or labour conditions without any clear evidence. Regardless of whether measures are justified or unjustified, the industry may be affected.

| Criteria score | Guidance |
|----------------|--|
| 5 | There are no trade related sanctions or measures currently taken against the aquaculture industry. There is also no history of measures brought against the industry by importing countries. |
| 4 | There are no trade related sanctions or measures currently taken against the aquaculture industry. There is a history of measures brought against the industry by importing countries. |
| 3 | Trade related sanctions or measures currently taken against the aquaculture industry. However, there is no history of measures brought against the industry by importing countries. |
| 2 | Trade related sanctions or measures currently taken against the aquaculture industry. There is also a history of other measures brought against the industry by importing countries. |
| 1 | There are a number of long-term unresolved sanctions or measures taken against the aquaculture industry. |

Scoring guidance

Two questions are to be answered:

- 1) Are there trade related sanctions or measures brought against the aquaculture industry?
 - The assessor can draw on expert knowledge and/or look for online sources which give information on current trade sanctions/disputes related to the aquaculture industry. Note that trade sanctions should be relevant to aquaculture, and are issued by importing countries.
- 2) Is there a history of measures brought against the country by importing countries?
 - Relates to trade sanctions issued in the past. Again, expert knowledge and online sources can provide this information.

Sources:

- Government and industry websites
- News articles
- Academic articles

B. Proactivity

Governments may mediate sanctions by setting new legislation or supporting the industry to improve practices to meet trade requirements. The degree to which a government proactively responds, indicates their ability to adapt to changing international markets and regulation.

| Criteria score | Guidance |
|----------------|--|
| 5 | The government has proactively addressed all trade regulation related to aquaculture by developing legislation and implementing support programmes for the industry. |
| 4 | The government has addressed most trade regulations related to aquaculture by developing legislation and implementing support programmes for the industry. |
| 3 | The government has addressed some trade regulations related to aquaculture by developing legislation. Other trade regulations remain unaddressed and there is limited implementation of support programmes for the industry. |
| 2 | The government has not addressed trade regulations related to aquaculture. There are some support programmes in place for the industry to improve their compliance. |
| 1 | There is no evidence of discussion or implementation of principles or requirements from trade treaties relevant to aquaculture. |

Scoring guidance

The score is closely linked to the score of the previous indicator (1.7A - Vulnerability). Note that if the country under assessment has scored a 5 in the previous criterion, the government either has successfully mediated measures in a proactive way, or has not faced any possible sanction. In the first case, a score of 5 would be appropriate, in the second case the score would be NA. Both cases result in an average score of 5 for indicator 1.7.

If the score of criterion 1.7A is below 5, criterion 1.7B has to be assessed. Two questions are to be considered:

- 1) In what way does the government deal with sanctions?
 - The assessor has to find information on the government's response to the sanctions, whether the government has tried for example to update and upgrade legislation as a result of trade sanctions.
- 2) Whether the country has implemented support programmes for the industry?
 - In case the government changed legislation or policy, a more proactive government would take one step further by implementing support programmes for the industry. If a government does so, it shows commitment to adapting in response of sanctions.

Sources:

- News articles
- Academic articles
- Government websites related to trade disputes, sanctions against the aquaculture sector or threats of sanctions
- Policy documents

2. VOLUNTARY CODES AND STANDARDS

Rationale

Voluntary codes and standards are commonly developed by civil society and/or industry either in the absence of state regulation and/or enforcement of regulation, or where regulation holds the potential to undermine good industry practice (Vandergeest 2007; Ponte et al. 2011). By assessing the content and performance of these codes and standards the AGIs provide insights into the degree to which state legislation is supplemented, replaced, and/or challenged to improve. Legislation and codes and standards are therefore related but can be mutually exclusive. In other words, even though a country can have weak legislation, it can still be deemed to be performing well if it has strong voluntary codes and standards in place.

The assessment of codes and standards does not hold countries to account for content or performance of non-state codes and standards. Instead, the framework views these codes and standards as a constituent part of the governance arrangements within a country. This means that regardless of whether a country contributes to the content of the codes and standards in place or not, the aquaculture industry within their borders will be subject to the norms and principles upon which they are based.

Examples of voluntary codes and standards include third party business-to-consumer eco-certification schemes (e.g. Aquaculture Stewardship Council, the Global Aquaculture Alliance and Global G.A.P.), and third party environmental management standards (e.g. ISO14001). Codes and standards can also include state or industry codes-of-conduct that set expectations for 'good' performance for a sector. These codes of conduct may not be binding or communicated to the market but provide a basis for guiding producers to improve production practices. Examples of these codes-of-conduct are the national Good Aquaculture Practice (GAP) standards in Vietnam, Indonesia and Thailand (see Nguyen 2015).

The extent to which prescriptive codes and standards are applied in the aquaculture industry gives an indication of their overall coverage. In the absence of state regulation (see dimension 1 - Legislation) the extent of this coverage gives an indication of whether the aquaculture industry has agreed upon 'responsible' production practices, put in place mechanisms to monitor and assess progress towards improving 'irresponsible' production practices, and whether there is any response by the state in improving regulation.

The assessment of voluntary codes and standards is divided into seven indicators, organized according to the three principles of legitimacy, effectuation and coordination:

1. **Input legitimacy** refers to the extent to which stakeholders are included in the decision-making process of developing and renewing standards (Rantala, 2012; Eshuis and Edwards, 2013).
2. **Scope** of codes and standards in terms of coverage of issue areas and environmental principles, and applicability to appropriate actors.
3. **Organization** of codes and standards into practice, looking at how this is done and by whom.
4. From this, the outcome of this organization in terms of **enactment and learning** is assessed, looking at compliance, monitoring and evaluation.
5. Next, we consider the **coordination between codes and standards** and the **coordination with state policy and regulation** and **coordination with global frameworks**. Coordination between codes and standards will create oversight that contributes to assuring claims of these voluntary instruments being credible and legitimate in the eyes they seek to regulate (Derkx and Glasbergen, 2014; Samerwong et al, 2017; Sørensen, 2006). Mutual reinforcement of codes and standards with state legislation, e.g. through recognition in law or public procurement policies, is likely to lead to improvements in governance performance of both governments and standard setters (cf. Gulbrandsen, 2012).

Identification

To delineate the extent of assessment, prescriptive (voluntary) codes and standards have to be identified. These codes and standards can be public or private initiatives. Overall, focus is on market-driven codes and standards aimed to include economic actors in striving for improvements in a country's aquaculture sector. For this identification step, the 'Codes and standards' tab in the worksheet has to be used.

Table 3. Codes and standards identification fields descriptions.

| Field | Guidance |
|--|--|
| Name of code or standard | Enter the full name of the code or standard. Provide a link to online version either by a) right click on the cell > Link > Insert Link or b) put in references list in methodology tab |
| Public or Private? | Click <input type="checkbox"/> and select one of the two, as appropriate |
| Local, national, regional, or international? | Click <input type="checkbox"/> and select one of the four options, as appropriate |
| Main issue area | Based on expert judgment the assessor defines the main issue areas, informed by the view on sustainability by the country's industry that the code or standard covers. The main issue areas must include the SFW issues that are flagged as 'red' in the SFW assessment report for that country & species (if applicable). |
| Seafood Watch issue area(s) | Based on expert judgment the assessor defines the Seafood Watch issue areas the code or standard connects to. See table 1 for complete list and descriptions. |
| Sources | Indicate the source of information used to score and justify each criteria. Note: when referring to interviews or references, use the format "interview [number]" with the number referring to the appropriate interview listed in the methodology tab (use references section to include hyperlinks). |
| Justification | Provide rational and reasoning for the score given. |

When filling the table, the assessor starts with listing prescriptive (voluntary) codes and standards in the first column of the '2. Codes and standards' tab in the worksheet, and indicates whether a code or standard is "public" or "private" in the second column and whether it is a local, national, regional or international code/standard in the third column.

Information about codes and standards can be found in the Standards Map of the International Trade Center (ITC) (See sources list below). ITC's Standards Map draws on a large dataset of codes and standards. However, public or private national standards might not be listed here so an assessor, based on knowledge and expertise, has to check which other relevant schemes need to be included in the assessment. Also, governmental websites and documents, and websites of codes and standards serve as sources. Note that the identification does not have to be all-encompassing but should cover the range of the most prominent voluntary codes and standards applied in the country under assessment.

The assessor also fills in columns D and E, identifying "Main issue areas" and "Seafood Watch issue area(s)". Based on expert judgment the assessor has defined the main issue areas in step 1 (identification). The assessor should use the acronyms/numbers for the Seafood Watch issue areas (see table 1). Information about the main and Seafood Watch issue areas covered by the codes and standards can be found in ITC's Standards Map. Also, principles and indicators of standards are provided on their websites, or this can be requested. While it is not needed to go into detail for this identification step, more information about the extent to which the issue areas are dealt with, is important for assessing indicators 2.2 and 2.5. It is therefore useful for the assessor to already get an idea about where to find such information.

Like mentioned before, it is important to note is that indicator scores should be an aggregated score weighed following a qualitative judgment, and not based on an average score. So if a standard is considered to be more important than others for raising the sustainability bar in a country's aquaculture sector, this standard has more "weight" in the scoring of the indicator. Also, if a country's aquaculture sector is covered by many prescriptive (voluntary) codes and standards, and the aim of the assessment is to get a bird's eye view, the assessor can select a set of standards which are deemed to be most relevant to assess. The assessor should justify the selection in the table listing the code or standard in the 'justification' column.

Selection criteria to determine the importance of a code or standard include volume certified, relevance to Seafood Watch issue areas, variety of different forms of codes and standards, and the expected potential for impact.

Sources:

- Standards Map Country profile - ITC's Standards Map website: <https://standardsmap.org/standards> - select "Fish - Aquaculture" under "By sector or product" field and select the country under assessment under "By origin").
- Governmental websites and documents
- Standards websites and documents
- National databases, academic articles, interviews
- Information can also be also found in sources such as academic articles, or through (phone/virtual) interviews of actors in the sector.

For more information about the Seafood Watch issue areas ('aquaculture criteria'), check the website: <https://www.seafoodwatch.org/about-us/our-standards/standard-for-aquaculture>

Indicator 2.1 Input legitimacy

Input legitimacy focuses on the extent to which stakeholders are included in the decision-making process of developing and renewing standards (Rantala, 2012; Eshuis and Edwards, 2013). It can be measured in terms of the *representativeness* of those involved in setting the standards, the degree of *fairness* of those actors participating in deliberation over the content of the standards, and the *transparency* of the standard setting and renewal process.

The indicator consists of the following criteria:

- A. Representative inclusion
- B. Procedural fairness of deliberation
- C. Transparency of standard setting

A. Representative inclusion

Representative inclusion refers to the involvement of those groups (dis)affected by the aquaculture industry in the process of design and renewal of the standards (Mena and Palazzo 2012). For example, high representation would be the inclusion of producers, processors, state regulators, NGOs and affected communities.

| Criteria score | Guidance |
|----------------|---|
| 5 | Those involved in the design and renewal of the standards can be considered as highly representative of the full range of (dis)affected actors in the aquaculture industry. |
| 4 | Those involved in the design and renewal of the standards can be considered representative of the majority of (dis)affected actors in the aquaculture industry. |
| 3 | Those involved in the design and renewal of the standards can be considered representative of (dis)affected actors in the aquaculture industry. |
| 2 | Those involved in the design and renewal of the standards represent a clear bias in the representation of (dis)affected actors in the aquaculture industry. |
| 1 | Those involved in the design and renewal of the standards represent a clear bias of a single (or small group) of dominant stakeholders in the aquaculture industry. |

Scoring guidance

This criterion deals with the design and the renewal of the standards:

- 1) What is the extent of representativeness of the non-recognized standards regarding the design and the renewal of standards?; and
- 2) Is the representativeness extended to all affected actors in the aquaculture industry?

The assessor should assess which actors are included in the design or renewal of standards, and whether there is a large bias when it comes to representation of interests. The assessor can look into the background and affiliation of (board) members. Also, documentation about procedures for renewal can give information, for example attendance lists of important meetings, or by expert interviews.

Sources:

- Standard documentation about (board) membership
- Minutes/notes of meetings
- Academic articles
- Interviews

B. Procedural fairness of deliberation

Procedural fairness of deliberation refers to how those included in the development and renewal of standards are able to influence the content of the standards. To be 'fair', the engagement of stakeholder groups must not create structural barriers for stakeholders to engage in the standard-setting process (Mena and Palazzo 2012). For example, barriers to participating in deliberation should be removed, such as the cost of participating or language barriers that limit active discussion.

| Criteria score | Guidance |
|----------------|--|
| 5 | In the majority of codes and standards all of the categories of stakeholder have equal access during the deliberation over the design and renewal of standards to the decision-making process. There is no evidence of parties that have a claim of being excluded. |
| 4 | In the majority of codes and standards all of the categories of stakeholder have access during the deliberation over the design and renewal of standards to the decision-making process. There is evidence that some parties did not have equal access because of cost of attendance and/or language barriers. |
| 3 | In the majority of codes and standards most of the categories of stakeholder have access to deliberation over the design and renewal of standards to the decision-making process. There is evidence that some parties did not have equal access because of cost of attendance and/or language barriers. |
| 2 | In some codes and standards a limited number of stakeholders have access to deliberation over the design and renewal of standards to the decision-making process. There is public acknowledgement that key parties have been systematically excluded from the process. |
| 1 | Deliberation over the design and renewal of standards to the decision-making process is considered to exhibit a high degree of 'capture' by one or small group of actors. There is widespread evidence that key parties have been systematically excluded from the process. |

Scoring guidance

If every actor who is involved, or who wants to be involved in the deliberation over the design and renewal of standards, can join and deliberate in these meetings without having to cross major financial, language or other barriers, and stakeholders can state their opinions and views freely, the indicator could be scored high.

Sources:

- Standards websites
- Minutes/notes of meetings
- Academic articles
- Interviews

C. Transparency of standard-setting process

Transparency defined as openness, secured through greater availability of information, and is a key element of the credibility of public and private governance (Gupta and Mason 2014). As outlined by Hale (2008), "An institution is transparent if it makes its behaviour and motives readily knowable to interested parties" (Hale, 2008, p. 75). The more transparent institutions are, the more those actors governed by them will be able to evaluate their activities, and in turn assess how a rule was decided upon and judge its appropriateness, as well as the benefits of compliance (Mena and Pallazo 2012; Bernstein & Cashore, 2007).

Transparency of the standard-setting process or 'procedural' transparency is related to the openness of decision making or adjudication processes (Fung et al., 2007).

| Criteria score | Guidance |
|----------------|--|
| 5 | All aspects codes or standards are available publicly, including the criteria design process and adjudication process. |
| 4 | The majority of codes and standards have made their criteria design process making and adjudication process public. |
| 3 | The majority of codes and standards have made their criteria design process public. |
| 2 | Some of the codes and standards available have made their criteria design process making or adjudication process public. |
| 1 | None of the codes and standards have made their criteria design process making or adjudication process public. |

Scoring guidance

This score is based on the extent to which information provided by standards are publicly available. It can be assessed by desk study by looking on the standards' websites or in some cases academic articles. If the standards under assessment have published their criteria design process and adjudication process the level of transparency is considered high.

Sources:

- Standards websites
- News articles
- Academic articles
- Interviews

Indicator 2.2 Scope

Scope refers to the content, or the 'what' and 'about whom' of codes and standards. First, it refers to the coverage of Seafood Watch issue areas in the codes and standards, and attention for precautionarity and cumulative impacts ('about what'). Second, it deals with the coverage of appropriate actors included within the scope of codes and standards ('about whom'). Finally, scope also refers to the perceived relevance of (the scope of) codes and standards by industry actors.

The indicator consists of the following criteria:

- A. Perceived relevance
- B. Coverage of issue areas
- C. Precuationarity and attention for cumulative impacts
- D. Appropriate actors

A. Perceived relevance

The relevance of codes and standards is determined by expert judgement of those in or related to the industry. Clear evidence and examples should be provided by expert respondents demonstrating where codes and standards are NOT deemed relevant or contradictory leading to multiple interpretations of codes and standards.

| Criteria score | Guidance |
|----------------|--|
| 5 | Codes and standards are deemed very relevant to all the main issues faced by the industry. |
| 4 | Codes and standards are deemed relevant to most of the main issues faced by the industry. |
| 3 | Codes and standards are deemed relevant to some degree, but not all main issues faced by the industry are covered. |
| 2 | The industry questions the relevance of codes and standards to their industry. |
| 1 | Codes and standards are deemed completely irrelevant for the industry. |

Scoring guidance

Relevance is defined by the perception of industry actors. Scoring therefore needs to be based on an assessment of the perception of the industry, which can be obtained through interviews or public statements by industry actors regarding codes and standards. Refer to column E within the worksheet for the main issue areas.

Sources:

- Interviews with industry actors
- Public statements

B. Coverage of issue areas

The coverage of issue areas is a measure of the extent of technical alignment between voluntary standards and the Seafood Watch issue areas.

| Criteria score | Guidance |
|----------------|---|
| 5 | All of the voluntary instruments cover all of the Seafood Watch issues areas. |
| 4 | The majority of the voluntary instruments cover all Seafood Watch issue areas |
| 3 | The majority of the voluntary instruments cover most Seafood Watch issue areas, including the most important issues for the country under assessment,. |
| 2 | The majority of the voluntary instruments cover most Seafood Watch issue areas, yet not the issues deemed most important by Seafood Watch for the country under assessment. |
| 1 | The majority of the voluntary instruments cover a few (or no) Seafood Watch issue areas, and do not address the issues deemed most important by Seafood Watch for the country under assessment. |

Scoring guidance

Check and compare columns "Main issue area" and "Seafood Watch issue area", column E and column F respectively, within the 'Codes and Standards' worksheet tab to determine how well Seafood Watch issues areas are addressed in the codes and standards.

Sources:

- Standards Map Country profile - <https://standardsmap.org/standards>
- Standards websites and documents
- Seafood Watch Eco-certification benchmark reports for ASC, BAP, Friends of the Sea, etc: <https://www.seafoodwatch.org/recommendations/eco-certified-seafood/>

C. Precautionarity

The precautionary approach refers to the degree to which the codes and standards leave room for risk or uncertainty, and if this is deemed acceptable. This translates into the degree to which evidence is needed to reduce risk; yet if the proof is not available, or risks and uncertainties are high, the most precautionary approach is to be followed, and (additional) investigation needs to be carried out.

| Criteria score | Guidance |
|----------------|---|
| 5 | All of the available codes and standards make explicit reference to precautionarity in their criteria and conformity assessment methodology. Where evidence of impacts is not available or there is no information available the codes and standards avoid risk of environmental impacts. |
| 4 | The majority of available codes and standards make explicit reference to precautionarity in their criteria and/or conformity assessment methodology. When there is no information available, codes and standards avoid risk of environmental impacts. |
| 3 | The majority of available codes and standards do not make explicit reference to precautionarity in their criteria and/or conformity assessment methodology. When there is no information available codes and standards make some effort to avoid risk of environmental impacts. |
| 2 | The majority of codes and standards hold implicit relevance to a precautionary approach in some legislation. When there is no information available codes and standards make some effort to avoid risk of environmental impacts. |
| 1 | There is no evidence that codes and standards take a precautionary approach. |

Scoring guidance

This criterion refers to two questions:

- 1) Does the majority of codes and standards refer to the precautionary approach?
 - If a text search is carried out, it can be useful to not only search for precautionary approach but also look for different wording such as 'prevention' or 'avoidance'.
- 2) What do the codes and standards prescribe when there is no information or evidence on environmental impact available?
 - Relates to the extent to which lack of information is considered a risk. For example, if certificates are not provided when information about environmental impacts is missing or not clear, the precautionary approach is respected, resulting in a high score.

Sources:

- Standard documents (criteria, principles, conformity assessment methodology)

D. Attention for cumulative impacts

It is assumed that codes and standards that make explicit reference to cumulative effects in the design of their criteria and assessment methodologies are better suited to ensure broad scale environmental impact. This assessment focuses on the unit of application of the norm or standard. This does not require an in-depth understanding of the content of the norm or standard, but an assessment of the level at which the codes or standards are applied.

| Criteria score | Guidance |
|-----------------------|---|
| 5 | All of the available codes and standards make explicit reference to cumulative environmental impacts in their criteria and conformity assessment methodology. |
| 4 | The majority of available codes and standards make explicit reference to cumulative environmental impacts in their criteria and/or conformity assessment methodology. |
| 3 | The majority of available codes and standards do not make explicit reference to cumulative environmental impacts in their criteria and/or conformity assessment methodology. |
| 2 | All of the available codes and standards are limited to farm level criteria and conformity assessment methodology. There is no reference to cumulative environmental impacts. |
| 1 | No level of assessment is explicitly covered in the codes and standards. |

Scoring guidance

This can be answered by desk study: the assessor should check the criteria and conformity assessment methodology of the standards under assessment, and see if cumulative environmental impacts are explicitly mentioned, either by exactly mentioning cumulative impacts or in some different wording that still speaks to this topic.

E. Appropriate actors

The scope of standards also refers to the actors to whom the standards are applicable. The appropriateness of actors included in the scope of standards is determined by the degree of overlap between an issue area and the groups most closely connected to its cause, impact and/or solution. A low degree of overlap could mean over-inclusive standards, which includes people who are not affected and/or required to resolve an issue area; or under-inclusive standards, excluding people who are affected and/or needed to addressing key issues associated with aquaculture.

| Criteria score | Guidance |
|----------------|--|
| 5 | There is a complete overlap between the scope of the standards and those groups associated with issue areas. There is no apparent reason that standards would overly bias the inclusion or exclusion of any specific group from complying. |
| 4 | There is a high degree of overlap between the scope of the standards and those groups associated with issue areas. There is no apparent reason that standards would overly bias the inclusion or exclusion of any specific group from complying. |
| 3 | There is a high degree of overlap between the scope of standards and those groups associated with issue areas. There is evidence that standards bias the inclusion or exclusion of some groups from complying. |
| 2 | There is weak overlap between the scope of standards and those groups associated with issue areas. There is evidence that standards bias the inclusion or exclusion of some groups from complying. |
| 1 | There is no overlap between the scope of standards and those groups associated with issue areas. |

Scoring guidance

This criterion addresses two questions:

- 1) Is there overlap between the scope of codes and standards, and the groups associated with the issue areas?
 - The assessor has to find out which actors are mentioned in the codes and standards. If specific groups are mentioned, it depends on expert judgment about the need for having them (involved) to solve particular issues which will determine whether this results in a high or low score. If no groups are mentioned, this could imply either that standard is inclusive (open to all) or excluding actors who have difficulties to participate or enter the certification without support from others. You can use expert judgement via interviews or academic/media articles to confirm this.
- 2) Do the standards exclude any specific group from participating (accessing, complying to the standard)?
 - Refers to explicit exclusion of certain actors, or an overt bias of a group or groups of actors to comply. This information can be found in policy documents (e.g. on support programs, enforcement rules).

Sources:

- Standard information
- Academic articles about inclusivity in aquaculture
- Interviews

Indicator 2.3 Organization

Organization concerns the procedures in place to turn codes and standards into practice. Adequate implementation occurs when roles and responsibilities are well-organized and clearly defined, and when there is transparency of information about the (results of) implementation.

The indicator consists of the following criteria:

- A. Division of roles
- B. Informational transparency

A. Division of roles

The assessment of the organization of standards addresses the extent to which the roles of the implementing actors are organized in an appropriate manner. Appropriateness is assessed in terms of the support and resources available from public and private actors to implement standards.

| Criteria score | Guidance |
|----------------|---|
| 5 | Standards are explicitly encouraged/funded by government and industry associations as a reference point for improvement. Public support is available to industry to subsidise the cost of compliance. |
| 4 | Standards are explicitly encouraged/supported by government and industry associations as a reference point for improvement. Third party (foundations, NGO) support is available to industry to subsidise the cost of compliance. |
| 3 | Standards are not explicitly encouraged/supported by government, but there is evidence of their use by government as a reference point for improvement. Either public or third party (foundations, NGO) funding is available to industry to subsidise the cost of compliance. |
| 2 | Standards are not explicitly encouraged/supported by government, but there is evidence of their use by government as a reference point for improvement. There is no public or third party funding available to subsidise the cost of compliance. |
| 1 | Standards are not explicitly encouraged/supported by government, and there is no evidence of their use by government as a reference point for improvement. There is no public or third party funding available to subsidise the cost of compliance. |

Scoring guidance

Three questions are to be answered:

- 1) Are standards funded or encouraged by the government and industry associations?
 - If the standards are funded in terms of financial compensation, free auditing or promoted in any way by the government or private actors, the indicator has a high score. If there is no evidence, or no explicit reference to it, the score cannot be higher than 3.
- 2) Are the standards used as a point of reference for improvement, and
 - The second part is scored highly when the standards under assessment are mentioned in either policy documents or industry guidelines/websites. If either the government or industry actors refer to the standard as an example of high quality, the standard can be judged as being influential.
- 3) Is any public or private support available to the industry to subsidise the cost of compliance?
 - Public or private support for the industry to subsidise costs of compliance can be found in policy documents, websites, academic articles or by interviewing representatives of standards

Sources:

- Government websites and policy documents
- Industry websites
- Academic articles
- Interviews

B. Informational transparency

Transparency is defined as openness, secured through greater availability of information, is a key element of the credibility of public and private governance (Gupta and Mason 2014). As outlined by Hale (2008), “An institution is transparent if it makes its behaviour and motives readily knowable to interested parties” (Hale, 2008, p. 75). The more transparent institutions are, the more those actors governed by them will be able to evaluate their activities, and in turn assess how a rule was decided upon and judge its appropriateness, as well as the benefits of compliance (Mena and Pallazo 2012; Bernstein & Cashore, 2007). Informational or ‘outcome’ transparency concerns the accessibility of information needed to determine whether and how standards are effective in meeting their goals (Fung et al., 2007).

| Criteria score | Guidance |
|----------------|--|
| 5 | All codes and standards make their conformity assessment reports publicly available, with updated and complete information. All codes and standards provide fully accessible and searchable databases. |
| 4 | The majority of codes and standards make their conformity assessment reports publicly available, with updated and complete information. The majority of codes and standards provide fully accessible and searchable databases. |
| 3 | The majority of codes and standards make their conformity assessment reports publicly available, but information is sometimes incomplete or outdated. Information is not always accessible and/or searchable. |
| 2 | Some codes and standards make their conformity assessment reports publicly available, but information is sometimes incomplete or outdated. Information is not accessible and/or searchable. |
| 1 | None of the codes and standards make their conformity assessment reports publicly available. |

Scoring guidance

Informational transparency can be assessed via a desk study of relevant websites, such as those of the codes and standards under assessment. The assessor should check if conformity assessment reports are available publicly. If this information is not available online, perhaps they can be requested by e-mail. If codes and standards do not share any of the information, the indicator will be scored low. If codes and standards provide the information publicly, and have a searchable database, the score is high.

Sources:

- Websites of codes and standards organizations

Indicator 2.4 Enactment and learning

Enactment and learning refers to the actual results of codes and standards. Results are broadly defined and consist of three aspects. First, results are understood in terms of participation and compliance with codes and standards. The second aspect assesses whether systemic and controversial issues have been taken into account. Third, this indicator looks at the monitoring of codes and standards and the learning based on this monitoring.

The indicator consists of the following criteria:

- A. Participation and compliance
- B. Monitoring
- C. Evaluation

A. Participation and compliance

The degree to which codes and standards are enacted can be measured by the apparent level of participation and compliance. In addition, the potential of a code or standard can be assessed in terms of the existence of apparent barriers to participation and compliance. These barriers can be financial, reflected in evidence that the cost of compliance or assessment is prohibitive for widespread uptake in an industry, or structural, such as subsidies to specific sectors or producers.

| Criteria score | Guidance |
|----------------|--|
| 5 | All producers and other industry actors required to resolve an issue area are voluntarily complying with the voluntary instruments available. There are no barriers to producer inclusion reported, such as cost of compliance or assessment. |
| 4 | The majority of producers and other industry actors required to resolve an issue area are voluntarily complying with the voluntary instruments available. There are no obvious barriers to producer inclusion reported, such as cost of compliance or assessment. |
| 3 | The majority of producers and other industry actors required to resolve an issue area are voluntarily complying with the voluntary instruments available. There is clear evidence of barriers to producer inclusion such as cost of compliance or assessment. |
| 2 | Less than half of producers and other industry actors required to resolve an issue area are voluntarily complying with the voluntary instruments available. There is clear evidence of structural barriers to producer inclusion, such as subsidies to specific sectors or producers, and/or the cost of compliance and assessment are prohibitive to the majority of producers. |
| 1 | A small number of 'front-running' producers and others industry actors are voluntarily complying with the voluntary instruments available. There is clear evidence of structural barriers to producer inclusion, such as subsidies to specific sectors or producers, and/or the cost of compliance and assessment are prohibitive to the majority of producers. |

Scoring guidance

This criteria consists of two parts:

- 1) Are all producers (and other industry actors) which are required to resolve an issue area voluntary complying with the available standards?
 - Looking at the producers who are complying to the standards, the assessor assesses whether all producers required to resolve an issue area are well-represented. Producers can be working on different scales (small, medium, and large scale) but standards may address groups who might or might not be required to resolve an issue area. Because it is an aggregative scoring, different standards and codes may address different producer groups, as such a majority or even all producers and industry actors can be complying.
- 2) Are there barriers to producer inclusion?
 - The assessor has to find out whether there are barriers to producers when complying to voluntary standards. In other words, whether a group is marginalized or excluded from participation or compliance in any way, such as producers not be able to bear the costs of the certification process or the audits. However, in some countries producers receive help from the government or support by third parties (e.g. civil society organizations) to comply, which reduces the barrier.

Sources:

- Standard information on compliance
- Documents on support programs
- Academic articles on accessibility and inclusivity of standards

B. Monitoring

Adequate enactment of codes and standards requires monitoring of their results and implementation, and learning based on the information obtained through monitoring.

| Criteria score | Guidance |
|----------------|--|
| 5 | The effects of codes and standards are systematically monitored. Monitoring systems are extremely reliable and independent. The results of this monitoring are used for reflection and learning. |
| 4 | The effects of codes and standards are systematically monitored. Monitoring systems are generally reliable and independent. The results of this monitoring are sometimes used for reflection and learning. |
| 3 | The effects of codes and standards are sometimes monitored, but not systematically. Monitoring systems are not completely reliable and/or independent. The results of this monitoring may sometimes be used for reflection and learning. |
| 2 | The effects of codes and standards are sometimes monitored, but not systematically. Monitoring systems are unreliable and/or biased. The results of this monitoring are not used for reflection and learning. |
| 1 | The effects of codes and standards are not monitored and there is no learning. |

Scoring guidance

To assess whether codes and standards are systematically monitored, the assessor can look for evidence in reports produced by codes and standards organizations. This information can also be retrieved through interviews with representatives of codes and standards organizations.

Reports can also be used to see if monitoring has resulted in learning. Reports that include an analysis and evaluation of monitoring results count as evidence of learning and reflection. In addition, the reliability and independence of the monitoring system has to be assessed. This can be done through studying documentation on the monitoring system, and by interviewing various experts.

Sources:

- Interviews with representatives of codes and standards organizations and other experts
- Reports of monitoring results
- Websites of codes and standards (search for information on M&E)
- Media
- Academic articles

C. Evaluation

Evaluation requires the capacity to reflect on uncertainties and mistakes made in the past, and proactive and strategic planning to deal with systemic issues. It goes beyond monitoring of codes and standards, as evaluation is about taking a step back and (re-)considering the appropriateness of codes and standards and their implementation strategies.

| Criteria score | Guidance |
|----------------|---|
| 5 | Evaluations are carried out systematically and continuously. Evaluations reflect on uncertainties and mistakes made in implementation and consider whether the codes and standards are still appropriate to achieve their objectives. Evaluations are based on strategic assessment of trends and proactively anticipate these trends, leading to changes when necessary. |
| 4 | Evaluations are carried out periodically. Evaluations reflect on uncertainties and mistakes made in implementation and consider whether the codes and standards are still appropriate to achieve their objectives. Evaluations proactively anticipate some future trends. |
| 3 | Evaluations are sometimes carried out, but on an ad-hoc basis. Evaluations reflect on uncertainties and mistakes made in implementation and consider whether the codes and standards are still appropriate to achieve their objectives. Evaluations do not always proactively anticipate future trends. |
| 2 | Evaluations are sometimes carried, but on an ad-hoc basis. Evaluations do not reflect on uncertainties and mistakes made in implementation, and they do not consider whether the codes and standards are still appropriate to achieve their objectives. Evaluations do not proactively anticipate future trends. |
| 1 | Evaluations are not carried out. |

Scoring guidance

To score this criterion, the following questions need to be answered:

1. Are evaluations carried out?
2. How often is this done and is this planned?
3. Do the evaluations consider mistakes and uncertainties in implementation and reflect on the appropriateness of codes and standards?
4. Do the evaluations proactively and strategically deal with future trends?

Codes and standards organizations might publicize evaluation reports on their websites. If not, these might be requested, or the assessor will have to rely on interviews.

Sources:

- Evaluation reports
- Websites of codes and standards organizations
- Interviews with codes and standards organizations

Indicator 2.5 Coordination between codes and standards

Coordination refers to the degree to which multiple codes and standards are consistent with each other. If there is low coordination it is assumed there will be a high degree of confusion and/or fragmentation in terms of the level of stringency required and accessibility to producers (Bush et al. 2013), with the effect that different levels of environmental improvement will be evident based on the spatial distribution of the industry (Ha et al. 2014).

The indicator consists of the following criteria:

- A. Consistency
- B. Orchestration

A. Consistency

Consistency refers to the degree to which the content of the standards, including areas covered, criteria and assessment methodologies, are consistent. The reasoning is that the more coordination occurs between the codes and standards, the more consistent requirements will be in terms of their combined contribution to aquaculture improvement (see Picciotto 2005).

| Criteria score | Guidance |
|----------------|--|
| 5 | Criteria for the different issue areas are 100% consistent with each other. |
| 4 | Criteria for the different issue areas are consistent to a large degree with each other. There are some minor deviations between the codes and standards which do not affect their overall assessment. |
| 3 | Criteria for the different issue areas have some inconsistencies with each other. There are some deviations between the codes and standards which have a minor effect on their overall assessment. |
| 2 | Criteria for the different issue areas exhibit major inconsistencies. There are major deviations between the codes and standards which have a major effect on their overall assessment. |
| 1 | Criteria for the different issue areas are completely inconsistent with each other. There are major deviations between the codes and standards which lead to completely different assessments. |

Scoring guidance

This criterion is based on the identification of standards and the associated Seafood Watch issue areas (column A and column E, respectively). Based on comparison of the extent to which standards cover the same issues, and the extent this contributes to overall aquaculture improvement, the assessor can determine whether standards are aligned. Also, if standards deal with the same issues in different ways for no clear or good reason, the assessor can give a low score.

Sources:

- Standards documentation (criteria)

B. Orchestration

Orchestration refers here to the degree to which codes and standards are aligned within a country, in a way that coordination creates an overall improvement pathway for the aquaculture industry (see Samerwong et al., 2017).

If there is a number of public and private standards available to a sector or within a country, but no attempt within the country to coordinate them to either improve coverage, inclusion of producers or stringency of the standards, then orchestration is assumed to be low.

If there is evidence that there is an attempt to align or apply standards so that coverage, inclusion of different types of producers or stringency of standards is improved, the orchestration is seen as high. Such orchestration can be undertaken by state and private actors (such as industry associations) either independently or in collaboration.

| Criteria score | Guidance |
|----------------|--|
| 5 | The is an explicit attempt within the country to coordinate all available codes and standards to create a coherent, indicator-wise improvement pathway maximising both progress to environmental improvement and the participation of the full range of producers. |
| 4 | Coordination between two or more codes and standards is evident within the country, but not organised to create indicator-wise improvement pathway maximising both progress to environmental improvement and the participation of the full range of producers. |
| 3 | In the country, there is no coordination in place, but there is evidence of active deliberation on the need to better coordinate codes and standards to either contribute to environmental improvement or the participation of a wider group of producers. |
| 2 | There is no coordination evident within the country, but there is explicit acknowledgement of the problems arising from a lack of coordination. |
| 1 | There is no coordination evident within the country (either because there is only one norm or standard available, or because problems of coordination have not been identified). |

Scoring guidance

If there is a collaborative platform, or industry partners stimulate compliance to multiple standards, the score will be higher. Information can be found via desk study of online sources, such as the websites of standards providing information about their networks and collaborations. Some countries have platforms or working groups which are particularly aimed to align voluntary codes and standards. Such initiatives might already be indicated during the identifying of collaborative arrangements (dimension 3). If online sources are not found, academic articles can be consulted, or interviews can be carried out.

Sources:

- Standard websites
- Governmental or industry information (websites, news articles) about platforms or working groups
- Academic articles
- Interviews

Indicator 2.6 Coordination with state policy and legislation

Coordination with state policy and legislation refers to the ways in which (private) standards and state policy mutually reinforce each other (Gulbrandsen, 2012). Mutual reinforcement can take place in terms of changes in the scope of legislation and standards, and changes in the implementation and compliance of legislation and standards.

The indicator consists of the following criteria:

- A. Change in legislation
- B. Change in compliance

A. Change in legislation

Change in legislation refers to state responses to voluntary codes and standards, measured by the extent to which there is public recognition of (private) standards in state policy and legislation. It is assumed that reference to standards in legislation contributes to an increased coverage of issue areas.

| Criteria score | Guidance |
|----------------|---|
| 5 | There is explicit evidence of state legislation or regulation referencing (public and private) codes and standards for all Seafood Watch issue areas. |
| 4 | There is explicit evidence of state legislation or regulation referencing (public and private) codes and standards for the majority of Seafood Watch issue areas, including the issue areas deemed most important by Seafood Watch. |
| 3 | There is explicit evidence of state legislation or regulation referencing (public and private) codes and standards for some of Seafood Watch issue areas. |
| 2 | There is some evidence of state legislation or regulation recognizing the importance of (public and private) codes and standards. |
| 1 | There is no evidence of state legislation or regulation recognizing the importance of (public and private) codes and standards. |

Scoring guidance

This criterion refers to the extent to which the government recognizes (private) codes and standards. It is connected to Criterion 2.3A (Division of roles) yet focuses on the acknowledgment of codes and standards in legislation or regulations (in contrast, criterion 2.3A points to a state's financial support or endorsement). The assessor can look into policy documents and regulations, as well as news items. Interview with government and legal experts can provide information to score this indicator.

Sources:

- NALO country description - <http://www.fao.org/fishery/nalo/search/en>
- Policy documents
- Governmental websites
- News articles
- Interviews

B. Change in compliance

Coordination between standards and legislation can also result in a change in compliance with legislation. Mutual reinforcement might be more likely to occur when the state depends on the non-state program for implementing regulations or attaining public policy objectives.

| Criteria score | Guidance |
|----------------|--|
| 5 | There is explicit evidence that the coverage and enforcement of public regulation relevant to all or the majority of Seafood Watch issue areas, including the ones deemed most important for the country, has improved as a result of coordination with standards. |
| 4 | There is explicit evidence that the coverage and enforcement of public regulation relevant to some of Seafood Watch issue areas has improved as a result of coordination with standards. |
| 3 | There is limited evidence that the coverage and enforcement of public regulation relevant to Seafood Watch issue areas has improved as a result of coordination with standards. |
| 2 | There is no evidence that the coverage and enforcement of public regulation relevant to Seafood Watch issue areas has improved as a result of coordination with standards. |
| 1 | There is documented evidence that the coverage and enforcement of public regulation relevant to Seafood Watch issue areas has decreased as a result of the lack of coordination with standards. |

Scoring guidance

To assess this criterion, two questions have to be answered:

- 1) Did the coverage of legislation with regard to Seafood Watch issue areas improve since the emergence of codes and standards?
- 2) Was this improvement caused by the emergence of codes and standards?

An answer to the first question can to some extent be based on the identification step for the first dimension of the AGIs, complemented by interviews. An answer to the second question can be based on interviews with government officials or representatives of codes and standards.

Sources:

- Interviews with representatives of codes and standards
- Interviews with governmental agencies responsible for legislation
- Academic articles

Indicator 2.7 Coordination with global frameworks

Coordination with global frameworks refers to the alignment of voluntary codes and standards to global (public and private) frameworks, like international environmental international treaties, agreements, benchmarks and codes of conduct. Full coordination would correspond with the recognition and integration of key principles and requirements of relevant frameworks into voluntary codes and standards. A lack thereof would correspond with no recognition of global frameworks by codes and standards at the national level. Coordination is further enhanced by initiatives and activities to synchronize and/or jointly organize improvement processes.

The indicator consists of the following criteria:

- A. Consistency
- B. Orchestration

A. Consistency

Consistency refers to the degree to which standards conform to and recognize international public and private agreements. A high level of consistency is expressed when international treaties relevant to the Seafood Watch issue areas are referenced and integrated in codes and standards.

| Criteria score | Guidance |
|----------------|---|
| 5 | All codes and standards are based on international treaties, agreements, benchmarks and codes of conduct relevant to all the Seafood Watch issue areas, or the majority of the Seafood Watch issue areas, including the issue areas deemed most important by Seafood Watch. |
| 4 | The majority of codes and standards are based on international treaties, agreements, benchmarks and codes of conduct relevant to the majority of the Seafood Watch issue areas, including the issue areas deemed most important by Seafood Watch. |
| 3 | The majority of codes and standards are based on international treaties, agreements, benchmarks and codes of conduct relevant to some of the Seafood Watch issue areas, including the issue areas deemed most important by Seafood Watch. |
| 2 | Some codes and standards are based on international treaties, agreements, benchmarks and codes of conduct relevant to the some of the Seafood Watch issue areas but not the issue areas deemed most important by Seafood Watch. |
| 1 | None of the codes and standards are based on international treaties, agreements, benchmarks and codes of conduct relevant to the Seafood Watch issue areas. |

Scoring guidance

Explicit and systematic reference to international treaties relevant to Seafood Watch issue areas would result in a high score.

Sources:

- Standards websites and documentation

B. Orchestration

Orchestration refers here to the degree to which codes and standards seek international collaboration to improve coordination (e.g. Samerwong et al., 2017). Examples are engagement in or recognition by international benchmarks like by Seafood Watch or the Global Sustainable Seafood Initiative (GSSI), following codes of good conduct, such as from ISEAL.

| Criteria score | Guidance |
|----------------|---|
| 5 | All codes and standards engage actively in international fora and initiatives that strive for coordination to create coherent improvement pathways, maximising both progress to environmental improvement and the participation of the full range of producers. |
| 4 | The majority of codes and standards engage actively in international fora and initiatives that strive for coordination to create coherent improvement pathways maximising either progress to environmental improvement or the participation of the full range of producers, or both |
| 3 | Some codes and standards engage actively in international fora and initiatives that strive for coordination to create coherent improvement pathways maximising either progress to environmental improvement or the participation of the full range of producers, or both |
| 2 | None of the codes and standards engage actively in international fora and initiatives, but there is explicit acknowledgement of the problems arising from a lack of international coordination. |
| 1 | None of the codes and standards engage actively in international fora and initiatives, and there is no acknowledgement of the need for international coordination. |

Scoring guidance

The website of GSSI, ISEAL, the Certification and Ratings Collaborative and Seafood Watch provide information on participating codes and standards.

Sources:

- Certification and Ratings Collaborative: <https://certificationandratings.org/members/>
- ISEAL: <https://www.isealalliance.org/about-iseal/iseal-members>
- GSSI: <https://ourgssi.org/benchmarking/recognized-schemes/>
- Seafood Watch: <http://www.seafoodwatch.org/seafood-recommendations/eco-certification>

3. COLLABORATIVE ARRANGEMENTS

Rationale

Governance involves a broad understanding of institutional processes affecting decision-making and actions in striving to attain societal goals (Kooiman et al, 2008); goals here referring to objectives of resolving challenges in, and creating opportunities for, a country's aquaculture sector. This implies that aquaculture governance also includes collaborative arrangements, next to government control and legal compliance, both nationally and internationally (dimension 1), and (new) modes of voluntary codes and standards by state and non-state actors (dimension 2).

A collaborative arrangement is defined as an organized group of actors with different rights, interests and responsibilities, but who share, to a large extent, the same policy objectives (Van Tatenhove et al, 2000). Actors in aquaculture governance range from fish farmers, suppliers, and traders, producer organizations, research institutions and government agencies at different policy levels, to communities in close vicinity of farms, as well as civil society organizations concerned about social and/or environmental impacts. Actor constellation in collaborative arrangements varies across countries (e.g. see scoping review by Béné and Neiland, 2006). Some countries have highly centralized state management, while others promote co-management modes at the local level, or push industry actors to take over some decision-making responsibilities. It is however generally understood that each country has some degree of institutionalized interactions between different groups of actors. Due to the complexity and globalized nature of the aquaculture sector, no single (state) actor can resolve all issues by itself and needs collaboration with other (public and private) actors to foster problem solving of key sustainability issues in aquaculture.

Collaborative arrangements (CAs) vary in objective and scope. Some might be formed to engage in legislative processes. Voluntary standard setting and adoption practices result almost by definition from collaborative arrangements. Arrangements can, however, also work without striving for norm setting goals, e.g. many are designed to foster deliberative processes. While arrangements might have a specific focus on addressing a single issue area or species-specific concerns, they can also be set up to carry out a broad range of tasks in environmental management including aquaculture.

The assessment of collaborative arrangements is divided into seven indicators, organized according to the three principles of legitimacy, effectuation and coordination.

- **Input legitimacy** refers to the extent to which stakeholders are included in the deliberative process, to assess whether collaborative arrangements enable new ways of collective problem solving rather than favouring particular vested interest (Healey, 1998).
- **Scope** of collaborative arrangements to evaluate the content of the discussions in these arrangements with regard to issue areas, actors and environmental principles.
- The third and fourth indicator focus on **information processes** and **enactment and learning**, which are fundamental to understanding what joint problem-solving strategies are formulated and how reflection leads to adjusting or transforming practices and routines (Keen et al, 2005; Armitage et al, 2008; Mol, 2008).
- The final three indicators consider the **coordination between collaborative arrangements** and the **coordination with state policy and regulation** and **attribution to change in codes and standards**. The extent to which collaborative arrangements can realize actionable outcomes, depends to their position vis-à-vis each other. Collaborative arrangements working complementary and in synergy are likely to boost sustainability governance in a country while arrangements that are hardly connected, and have conflicting principles and rules, will lead to inertia or antagonizing activities (cf. Biermann et al, 2009).

Identification

To delineate the extent of assessment, collaborative arrangements are categorized in terms of their actor constellation, prioritizing the involvement of economic actors. Aquaculture is first and foremost an economic sector, as such the trade-off between economic interests and (socio-)environmental improvement will always have to be considered. Producers and producer organizations, together with their chain partners, are in a key position to bring about change, their engagement in collaborative arrangements is thus an important prerequisite to assess a country's governance performance.

Five collaborative arrangements are selected and assessed (Figure 6). The performance of these five arrangements is taken together to assess the overall functioning of collaborative arrangements in a country. Selection of the five arrangements is based on the prioritization of market actors, so that are arrangements which can be characterized as modes 3, 4, 5 or 6 using the typology of modes of interaction as illustrated in Figure 6 (adapted from Driessen et al, 2012). The focus in the assessment is thus on arrangements in which market actors (M) work together with either state actors (S) or civil society organizations (CS) or both. Also, market actors partnering up without state or civil society involvement are to be included in the assessment (mode 6, Figure 6), though it should be noted that each of the arrangements assessed includes multiple organizations.

In a market-only arrangement, collaboration is for example between various producers organizations, or an arrangement of producers with traders and retailers. Given this focus, arrangements are included in the selection if they represent either mode 3 (public-private governance), mode 4 (interactive governance), mode 5 (non-state self-governance) or mode 6 (industry self-governance). State-led, (de-) centralized arrangements (mode 1 and 2) are excluded from this part of the assessment, because state agencies, alone or together, can work through legislative and directive policy processes to push for responsible aquaculture practices—which is assessed in dimension 1. It should, however, be noted the state is never fully absent (as depicted by the dotted lines in Figure 6).

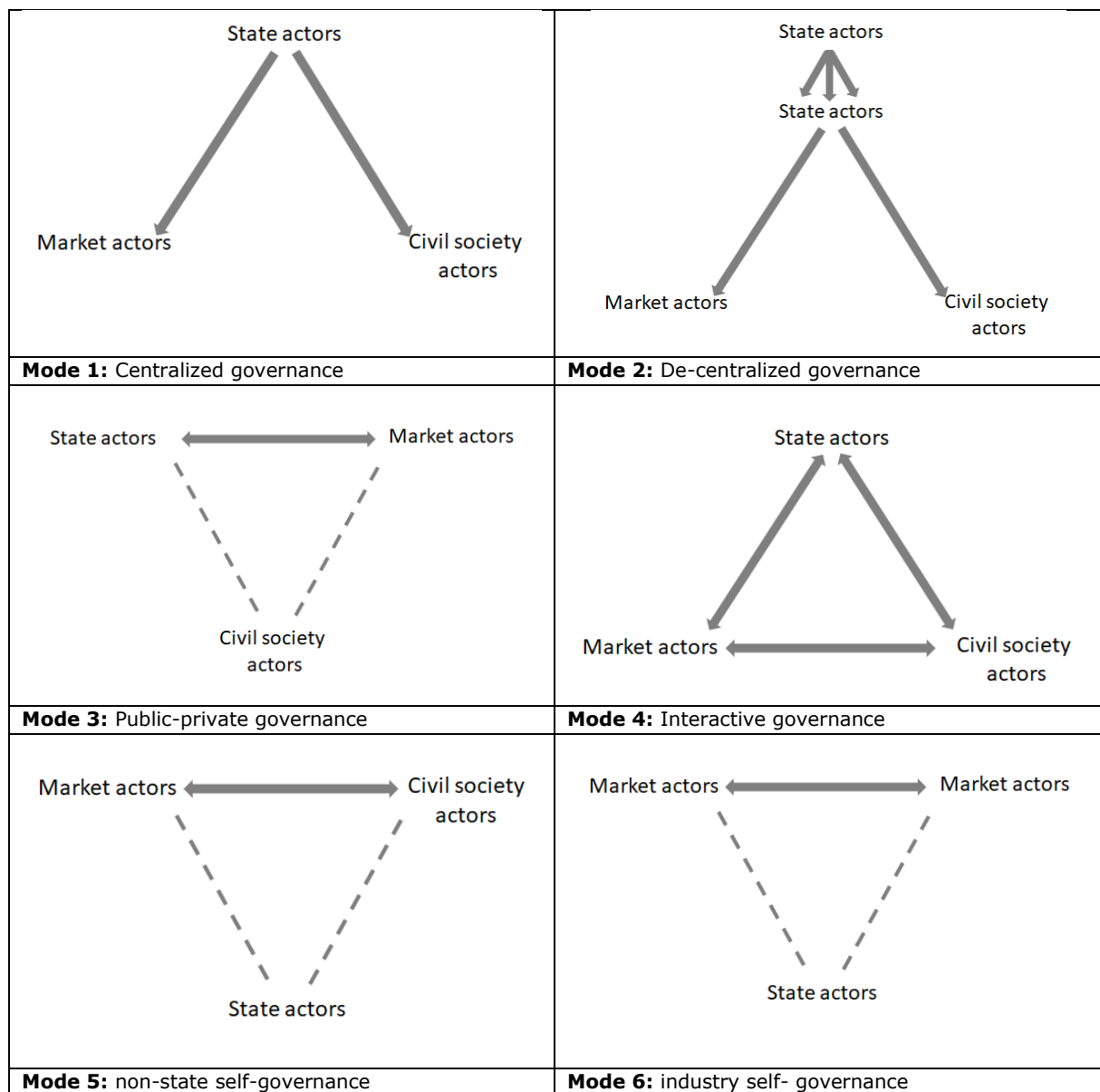


Figure 6. Modes of governance and their interaction (adapted from Driessen et al, 2012).

The five selected arrangements are preferably covering different modes of interaction, allowing for a broad assessment of a country's aquaculture governance performance. However, assessors should look for and prioritize arrangements that work on the most important sustainability challenges ("red flags") as these will be likely to provide most insight in a country's capacity to collaboratively identify, deliberate over and coordinate approaches to resolve key sustainability issues. While this focus presents a selection bias, we consider this emphasis to be most aligned with the framework's objectives (presented in the [introduction](#)).

The selection of the five collaborative arrangements is based on the assessor's expertise. The assessor needs to give an explanation on why the selected arrangements contribute to a representative view of the overall governance performance of collaborative arrangements in the country. This justification is to be included in 'Final selection' of the '3. Collaborative arrangements' tab in the working sheet.

| # | Name of collaborative arrangement | Mode of interaction | Justification | Source |
|---|-----------------------------------|---------------------|---------------|--------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

Table 4. Final selection of collaborative arrangements (see Annex A - template worksheet).

If needed, assessors can use the following rubrics to support their selection. First, the representativeness of producers in the arrangement is guiding the selection. Also, prioritization is based on the scope, that is whether the so-called "red flags" as defined by the industry and by Seafood Watch are addressed, and the extent in which the arrangement involved in the first two governance dimensions. Lastly, as stated above, assessors should consider if the selected set of arrangements covers different modes of interaction (a diversified selection is preferable).

The following rubric scores can be used to justify the selected arrangements, based on the average of the scores.

$$(A + B+C)/3 = \underline{\hspace{2cm}}$$

A. Representativeness of market actors in the arrangement

| Score | Guidance |
|-------|--|
| 5 | Arrangement includes industry actors representing producers of all major aquaculture species, both export and domestic consumption |
| 4 | Arrangement includes industry actors representing producers of all major export aquaculture species. |
| 3 | Arrangement includes industry actors representing producers of some of major export aquaculture species |
| 2 | Arrangement includes industry actors representing producers representing some aquaculture species. |
| 1 | Arrangement includes no industry actors. |

B. Extent of link to other governance dimensions

| Score | Guidance |
|-------|--|
| 5 | Arrangement addresses the "red flags" as identified by the country's industry and also covers all of the Seafood Watch issues areas. |
| 4 | Arrangement addresses the "red flags" as identified by the country's industry and also covers most of the Seafood Watch issues areas, including the issues deemed most important by Seafood Watch. |
| 3 | Arrangement covers most of the Seafood Watch issues areas. |
| 2 | Arrangement covers some of the Seafood Watch issue areas, yet not the issues deemed most important by Seafood Watch for the country under assessment. |
| 1 | Arrangement does not cover Seafood Watch issue areas. |

C. Extent of link to other governance dimensions

| Score | Guidance |
|-------|--|
| 5 | Arrangement has a clear link to the first two governance dimensions |
| 3 | Arrangement has a clear link to one of the first two governance dimensions |

Indicator 3.1 Input legitimacy

Input legitimacy focuses on the extent to which stakeholders are included in the deliberative process of collaborative arrangements (Rantala, 2012; Eshuis and Edwards, 2013). It can be measured in terms of the *representativeness* of those involved in deliberation, the degree of *fairness* of those actors participating in deliberation, and the *transparency* of the deliberative process.

The indicator consists of the following criteria:

- A. Representative inclusion
- B. Procedural fairness of deliberation
- C. Transparency of standard setting

A. Representative inclusion

Representative inclusion refers to the involvement of those groups (dis)affected by the aquaculture industry in the deliberative process (Mena and Palazzo 2012). For example, high representation would be the inclusion of producers, processors, state regulators, NGOs and affected communities.

| Score | Guidance |
|-------|--|
| 5 | Deliberation across all collaborative arrangements can be considered as highly representative of the full range of (dis)affected actors in the aquaculture industry. |
| 4 | Deliberation across the majority of collaborative arrangements can be considered representative of the full range of (dis)affected actors in the aquaculture industry. |
| 3 | Deliberation across the majority of collaborative arrangements can be considered representative of the majority of (dis)affected actors in the aquaculture industry. |
| 2 | Deliberation across the majority of collaborative arrangements represent a clear bias in the representation of (dis)affected actors in the aquaculture industry. |
| 1 | Deliberation in all collaborative arrangements represent a clear bias of a single (or small group) of dominant stakeholders in the aquaculture industry. |

Scoring guidance

This criterion refers to the extent to which actors with different background and perspectives are represented in the collaborative arrangements (CAs) under assessment. The assessor looks into the actor constellation of the CAs, and assesses whether those who are affected by the issues the arrangements address are represented. Also, it has to be assessed whether affected actors are left out.

Sources:

- Online sources (websites, news articles)
- Interview with actors that are part of the CAs,
- Interview with other organizations about their general opinion towards the CAs
- Observation of interaction between the actors

B. Procedural fairness of deliberation

Procedural fairness of deliberation refers to how those included in collaborative arrangements are able to influence the content of the deliberation. To be 'fair', the engagement of stakeholder groups must not create structural barriers for stakeholders to engage in the standard-setting process (Mena and Palazzo 2012). For example, barriers to participating in deliberation should be removed, such as the cost of participating or language barriers that limit active discussion.

| Score | Guidance |
|-------|---|
| 5 | In the majority of collaborative arrangements all of the categories of stakeholder have equal access to the deliberation over and to the decision-making process. There is no evidence of parties that have a claim of being excluded. |
| 4 | In the majority of collaborative arrangements all of the categories of stakeholder have access to the deliberation and to the decision-making process. There is evidence that some parties did not have equal access because of cost of attendance and/or language barriers. |
| 3 | In the majority of collaborative arrangements most of the categories of stakeholder have access to the deliberation and to the decision-making process. There is evidence that some parties did not have equal access because of cost of attendance and/or language barriers. |
| 2 | In some collaborative arrangements a limited number of stakeholders have access to deliberation and to the decision-making process. There is public acknowledgement that key parties have been systematically excluded from the process. |
| 1 | Deliberation and decision-making is considered to exhibit a high degree of 'capture' by one or small group of actors. There is widespread evidence that key parties have been systematically excluded from the process. |

Scoring guidance

The deliberation is considered fair if the different actors have the same rights and obligations, can participate in deliberation, and are being heard and listened to. Most likely, this information is best acquired via interviews. If every actor who is involved, or who wants to be involved in the deliberation, can join and deliberate in these meetings without having to cross major financial, language or other barriers, and stakeholders can state their opinions and views freely, the indicator could be scored high.

Sources:

- Minutes/notes of meetings
- Interview with actors that are part of the collaborative arrangements
- Observation of interaction between the actors
- Academic articles

C. Transparency of the deliberative process

Transparency is defined as openness, secured through greater availability of information. It is a key element of the credibility of public and private governance (Gupta and Mason 2014). As outlined by Hale (2008), "An institution is transparent if it makes its behaviour and motives readily knowable to interested parties" (Hale, 2008, p. 75). The more transparent a collaborative arrangement, the more those actors involved will be able to evaluate their activities and in turn assess the degree to which they will continue to participate.

Process transparency specifically refers to the degree to which 'rules of cooperation' are available to those collaborating. If the rules are publicly available, those involved are assumed to gain more trust in the arrangement and therefore continue to invest in their collaboration.

| Score | Guidance |
|-------|--|
| 5 | All aspects of all collaborative arrangements are available publicly, including the criteria design process, adjudication process and conformity assessment reports. |
| 4 | The majority of collaborative arrangements have made their criteria design process making, adjudication process and adjudication process public. |
| 3 | The majority of collaborative arrangements have made their criteria design process public. |
| 2 | A minority of collaborative arrangements have made their criteria design process making or adjudication process or adjudication process public. |
| 1 | None of the collaborative arrangements have made their criteria design process making or adjudication process or adjudication process public. |

Scoring guidance

This criterion can be scored by desk study. The assessor should check the websites of the CAs and see if there is documentation available about the rules structuring the deliberative process. If these documents are not available online, perhaps they are available on a different websites, or they can be requested by email. If the CA does not share any of these documents, the indicator will be scored low.

Sources:

- Website of actors within the collaborative arrangements

Indicator 3.2 Scope

Scope refers to the content, or the 'what' and 'about whom' of collaborative arrangements. First, it refers to the coverage of Seafood Watch issue areas and attention for cumulative impacts in the deliberative process of collaborative arrangements ('about what'). Second, it deals with the coverage of appropriate actors included within the scope of the discussion ('about whom'). Finally, scope also refers to the perceived relevance of (the scope of) codes and standards by industry actors.

The indicator consists of the following criteria:

- A. Perceived relevance
- B. Coverage of issue areas
- C. Attention for cumulative impacts
- D. Appropriate actors

A. Perceived relevance

The relevance of collaborative arrangements is determined by expert judgement of those in or related to the industry. Clear evidence and examples should be provided by expert respondents demonstrating where collaborative arrangements are NOT deemed relevant or contradictory.

| Score | Guidance |
|-------|---|
| 5 | Collaborative arrangements are deemed very relevant to all the main issues faced by the industry. |
| 4 | Collaborative arrangements are deemed relevant to most of the main issues faced by the industry. |
| 3 | Collaborative arrangements are deemed relevant to some degree, but not all main issues faced by the industry are covered. |
| 2 | The industry questions the relevance of collaborative arrangements to their industry. |
| 1 | Collaborative arrangements are deemed completely irrelevant for the industry. |

Scoring guidance

Relevance is defined by the perception of industry actors. Scoring therefore needs to be based on an assessment of the perception of the industry, which can be obtained through interviews or public statements by industry actors regarding collaborative arrangements.

Sources:

- Interviews with industry actors
- Public statements by industry actors (e.g. in print or online media, company publications, etc.)

B. Coverage of issue areas

The coverage of issue areas is a measure of the extent to which collaborative arrangements take into account Seafood Watch issue areas in their deliberation and action.

| Score | Guidance |
|-------|--|
| 5 | All of the collaborative arrangements cover all of the Seafood Watch issues areas. |
| 4 | The majority of the collaborative arrangements cover all Seafood Watch issue areas |
| 3 | The majority of the collaborative arrangements cover most Seafood Watch issue areas, including the most important issues for the country under assessment,. |
| 2 | The majority of the collaborative arrangements cover most Seafood Watch issue areas, yet not the issues deemed most important by Seafood Watch for the country under assessment. |
| 1 | The majority of the collaborative arrangements cover a few (or no) Seafood Watch issue areas, and do not address the issues deemed most important by Seafood Watch for the country under assessment. |

Scoring guidance

To score this criterion, an overview needs to be made of the issues dealt with in collaborative arrangements, which should subsequently be compared with the Seafood Watch issue areas.

Sources:

- Website of actors within the collaborative arrangements
- Interviews with participants of actors within collaborative arrangements
- Documents produced by actors in collaborative arrangements
- Media

C. Attention for cumulative impacts

Attention for cumulative impacts refers to the degree to which collaborative arrangements also look at environmental impact beyond the unit of production (i.e. the farm level). It is assumed that explicit reference to cumulative effects ensures broad scale environmental impact.

| Score | Guidance |
|-------|---|
| 5 | All of the collaborative arrangements make explicit reference to cumulative environmental impacts. |
| 4 | The majority of collaborative arrangements make explicit reference to cumulative environmental impacts. |
| 3 | The majority of collaborative arrangements do not make explicit reference to cumulative environmental impacts. |
| 2 | All of the collaborative arrangements are limited to the farm level. There is no reference to cumulative environmental impacts. |
| 1 | The collaborative arrangements do not consider the level of impact at all. |

Scoring guidance

To see if collaborative arrangements deal with cumulative environmental impacts, documents should be searched for explicit reference to cumulative impacts. Another way to score this criterion is to evaluate what kind of actors participate in collaborative arrangements. If these actors have an explicit landscape or geographical focus, this is also an indication of attention for cumulative impacts.

Sources:

- List of participants (see 3.1A – Representative Inclusion)
- Website of collaborative arrangements actors
- Interviews with participants of collaborative arrangements
- Documents produced by collaborative arrangements actors
- Media

D. Appropriate actors

The scope of collaborative arrangements also refers to the actors about whom the collaborative arrangements deliberate. The appropriateness of actors included in the scope of collaborative arrangements is determined by the degree of overlap between an issue area and the groups most closely connected to its cause, impact and/or solution.

A low degree of overlap could mean over-representative collaborative arrangements, which includes people who are not affected and/or required to resolve an issue area; or under-representative collaborative arrangements, excluding people who are affected and/or needed to addressing key issues associated with aquaculture.

| Score | Guidance |
|-------|--|
| 5 | There is a complete overlap between the scope of the collaborative arrangements and those groups associated with issue areas. There is no apparent reason that collaborative arrangements would overly bias the inclusion or exclusion of any specific group as the subject of discussion. |
| 4 | There is a high degree of overlap between the scope of the collaborative arrangements and those groups associated with issue areas. There is no apparent reason that collaborative arrangements would overly bias the inclusion or exclusion of any specific group as the subject of discussion. |
| 3 | There is a high degree of overlap between the scope of collaborative arrangements and those groups associated with issue areas. There is evidence that collaborative arrangements bias the inclusion or exclusion of some groups as the subject of discussion. |
| 2 | There is weak overlap between the scope of collaborative arrangements and those groups associated with issue areas. There is evidence that collaborative arrangements bias the inclusion or exclusion of some groups as the subject of discussion. |
| 1 | There is no overlap between the scope of collaborative arrangements and those groups associated with issue areas. |

Scoring guidance

This criterion addresses two questions:

- 1) Is there overlap between the scope of collaborative arrangements and the groups associated with the issue areas?
 - The assessor has to find out which actors are mentioned in the collaborative arrangements. If specific groups are mentioned and whether this results in a high or low score depends on expert judgment about the need for having them (involved) to solve particular issues.
- 2) Do the collaborative arrangements exclude any specific group as the subject of discussion?
 - Refers to explicit exclusion of certain actors, or overly bias to a group of actors, of which information is to be found in policy documents or notes of meetings.

Sources:

- Policy documents
- Notes of meetings published publicly (e.g. online)
- Academic articles
- Interviews

Indicator 3.3 Informational processes

Complexity, uncertainties and knowledge gaps related to aquaculture practices and impacts highlight the importance of data and information, and emphasize the quality of informational processes.

The first criterion in the Seafood Watch Aquaculture Standard is on “Data”, which emphasizes the importance of having robust and up-to-date information on production practices which allows for a more accurate assessment. Moreover, “[p]oor data quality and availability limits the ability to assess and understand the impacts of aquaculture production” (Seafood Watch, 2020, p. 5). Indeed, poor data quality and availability are often of key concern for collaborative arrangements in fisheries and aquaculture governance (Bavinck et al, 2005). Lack of information affects quality of argumentation and, eventually, the arrangement’s legitimacy to decide and act (Mol, 2008).

Inclusive approaches to information are also important, referring to the various points of view and mixture of expertise and knowledge available in a given arrangement (Healey, 1998; Berkes, 2008). Scientific knowledge is often highlighted as the key information source, while so-called practical knowledge is now increasingly recognized as providing valuable insights for day-to-day problems and situated solutions (Reid et al, 2006). Experts from various backgrounds and with different ontologies and epistemologies provide different types of information, and contribute to a broader and more in-depth understanding of issues. Informational processes are strengthened by open (‘two-way’) interaction, especially if there is openness to accept non-scientific and non-expert knowledge (Hatanaka, 2010).

The quality of information refers to its suitability for a particular purpose (Tauberer 2014). In more specific terms “managing information involves identifying what should be kept, how it should be organized, where it should be held and who should have access to it.” (Galliers and Leidner 2003, p. 2). The quality of this management will dictate the quality of the information, and ultimately the quality of the decisions being taken and (very ultimately) the survival of the collaborative arrangement (see also Mol 2008). If the information collated by a collaborative arrangement is of a high ‘quality’, it is precise, salient, accessible and trustworthy. If information is accurate it is assumed that decisions made by a collaborative arrangement will also be accurate. However, if information is accurate but not precise, the capacity of collaborative arrangements to enable accurate decision making will be diminished.

For information to be deemed useful, it should have adequate coverage of production systems, species and areas in a country relevant to the resolution of issues covered by a collaborative arrangement. If the coverage is high, it is assumed the information will enable participants in a collaborative arrangement to make more accurate decisions.

Thus, understanding this quality of information (and related information systems controlled by these arrangements), provides a key indicator for understanding the potential of collaborative arrangements to contribute to the resolution of any given issue area related to aquaculture sustainability.

The indicator consists of the following criteria:

- A. Quality of information
- B. Informational transparency

A. Quality of information

If the information collated by a collaborative arrangement is of a high 'quality', it is accurate, precise, salient and trustworthy. *Accuracy* is the likelihood that information collected represents reality. *Precision*, in contrast, measures the depth of knowledge encoded in data, given the particular issue area. The information collected should also be salient, that is, provide enough stimulus to make decisions that are relevant to the issues being addressed. *Trustworthiness* refers to the degree of perceived bias in the information.

| Score | Guidance |
|-------|---|
| 5 | All collaborative arrangements organize their deliberations and actions based on accurate, precise, salient and trustworthy information. |
| 4 | The majority of collaborative arrangements organize their deliberations and actions based on accurate, precise, salient and trustworthy information. |
| 3 | The majority of collaborative arrangements organize their deliberations and actions based on accurate, precise, salient and trustworthy information. Sometimes information is lacking, or there are some issues regarding the quality of information. |
| 2 | A minority of collaborative arrangements organize their deliberations and actions based on accurate, precise, salient and trustworthy information. In most cases, information is lacking or of low quality. |
| 1 | None of the collaborative arrangements organize their deliberations and actions based on accurate, precise, salient and trustworthy information. Information is generally lacking or of extremely poor quality. |

Scoring guidance

Accuracy, precision, salience and trustworthiness of data focuses on the data presented or shared among participants of the selected CAs. Documented evidence like meeting agendas, minutes or reports provide indication of whether this data is robust, up-to-date and relevant. Interviews with actors that are part of the CAs can also be a source of information, especially regarding the trustworthiness of information.

Sources:

- Documentation like meeting agendas, minutes or reports
- Interviews with actors that are part of the CAs
- Interviews with outside organization

B. Informational transparency

Transparency is defined as openness, secured through greater availability of information. It is a key element of the credibility of public and private governance (Gupta and Mason 2014). As outlined by Hale (2008): "An institution is transparent if it makes its behaviour and motives readily knowable to interested parties" (Hale, 2008, p. 75). The more transparent a collaborative arrangement, the more those actors involved will be able to evaluate their activities and in turn assess the degree to which they will continue to participate.

Information transparency specifically refers to the degree to which a collaborative arrangement discloses how it is collecting information, by whom, and whether collected data is publicly available. If an arrangement demonstrates a high degree of informational transparency, it is assumed participants will have greater trust in the capacity of the arrangement to solve environmental issues. It is also assumed they will be more committed to ongoing collaboration.

| Score | Guidance |
|-------|---|
| 5 | All collaborative arrangements provide access to information on all relevant environmental issues to all relevant participants. All arrangements provide fully accessible and searchable databases. |
| 4 | The majority of collaborative arrangements provide access to information on relevant environmental issues to relevant participants. The majority of arrangements provide fully accessible and searchable databases. |
| 3 | The majority of collaborative arrangements collaborative arrangements provide access to information on relevant environmental issues to relevant participants. Information is not, however, accessible and/or searchable. |
| 2 | A minority of collaborative arrangements provide access to information on relevant environmental issues to all relevant participants. Information is not accessible and/or searchable. |
| 1 | None of the collaborative arrangements have information available to its members. |

Scoring guidance

Informational transparency can be assessed via a desk study of relevant websites, such as those of the CAs under assessment. The assessor should check if information on all relevant environmental issues (both main and Seafood Watch issue areas) are available publicly. If this information is not available online, perhaps they can be requested by e-mail. If CAs do not share any of the information, the indicator will be scored low. If CAs provide the information publicly, and have a searchable database, the score is high.

Sources:

- Website CA
- Different online sources

Indicator 3.4 Enactment and learning

Deliberative and informational processes are particularly valued when they lead to learning, because learning is essential to problem solving, and forms the basis to decide on action (Berkes, 2008; Carlsson and Berkes, 2005; Armitage et al, 2008).

Learning in collaborative arrangements reflects social learning, defined by Keen et al (2005) as 'a process of iterative reflection that occurs when we share our experiences, ideas and environments with others'. As such, the first actionable outcome of collaborative arrangements refers to its attribution to (social) learning: whether and how learning occurs is operationalized by the extent to which practices and routines are adjusted or transformed (Keen et al, 2005; Armitage et al, 2008).

If information is structured into knowledge and shared in a collaborative arrangement it is assumed that a collaborative arrangement will be better able to foster learning. An enhanced capacity for learning, it is assumed, will in turn lead to more directed programmes by the collaborative arrangement, and/or more direct action by those collaborating.

The indicator consists of the following criteria:

- A. Commitment and continuity
- B. Attention for systemic and controversial issues
- C. Quality of learning

A. Commitment and continuity

Commitment refers to the degree of support collaborative arrangements receive from participants in setting tasks and goals, which in turn influences the design of the arrangement. Continuity refers to the degree to which participants are likely to continue their voluntary involvement in the collaboration.

A collaborative arrangement is deemed to have fostered commitment and continuity if those involved have gained trust in the formal and informal processes (such as rules structure for meetings) and/or the moral or cognitive justification for the objectives of the collaboration. In other words, whether the participants can agree on mutually achievable goals and, as a result, enact processes to achieve these goals (Spekman et al. 1998). If this commitment and continuity is established, the tasks will have a higher probability of being implemented and therefore goals of the collaborative arrangement have a higher chance of being achieved.

| Score | Guidance |
|-------|--|
| 5 | All collaborative arrangements have a high level of ongoing commitment. The majority of their participants play an active role in setting tasks and goals, resulting in concrete and comprehensive action plans. |
| 4 | The majority of collaborative arrangements have a high level of ongoing commitment. The majority of their participants play an active role in setting tasks and goals, resulting in long- and mid-term goals as well as action points. |
| 3 | The majority of collaborative arrangements have a medium level of ongoing commitment. The setting tasks and goals is carried out by a core set of participants, but there is ongoing participation from a broad set of actors. Long- and mid-term goals are set. |
| 2 | Less than half of collaborative arrangements have a medium level of ongoing commitment. The setting tasks and goals is carried out by a core set of participants, but there is ongoing participation from a broad set of actors. There are some goals, but there is little room for discussing practical issues. |
| 1 | None, or a small minority of collaborative arrangements have ongoing commitment from participants. It is not clear who sets tasks and goals and there is no to very sporadic participation from relevant actors. There are no goals and action points formulated. |

Scoring guidance

This criterion focuses on 1) the ongoing commitment of participants/members of CAs, 2) the role of participants/members in setting tasks and goals, and 3) the formulation of goals and action plans. Information for the first two parts relies on expert knowledge of the assessor, or on interviews with actors that are part of the CAs, or other organizations about their general opinion towards the CAs. The third question could be assessed by assessing the documents produced by CAs.

Sources:

- Interview with actors that are part of the CAs,
- Interview with other organizations
- Websites and documents produced by CAs (mission statements, announcements)
- News articles
- Observation of interaction between the actors
- Meeting agenda

B. Attention for systemic and controversial issues

The degree to which systemic and controversial issues are addressed depend on the ability of the collaborative arrangements to act proactively to future events, and the capacity to reflect on uncertainties and mistakes made in the past. Arrangements should enable deliberation that allows for the incorporation of knowledge and experience into a process of structured reflection to allow gradual improvement. The more controversial the issue, the more polarised the positions of the participants. Under such circumstances, successful arrangements will be those that not only demonstrate an openness to discussing these issues, but also enable participants to tolerate uncertainty around the outcome of the discussion.

| Score | Guidance |
|-------|---|
| 5 | The collaborative arrangements are characterized by an open, proactive and strategic planning style. Participants learn from mistakes, engage with outsiders and study and discuss best practices to anticipate future challenges. There is a high level of tolerance for uncertainties. |
| 4 | The collaborative arrangements enable participants to work together to capture best practices, and have joint understanding of the need to address controversies, learn from mistakes and anticipate future challenges. The arrangements demonstrate tolerance for uncertainties. |
| 3 | The collaborative arrangements enable participants to respond to incidents, but in a way that still enables a common understanding to be achieved of the need to address controversies and to learn from mistakes. Not all of these arrangements demonstrate tolerance for uncertainties. |
| 2 | The collaborative arrangements enable participants to respond to incidents, yet neither share a common understanding nor collaborate. There is a low level of tolerance for uncertainties. |
| 1 | The collaborative arrangements do not respond to incidents. Participants do not have joint understanding of the need to learn from mistakes, and there is a strong aversion for uncertainties. |

Scoring guidance

The assessor needs to determine if the members/participant of the CAs under assessment learn from mistakes, engage with outsiders and deal with future challenges, and plan strategies to anticipate these challenges.

To get a general idea, it might be useful to both focus on general questions regarding the type of discussions within the CAs, and specific aquaculture issues related to uncertainties of the world market, disease, environmental aspect or challenges and how this has been addressed. Evidence can be found in mission statements, minutes of meetings, and in observing meetings and interactions as well as in interviews.

Sources:

- Interview with actors that are part of the CAs
- Meeting agenda, minutes, notes.
- News articles
- Observation of interaction between the actors

C. Quality of learning

The quality of learning can be broken down into three 'loops' (Argyris and Schon (1978, 1996). First loop learning can be considered conventional learning, where behaviour is modified but the understanding of the problem is not internalised by those involved.

Double-loop learning involves reflection on not only whether deviations have occurred and how to correct them, but whether the "rules of the game" themselves should be changed. This learning often helps participants understand why a particular solution works better than others to solve a problem or achieve a goal. Double-loop learning is critical to the success of an organization, especially during times of rapid change.

Triple-loop learning involves "learning how to learn" by reflecting on how we learn in the first place. In this situation, participants reflect not only on whether the rules should be changed, but on the assumptions upon which the rules were set up in the first place. Triple-loop learning is designed to improve the capacity of an organization to engage in single- or double-loop learning.

| Score | Guidance |
|-------|--|
| 5 | The majority of collaborative arrangements engage in triple loop learning. There is constant reflection in the assumptions used to gather evidence to deal with issues. As a result totally new/different ways of organizing deliberation, informational processes, and/or coordination emerge on a regular basis. |
| 4 | The majority of collaborative arrangements engage in second loop learning. There is constant reflection on how the arrangement sets rules or requirements of for those participating to deal with issues. As a result totally new/ rules, informational processes, and/or coordination emerge on a regular basis. |
| 3 | The majority of collaborative arrangements engage in first loop learning. There is constant reflection on the performance of those participating in the arrangement and their effect on the issues being dealt with. This reflection leads to improved 'ways of doing', but not a change in the rules, informational processes, and/or modes of collaboration. |
| 2 | Learning results in performative reflection, meaning that meetings are held and issues discussed, but no changes are made to how participants or the collaborative arrangement operate ("zero loop learning") |
| 1 | The collaborative arrangements are focused on delivering information, not collecting and reflecting on information. |

Scoring guidance

Quality of learning has to be assessed by looking into the follow-up on an event or crisis. If actors improve their practices by only small changes, there is single loop learning, while if they change their perspective that result in adjusted processes and rules (second loop learning), or even in a radical different approach (third loop learning). Documented evidence can be reports or news articles, to be supplemented with interviews with actors who are part of the CAs.

Sources:

- Reports, news article or online news about the (joint) solutions addressing controversies
- Interview with participants of CAs

Indicator 3.5 Coordination between collaborative arrangements

Coordination between collaborative arrangements refers to the degree to which collaborative arrangements are consistent. The more complementary the purpose of the collaborative arrangements, the more consistent their combined contribution to aquaculture improvement. Alternatively, if major contradictions exist between the arrangements and a need for alignment is not recognized, the overall coherence of improvement in the industry may be hindered.

The indicator consists of the following criteria:

- A. Consistency
- B. Orchestration

A. Consistency

Consistency refers to the degree to which collaborative arrangements are consistent in terms of the issue areas covered, and the alignment of goals and tasks.

| Score | Guidance |
|-------|---|
| 5 | Together, the collaborative arrangements address all of the Seafood Watch issue areas. Goals, tasks and activities are well-aligned between the arrangements. |
| 4 | Together, the collaborative arrangements address the majority of the Seafood Watch issue areas, including the most important issues for the country under assessment. Goals, tasks and activities show some overlap, which is acknowledged by actors within all arrangements. |
| 3 | Together, the collaborative arrangements address some of the Seafood Watch issue areas, including the most important issues for the country under assessment. Goals, tasks and activities show some overlap, which is acknowledged by actors within all arrangements. |
| 2 | Together, the collaborative arrangements address some of the Seafood Watch issue areas, including the most important issues for the country under assessment. Goals, tasks and activities show overlap, which remains largely unacknowledged by actors within the arrangements. |
| 1 | Together, the collaborative arrangements address some of the Seafood Watch issue areas, yet not the important issues for the country under assessment. Goals, tasks and activities show overlap, which remains largely unacknowledged by actors within the arrangements. |

Scoring guidance

Coherence between collaborative arrangements (CAs) refers to the extent to which the co-existence of CAs leads to aquaculture improvement. Note that it is likely there is always some kind of fragmentation among collaborative arrangements, but the degree of fragmentation varies.

A low degree of fragmentation means that CAs have different goals and tasks, but are in synergy because together they cover what is needed for improving the sector. Due to the good communication, there is virtually no overlap in what the different arrangements do. If there is some overlap in goals and tasks, this does not have to result in significant problems when this is acknowledged by actors within the different arrangements. For this indicator, the assessor thus needs to determine whether and how the CAs are connected to each other in terms of content, goals and tasks, and if there are connections, are these connections conflictual or complementary? Documented evidence on connections and collaborations can be consulted, and interviews with, and observations of interactions between participants of the CAs are useful sources of information.

Sources:

- Reports, meeting summary, presentation, agenda on the collaborations among these CA on what topics or issued are discussed
- Interview participants who participated in more than one CA on the similar issues that are discussed, or joint-effort or solution among CAs
- Interview actors who do not participate in some (or all) of these CAs, what are their opinions toward the effectiveness, usefulness of these CAs, are they providing the similar solution, approach
- Expert's knowledge based on observation, interactions with participants when they discussed their experience from participating in these CAs, or the conflicts in information, directions, or similarity among these CAs

B. Orchestration

Orchestration refers to the degree to which collaborative arrangements are aligned in a way that creates an overall improvement pathway for the aquaculture industry. If there is a number of collaborative arrangements in a sector or within a country, but no attempt to coordinate them, then orchestration is assumed to be low. If there is evidence that there is an attempt to align or coordinate, the orchestration is seen as high. Such orchestration can be undertaken by state and private actors (such as industry associations), either independently or in collaboration.

| Score | Guidance |
|-------|--|
| 5 | There is an explicit attempt to coordinate all collaborative arrangements to synchronize and integrate goals, tasks, and activities. |
| 4 | Coordination between some of the collaborative arrangements is evident. |
| 3 | There is no coordination in place, but there is evidence of active deliberation on the need of better coordination between at least two collaborative arrangements . |
| 2 | There is no coordination evident. |
| 1 | There is no coordination evident while there is evidence of conflicts hindering functioning of at least one collaborative arrangement. |

Scoring guidance

Coherence between collaborative arrangements refers to the extent to which the co-existence of CAs leads to aquaculture improvement. Note that it is likely there is always some kind of fragmentation among collaborative arrangements, but the degree of fragmentation varies. A low degree of fragmentation means that CAs have different goals and tasks, but are in synergy because together they cover what is needed for improving the sector. Due to the good communication, there is virtually no overlap in what the different arrangements do. If there is some overlap in goals and tasks, this does not have to result in significant problems when this is acknowledged by actors within the different arrangements. For this indicator, the assessor thus needs to whether and how the CAs are connected to each other in terms of content, goals and tasks, and if there are connections, are these connections conflictual or complementary? Documented evidence on connections and collaborations can be consulted, and interviews with, and observations of interactions between participants of the CAs are useful sources of information.

Sources:

- Reports, meeting summary, presentation, agenda on the collaborations among these CA on what topics or issues are discussed
- Interview participants who participated in more than one CA on the similar issues that are discussed, or joint-effort or solution among CAs
- Interview actors who did not participate in some (or all) of these CAs, what are their opinions toward the effectiveness, usefulness of these CAs, are they providing the similar solution, approach
- Expert's knowledge based on observation, interactions with participants when they discussed their experience from participating in these CAs, or the conflicts in information, directions, or similarity among these CAs

Indicator 3.6 Coordination with state policy and legislation

The extent to which collaborative arrangements influence changes to the design and implementation of legislation is a measure of impact of the collaborative arrangements. This may occur by contributing to changes in norms that lead to participants advocating for legislative change. Also, a collaborative arrangement might create greater awareness of the importance to and methods for legal compliance.

The indicator consists of the following criteria:

- A. Change in legislation
- B. Change in compliance

A. Change in legislation

Change in legislation refers to state responses to deliberation with industry and/or civil society actors facilitated by collaborative arrangements. If a critical mass of actors is involved in collaborative arrangements, it is assumed that new norms are more likely to be developed that can be formulated into a position for advocating for legislative change. Legislative changes can have, or be likely to have, both positive or negative effects on the environment.

| Score | Guidance |
|-------|--|
| 5 | All collaborative arrangements have led to a higher level of involvement in deliberation over the effectiveness of legislation. As a result positive amendments have been made to legislation. |
| 4 | The majority of collaborative arrangements have led to a higher level of deliberation over the effectiveness of legislation. As a result positive amendments have been made to legislation. |
| 3 | The majority of collaborative arrangements have led to deliberation over the effectiveness of legislation. Amendments have been discussed by the state, but not translated into legislation. |
| 2 | A minority of collaborative arrangements have led to deliberation over the effectiveness of legislation. Amendments have been discussed by the state, but not translated into legislation. |
| 1 | None of the collaborative arrangements have led to deliberation over the effectiveness of legislation. Alternatively, collaborative arrangements have led to legislative amendments that have, or are likely to lead to negative impacts on the environment. |

Scoring guidance

This criterion focuses on the extent to which the CAs contribute to more support to legislative change, and whether deliberation in CAs leads to such change (e.g. new rules, amendments of regulations, change in legislation). Most likely, interviews with government or legal experts is the best source of information. Other sources for this are found in documentation like agendas, minutes or presentations to find whether information about law and regulations is shared and discussed.

Sources:

- Interview participants
- Interview governmental agencies responsible for legislation

B. Change in compliance

Change in compliance refers to improved understanding of legislation and the reasons for it, which assumingly leads to improved compliance, fostered by effective deliberation through collaborative arrangements. If understanding is improved, new norms for rule compliance can be established for an industry. Alternatively, a collaborative arrangement may lead to resistance to legal compliance—which might result in the law not followed leading to negative environmental outcomes, but can also lead to establishing improved private rules.

| Score | Guidance |
|-------|--|
| 5 | There is explicit evidence of widespread improvement in legal compliance as a result of interventions by collaborative arrangements. New norms for legal compliance have been established leading to the improved performance of environmental issues in the industry. |
| 4 | There is explicit evidence of improvement in legal compliance as a result of interventions by collaborative arrangements. Norms for legal compliance have been established leading to the improved performance of environmental issues in the industry. |
| 3 | There is explicit evidence of some improvement in legal compliance as a result of interventions by collaborative arrangements. Norms for legal compliance have been established leading to the improved performance of environmental issues in the industry. |
| 2 | There is no evidence of improvement in legal compliance as a result of interventions by collaborative arrangements. Norms for legal compliance have been established leading to the improved performance of environmental issues in the industry. |
| 1 | There is evidence that the collaborative arrangements reduces coverage of/compliance to public regulation. |

Scoring guidance

This criterion refers to the extent to which the CAs contribute to a better understanding of laws and regulations, and of the necessity of increasing compliance, to in turn, help improve legal compliance. Most likely, interviews with government or legal experts is the best source of information. Other sources for this is documentation like agendas, minutes or presentations to find whether information about law and regulations is shared and discussed.

Sources:

- Interview participants
- Interview governmental agencies responsible for legislation

Indicator 3.7 Attribution to change in codes and standards

The extent to which collaborative arrangements influence changes to the design and implementation of prescriptive codes and standards is a measure of impact of collaborative arrangements. A collaborative arrangement might lead to changes in norms that lead to participants advocating for the adoption of codes and standards, changes in emphasis on issue areas, or changes to coherence between available codes and standards. This may also occur by creating greater awareness of the importance to and methods for standard compliance.

The indicator consists of the following criteria:

- A. Change in scope
- B. Change in voluntary adoption

A. Change in scope

Change in scope refers to outcomes of deliberation over the issue areas covered by codes and standards. Better recognition of the importance of addressing main challenges can lead collaborative arrangements to advocate for change to voluntary codes and standards.

| Score | Guidance |
|-------|---|
| 5 | There is widespread and explicit evidence that, as a result of deliberation and advocacy by collaborative arrangements, the coverage of issues by codes and standards has improved. |
| 4 | There is explicit evidence that, as a result of interventions by collaborative arrangements, the coverage of issues by codes and standards has improved. |
| 3 | There is limited evidence that, as a result of interventions by collaborative arrangements, the coverage of issues by codes and standards has improved. |
| 2 | There is no evidence that, as a result of interventions by collaborative arrangements, the coverage of issues by codes and standards has improved. |
| 1 | There is evidence that the collaborative arrangements negatively affected the coverage of codes and standards. |

Scoring guidance

Change in scope is about the extent to which the CAs contribute to a revision of criteria of codes and standards, to be better aligned with key challenges and main issue areas in a country. The assessor can look into (recent) revisions of codes and standards, complemented with interviews with standards organizations or standards experts (e.g. from government, NGOs, industry, and/or academia).

Sources:

- Criteria of the standard
- Interview participants
- Interview standards organizations or standards experts
- Academic papers

B. Change in voluntary adoption

Change in voluntary adoption refers to deliberation over existing standards that results in improved adoption of these standards. It is assumed that, in the absence of strong legislation, standards provide a means of demonstrating improved performance. Collaborative arrangements can play an important role in improving participant understanding of codes and standards, which in turn can lead to a higher level of adoption.

| Score | Guidance |
|-------|--|
| 5 | There is explicit evidence that, as a result of interventions by collaborative arrangements, the voluntary adoption of codes and standards has increased, now including the full range of (dis)affected actors in the aquaculture industry. |
| 4 | There is explicit evidence that, as a result of interventions by collaborative arrangements, the voluntary adoption of codes and standards has increased, now including the majority of (dis)affected actors in the aquaculture industry. |
| 3 | There is limited evidence that the voluntary adoption of codes and standards has increased as a result of interventions by collaborative arrangements. |
| 2 | There is no evidence that the adoption of voluntary codes and standards has increased as a result of interventions by collaborative arrangements. |
| 1 | There is evidence that the prescriptive codes and standards has decreased the adoption of voluntary codes and standards as a result of interventions by collaborative arrangements leading to a perceived negative effect on the environmental outcomes. |

Scoring guidance

This criterion refers to the extent to which the CAs contribute to increasing the adoption rate of codes and standards. Sources are interviews with participants of the CAs and standards organizations or standards experts, complemented with documented information, e.g. on websites of standards, news articles, press releases.

Sources:

- Interview participants,
- Interview standards organizations or standards experts
- News article, press release, presentation about standard's compliance
- Academic papers

4. CAPABILITIES

Rationale

Governance capabilities refer to the abilities of actors (e.g. individuals and organizations) to observe complex problems, and to develop and employ strategies to deal with these problems—within conditions given by the institutional setting (Termeer et al, 2015, 2016; Termeer and Dewulf, 2014; Candell et al, 2016). Capability thinking builds on the idea that actors do not work towards solutions through blueprint approaches or “panaceas” (Ostrom, 2007). Actors need a certain degree of freedom to choose ways to define and deal with problems in ways they see fit and suit them best in light of their background, ambitions or context-specific position in a governance landscape (following Sen, 2005; Robeyns, 2005). This is especially true when problems are complex, and actors realize they need to develop adaptive strategies to ‘address’, ‘manage’, or ‘deal with’ problems, as opposed to be working from an instrumental rationality to find (technical) solutions (Head and Xiang, 2016).

The extent to which capabilities are well-developed by actors gives an indication of the overall potential for change in a country’s aquaculture industry. In this part of the assessment framework, focus is on the capabilities of actors who have a role in one or more of the other three dimensions. An actor is here defined as an organization constituted of structured interactions between individuals which have an interest in aquaculture governance, and share common features, like producer organizations bringing together farmers, and/or have a common goal/task, like a state agency responsible for a country’s environmental management. The unit of the assessment in this dimension is a single actor, in contrast to the analysis of collaborative arrangements (dimension 3) where the unit of assessment is an organized group of actors with different rights, interests and responsibilities.

A better understanding of actors’ capabilities allows for a more agency-oriented perspective and will contribute to the identification of gaps on the level of key actors, and to indicating their strengths in fostering responsible aquaculture governance.

Five capabilities are defined as indicators:

1. **Reflexivity:** the ability to be open to frame or redefine complex problems, identify problems, and develop new solutions.
2. **Agility:** the ability to adapt, referring to the repositioning of an actor in response to major and structural changes, for example shifts in government, changing market conditions, geo-political developments, environmental degradation, climate change impacts, etc.
3. **Innovation drive:** the ability to come up with new/smart interventions—ranging from products, processes to methods and approaches; and to be open to failure and disappointment.
4. **Rescaling:** the ability to move strategically between different scales of a given problem
5. **Responsiveness:** the ability to respond wisely to changing agendas and public demands.

Identification

To delineate the extent of assessment of governance capabilities, actors are to be prioritized in terms of relevance in their contribution to change in all issue areas, or in those most important for the country under assessment. Based on expert judgment, the potential positive contribution, and the potential problems in solving issues have been identified in the assessment of the other three governance dimensions. This identification will be guiding the selection of actors for the assessment. In selecting actors, focus will be on six single actors in total (preferably having an equal distribution between the actor groups: two state actors, two market players and two civil society organisation. The performance of these six actors is taken together to assess the overall capacity of key actors to contribute to responsible aquaculture governance in a country.

Selection is based on qualitative argumentation, taken into account who are key actors in a country’s aquaculture sector and whether they represent groups with different interests (state, market, civil society). In a first time assessment it is likely that emphasis is on actors already involved in a country’s aquaculture sector. This implies there will be a selection bias towards actors who (are expected to) have already developed some ability to foster change. These actors are likely to represent a specific subsample from the

overall range of actors involved, and it would thus be hard to draw inferences to determine the “average” level of governance capabilities in a country.

Yet other selection approaches, such as randomized sampling, would not provide information that is required to derive conclusions which serve the uses of the framework (as indicated in the [Introduction](#)). Also, comparison between countries is possible if the same approach to selecting subsamples is conducted. However, implications of any selection bias need to be recognized and accounted for. A well-argued justification is therefore imperative. Assessors need to give an explanation on why the selected actors contribute to getting a good insight in the governance capabilities in a country. This justification is to be included in column D of the ‘final selection’ section in the working sheet (see also scoring guidance below).

Example of final selection table (see Annex A - template Worksheet)

| # | Name | State, market or civil society | Justification | Source |
|---|------|--------------------------------|---------------|--------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |

Scoring guidance

If selection of actors proves to be difficult, for example because there is a range of actors whose role or importance is not clear, this identification step can be postponed and be taken up after the full assessment of the first three dimensions. Then, selection can be based on the extent of involvement of an actor in these dimensions, and the link to already identified gaps, using the following guidelines:

The rubrics outlined below can be used to justify which actors are included in the assessment, and which are excluded. Using this scoring guidance does reinforce the selection bias, prioritizing actors identified through their involvement in the other three dimensions. Assessors therefore need to realize that key actors can also be out of any legislative process, absent in implementation of codes and standards and/or excluded from collaborative arrangements.

| # | Name/description | State, market or civil society | Criteria A: Extent of involvement | Criteria B: Expected contribution | Justification for inclusion/exclusion |
|-----|------------------|--------------------------------|-----------------------------------|-----------------------------------|---------------------------------------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| ... | | | | | |

Guidelines to select actors, assessed against Criteria A (Extent of involvement).

| Score | Guidance |
|--------------|--|
| 5 | Of all (state/market/civil society) actors, the actor is mentioned most often when considering the link to identified gaps, and taking together all three governance dimensions |
| 4 | Of all (state/market/civil society) actors, the actor is mentioned most often when considering the link to identified gaps in two of the three governance dimensions, one of which is the collaborative arrangements |
| 3 | Of all (state/market/civil society) actors, the actor is mentioned most often, when considering the link to identified gaps in only the governance dimension of collaborative arrangements |
| 2 | Of all (state/market/civil society) actors, the actor is mentioned most often, when considering the link to identified gaps in either the governance dimension of legislation or the dimension of prescriptive codes and standards |
| 1 | Of all (state/market/civil society) actors, the actor may be mentioned, but is not the most mentioned in any of the governance dimensions |

Guidelines to select actors, assessed against Criteria B (Expectation of potential contribution to addressing/solving challenges).

| Score | Guidance |
|--------------|---|
| 5 | Actor is expected to have very strong positive influence on the level of success in addressing/solving major challenges |
| 4 | Actor is expected to have strong positive influence on the level of success in addressing/solving major challenges |
| 3 | Actor is expected to have modest positive influence on the level of success in addressing/solving major challenges |
| 2 | Actor is expected to have minor positive influence on the level of success in addressing/solving major challenges |
| 1 | Actor is expected to have no positive influence on the level of success in addressing/solving major challenges |

Indicator 4.1 Reflexivity

Reflexivity is the ability of an actor to be open to (re-) frame complex problems and develop new logics of action, or in other words, the ability to identify problems and solutions. The aquaculture sector represents a complex agro-food system (Béné, 2005) in which actors who are well-able to identify problems, will be more likely to also well-manage these problems. The capability of identification of problems and solutions refers to both the strategy developed by an actor, and the organizational setting that enables (or constrains) the enactment of these strategy. The problem/solution identification strategy assessed is the *enhanced reflexivity* of actors, that is, their ability to draw upon a diversity of opinions and views, and to develop new courses of actions (Termeer et al, 2015; Van Tatenhove, 2017). Furthermore, *procedures and the organizational structure* are to be designed in a way that supports activities which allow for discussion and exchange.

The indicator consists of the following criteria:

- A. Willingness to reflect
- B. Engagement with knowledgeable others
- C. Organization of problem/solution identification

A. Willingness to reflect

Willingness to reflect refers to the extent actors are able “to change their position on the basis of convincing reasons” (Mena and Palazzo, 2012), emphasizing the reflexive capacity of actors. If actors acknowledge differences in framing problems and solutions, they are more likely to design strategies that help to overcome (rather than ignore) difficulties related to frame diversity.

| Score | Guidance |
|-------|---|
| 5 | All actors show openness and clear willingness to (re) interpret experiences and meanings, high degree of tolerance towards ambiguity and overall commitment to formulate common goals and definitions. (Very strong ability) |
| 4 | Majority of actors show openness to addressing (re) interpret experiences and meanings, and committed to formulate common goals and definitions. (Strong ability) |
| 3 | Majority of actors show openness to (re)formulate goals and definitions. (Moderate ability) |
| 2 | Majority of actors take goal and definitions for granted, they show no effort to (re)formulate goals. (Weak ability) |
| 1 | No goals and definitions defined by majority of actors. (No ability) |

Scoring guidance

Willingness to reflect consists of three parts:

- 1) Are actors open and willing to reinterpret experiences and meanings?
- 2) Do they have a high degree of tolerance towards ambiguity?
- 3) Do they commit to formulate common goals and definitions?

For the three questions, evidence relies on expert judgment, that is experience of the assessor or other actors when dealing with the six identified actors. This can be complemented with information from an organization’s website, news articles, academic articles, meeting agendas and reports.

Most likely, information will have to be obtained through interviews. The six identified actors can be asked about the way they define and prioritize environmental issues, and how they plan or develop strategy or action plan to create common goals and definitions with other actors. Since actors might be biased towards their own reflective behaviour, an interview with other actors and/or observations can shed a different light on the way the actor acts and reflects.

Sources:

- Meeting agenda, report, summary on how solutions, policies, projects are developed to address certain issues
- Observing of how actor addressed, presented their view, opinion, solution on certain issues
- Expert judgment (based on for example interaction with actors, observation during meetings)
- Interview with actors themselves, or other actors on their opinions and experience from working with these organization, such as success story, effective policy, solution, or conflicts, disagreements, difficulties
- Websites of the actors
- Academic articles
- News articles, online news, press release on problem identification and how issues are addressed

B. Engagement with knowledgeable others

Engagement with knowledgeable others also focuses on the extent to which actors are able “to change their position on the basis of convincing reasons” (Mena and Palazzo, 2012), highlighting the capacity of actors to seek for new information and arguments to strengthen their own understanding of problems. If actors acknowledge that others have different kind of knowledge, experiences and interests, it is more likely they come to a more robust and realistic problem definition.

| Score | Guidance |
|-------|--|
| 5 | All actors interact with a considerable number of knowledgeable others, representing a high level of diversity in terms of expertise (scientific/practical) and interests. (Very strong ability) |
| 4 | Majority of actors interact with a limited number of knowledgeable others, representing a medium to high level of diversity in terms of expertise (scientific/practical) and interests. (Strong ability) |
| 3 | Majority of actors interact with a considerable number of knowledgeable others, representing a low level of diversity in terms of expertise (scientific/practical) and interests. (Moderate ability) |
| 2 | Majority of actors interact with a limited number of knowledgeable others, representing a low level of diversity in terms of expertise (scientific/practical) and interests. (Weak ability) |
| 1 | Majority of actors do not interact with knowledgeable others. (No ability) |

Scoring guidance

Engagement with knowledgeable others can be scored by desk study of (online) information about the actors. Interviews can help to get additional information. On the websites of the actors, collaborations/partnerships can be listed, also news articles or academic articles. In the assessment the assessor has to reconcile whether the interaction of the actors with others is deemed diverse (high score) or do the actors only actively interact with the same type of actors with similar interests (low score)? If there is no or limited information available, an interview can be requested.

Example sources:

- Press release, report, meeting’s agenda, seminar or workshop’s invitation, websites of the actors
- Academic articles
- News articles, online news about actor’s activities and engagement with others
- Interview with actors on how they interact or share their knowledge, experience with others, whether they interact with all types of actor
- Interview with other actors on their experience of working with these actors, is there knowledge sharing among them, or disagreement, or one-way learning
- Meeting’s agenda, report, summary on how solutions, policies, projects are developed to address to certain issues
- Observing of how actor addressed, presented certain their view, opinion, solution on certain issues during the meeting, presentation, seminar, collaborative arrangements

C. Organization of problem/solution identification

Organization of problem/solution identification refers to the organizational setting that enables the enactment of strategies to identify problems and solutions. The extent to which actors include staff and/or members affects their input on defining problems, setting agendas, formulating action plans, and therefore influencing outcomes (Rantala, 2012; Eshuis and Edwards, 2013). It is assumed that the more attention given to substantive input by staff/members, the more legitimacy the problem definitions and suggested solutions to issue areas will ultimately have.

| Score | Guidance |
|-------|--|
| 5 | All actors have information and deliberation processes structurally embedded and enacted actively, and include virtually all staff/members to participate in meetings and events (i.e. special working groups) set up to address new/difficult/controversial issues. (Very strong ability) |
| 4 | Majority of actors have information and deliberation processes embedded and enacted, and include staff/members to large extent, but this is mostly not structurally embedded/enacted. (Strong ability) |
| 3 | Majority of actors have some degree of organization of information and deliberation processes, there are no obvious barriers for staff/members to participate in meetings and events. (Modest ability) |
| 2 | Majority of actors have flawed organization of information and deliberation processes, staff/members experience barriers to participate in meetings and events. (Weak ability) |
| 1 | Majority of actors have no or contra-productive organization of information and deliberation processes, staff/members experience structural barriers to participate in meetings and events (No ability). |

Scoring guidance

This indicator addresses two questions:

1) To what extent does the actor have information and deliberation processes structurally embedded and enacted?

- Information can possibly be found on the actors' websites, in a section related to their organizational set up ("who are we"/"about us") or in other documentation (annual reports, leaflets, brochures). If not, interviews can be conducted with the actors.

2) To what extent does the actor engage staff members to participate in meetings and events?

- This is about how the organisation includes staff members in meetings about problem identification and finding solutions. Scoring can be assessed by desk study, and by interviews the six actors.

Example sources:

- Expert judgment (based on for example interaction with actors, observation of behaviour in meetings)
- Websites of the actors
- Interview with actors on their approach or selection of staff to participate in meeting and whether they send the same staff to every meeting, or sending different staff to different meeting (and reasons supporting the answer)
- Agenda, summary, report, and participant list of the meeting. This can be found online, via actor's website (news section, press release section)

Indicator 4.2 Agility

Agility refers to the ability of an actor to flexibly adapt to changing economic and socio-political trends under uncertain circumstances. The agility of these actors (or ability to adapt) refers to the (re-) positioning of an actor in response to major and structural changes, for example shifts in government, changing market conditions, geo-political developments, environmental degradation, climate change impacts, etcetera.

Adaptive management literature puts much emphasis on learning as key component of adaptive systems and strategies (Carlsson and Berkes, 2005; Armitage et al, 2008). Learning within organizations can be encouraged by opening up opportunities for transferring experiences into explicit lessons, so-called "learning-by-doing", and by staff training/education (Armitage et al, 2008). Also, learning is enhanced if an organizational set-up enables signalling of risks and new opportunities, for example embedding monitoring and evaluation (M&E)-related activities in the organization (Ibid.; Termeer, 2015, 2016; Candel et al, 2015).

The indicator consists of the following criteria:

- A. Learning-by-doing
- B. Training of staff
- C. Resource allocation

A. Learning-by-doing

Learning-by-doing emphasises the degree to which actors have a strong practical orientation: working on the realization of goals and solutions for identified problems. The focus is on whether and to what extent long and mid-term goals are translated into a concrete and comprehensive action plan.

| Score | Guidance |
|-------|---|
| 5 | All actors have full attention to discuss practical issues, and long- and mid-term goals are translated into a concrete and comprehensive action plan. |
| 4 | Majority of actors have attention to discuss practical issues, and long- and mid-term goals as well as action points are formulated |
| 3 | Majority of actors have somewhat restricted discussion on practical issues, and long- and/or mid-term goals are framed yet no action points/concrete activities are formulated |
| 2 | Majority of actors have restricted discussion on practical issues, and only general long-term goals are framed neither mid-term goals or action points/concrete activities are formulated |
| 1 | Majority of actors provide no room to discuss practical issues, and long-term goals, if formulated, are vague. |

Scoring guidance

Learning-by-doing addresses two questions:

- 1) Do the actors discuss practical issues?
 - Evidence relies on desk study through topics, issues that are discussed by the actors. This can be complemented with information from an organization's website, meeting minutes/notes, annual reports, news articles or other documentation in which projects or practical results are presented. or academic articles. Information should be obtained through interviews for insight opinion/perspective, with the additional of outside actors who are not part of collaborative arrangements, who may or may not have experience of working or interacting with the actor.
- 2) Are mid-term or long-term goals translated into an action plan?
 - Assess whether an action plan is available, or assess policies, directions, activities on the extent to which goals are translated into action. Also, in interviews actors can be asked about the way they operationalize their goals.

Sources:

- Expert judgment (based on for example interaction with actors, observation of behaviour in meetings)
- Websites of the actors
- (Annual) reports and other documentation
- Academic articles
- News articles
- Interview with the six identified actors
- Interview with other actors about their experience on interacting, working, or collaborating with the actors. If there is any barrier, conflict, complication, success study.

B. Training of staff

Training of staff refers to the extent actors involve their staff and members, meet their needs and develop their adaptive skills to be(come) well-able to work day-to-day and face challenges (Senge, 2006).

| Score | Guidance |
|-------|---|
| 5 | All actors have virtually all staff/members regularly participating in training activities, which are tailored to their specific personal development (Very strong ability) |
| 4 | The majority of actors have most staff/members participating in training activities, yet not always tailored to their specific personal development (Strong ability) |
| 3 | The majority of actors have no obvious barriers for staff/members to participate in training activities. (Modest ability) |
| 2 | Staff/members of the majority of actors experience barriers to participate in training activities. (Weak ability) |
| 1 | Staff/members of the majority of actors experience structural barriers to participate in training activities (No ability). |

Scoring guidance

This criterion is about the provisioning of proper training to staff/members. Desk study can be first conducted on what kind of training courses have been provided or participated by staff. Follow up interviews can provide additional information or confirmation that staff have participated in sufficient numbers of training courses.

Sources:

- List of training courses that are provided by organizations to their own staff, can be found online, meeting agenda, news, annual report
- List of training courses provided by other organizations to the actor's staff, can be found online, organization's website, news section, press release, annual report
- List of participants who attended or participated in specific skills training course, can be found online, meeting agenda, press release, annual report
- Interview with the actors, on what kind of trainings are attended by their staff, if there is any limitation.

C. Resource allocation

Resource allocation refers to the organizational setting enabling the enactment of adaptive strategies and training of staff/members. The degree to which an organization is providing an enabling environment is captured in terms of allocation of human, financial and material resources.

| Score | Guidance |
|-------|--|
| 5 | All actors have considerable and structural allocation of resources, both human and financial/material, to M&E-related activities |
| 4 | The majority of actors have considerable allocation of resources, both human and financial/material, to M&E-related activities |
| 3 | The majority of actors have some allocation of resources, either both human and financial/material, or only human or financial/material, to M&E-related activities |
| 2 | The majority of actors have limited allocation of resources, either only human or only financial/material, to M&E-related activities |
| 1 | The majority of actors have no allocation of resources to M&E-related activities |

Scoring guidance

This criterion addresses the allocation of resources to M&E-related activities, and if there is, whether this allocation is structural and considerable, and focused on human, financial and/or material resources?

Note that the M&E-related activities can range from feedback sessions (individual or group), final project reports, progress reports, mid-term evaluations, field visits, client/stakeholder surveys, external reviews, to impact evaluations. The frequency, tool and purpose depends on the nature and size of the organization, and so is the allocation of resources.

In the scoring of this indicator, the assessor should therefore pay attention to the characteristics of the six actors under assessment, and what can reasonably be expected from them. For example, M&E-related activities of a governmental agency can be expected to be more institutionalized than those of a small-holder organization. If an annual report is available, this can be checked for an account of an actor's M&E activities and allocated human and financial resources. Most likely, the scoring of this indicator depends on information gathered in an interview with the actors under assessment.

Sources:

- Interview with actors
- Websites or report of the actors on its governance structure, if there is a department or representative assigned for this
- (Annual) reports and other documentation
- News article, online news about actor's monitoring and evaluation activities, through which method or by whom

Indicator 4.3 Innovation drive

Innovation drive refers to the ability of an actor to come up with (new/novel) interventions—ranging from products, processes to methods and approaches. Global aquaculture is characterized by (fast) transition (Belton and Bush, 2014). Expansion and intensification demand for innovation and smart interventions to unblock deadlocks (Diana et al, 2013). Innovation drive refers to the ability to take chances, and to be open to failure and disappointment. Intervention strategies should aim for motivating people to take risks (Termeer et al, 2015). This is often best set by example, both through trial projects and leadership. Next to intervention strategies, this indicator includes the organizational setting that enables (or constrains) the enactment of these strategies—although enabling creativity is not easily organized in procedures and policy. An organization can, however, provide room for creativity by allocating people, time and resources to innovate.

The indicator consists of the following criteria:

- A. Initiative
- B. Lead by example
- C. Resource allocation

A. Initiative

Initiative refers to the ability to translate high-level aspirations and creative ideas into something tangible, such as a product, service or approach, often first tested out through pilot projects.

| Score | Guidance |
|-------|--|
| 5 | All actors show strong drive to innovate by initiating pilot projects, and testing out new measures or ideas. (Very strong ability) |
| 4 | The majority of actors are among the first partners/collaborators in pilot projects and testing out new measures or ideas. (Strong ability) |
| 3 | The majority of actors participate in or follow up on pilot projects and testing out new measures or ideas, only if results are very promising and uncertainties are low. (Modest ability) |
| 2 | The majority of actors can be characterized as a laggard in follow-up on pilot projects and in testing out new measures or ideas. (Weak ability) |
| 1 | The majority of actors do not show any interest or willingness to innovate. (No ability) |

Scoring guidance

This criterion focuses on whether the actors under assessment show initiative to implement new ideas. Websites of the actors and news articles can give information about new and ongoing projects. If needed, actors can also be interviewed about their innovation projects.

Sources:

- Websites of the actors, online news articles about new and ongoing projects
- Observation during the CA meeting, workshop, event on what kind of information, knowledge is presented
- Interview the actor on their strategy, objective related to initiative or development of new ideas

B. Lead by example

Lead by example highlights the ability to encourage as well as to manage innovations, and to create trust for others to express new ideas.

| Score | Guidance |
|-------|--|
| 5 | All actors are characterized by individuals with leading roles and responsibilities throughout the organization who provide strong vision on innovation and support new ideas in word and deed. (Very strong ability) |
| 4 | The majority of actors have some individuals with leading roles and responsibilities in organization who provide a vision on innovation and generally support new ideas, and facilitate interventions occasionally. (Strong ability) |
| 3 | The majority of actors have some individuals with leading roles and responsibilities in organization in organization who generally support new ideas. (Modest ability) |
| 2 | The majority of actors have some individuals in organization who wish to work on new ideas. (Weak ability) |
| 1 | The majority of actors have no individuals in the organization who lead innovation by example. (No ability) |

Scoring guidance

This criterion addresses the extent to which the actors under assessment have a vision about needed changes and innovations in aquaculture and can motivate others and to help others to better deal with the sector's challenges. Information to score this criterion relies on desk study and interview of the actors on the innovation that they are involved with

Sources:

- News article, online news, press release on the collaboration among actors on innovation, developing of new farming techniques
- Report on innovation activities, funded, collaborate with other organizations
- Interview actor on their innovation activities, if they have learned from others, or collaborate with others, or share their innovation, knowledge with others

C. Resource allocation

Resource allocation refers to the organizational setting enables the enactment of intervention strategies and allows individuals within an organization to lead by example. The degree to which an organization is providing an enabling environment is captured in terms of allocation of human, financial and material resources.

| Score | Guidance |
|-------|---|
| 5 | All actors have considerable and structural allocation of resources, both human and financial/material, to develop innovations |
| 4 | The majority of actors have considerable allocation of resources, both human and financial/material, to develop innovations |
| 3 | The majority of actors have some allocation of resources, either both human and financial/material, or only human or financial/material, to develop innovations |
| 2 | The majority of actors have limited allocation of resources, either only human or only financial/material, to develop innovations |
| 1 | The majority of actors have no allocation of resources to develop innovations |

Scoring guidance

This indicator addresses the allocation of resources to R&D-related activities, and if there is, whether this allocation structural and considerable, and focused on human, financial and/or material resources? R&D-related activities can include tests and pilot projects on small- and large-scale. It is important to note that the extent to which an actor focuses on R&D-related activities and the extent to which resources can be allocated, is dependent on the nature and size of the organization. In the scoring of this indicator, the assessor should pay attention to the characteristics of the six actors under assessment, and what can reasonably be expected from them.

For example, a big market party can be expected to allocate more time and money to R&D activities, than smaller organizations such as (local) NGOs. If an annual report is available, this can be checked for an account of an actor's R&D-related activities, and allocated human and financial resources (note that this information might be confidential). Most likely, the scoring of this indicator depends on information gathered in an interview with the actors under assessment.

Sources:

- Interview with actors if there is any limitations on resources
- Structure of the organization from websites, report, press release
- (Annual) reports and other documentation such as booklet or magazine
- News article on new development projects, collaborations with other organization on R&D
- Observation during CA events, new projects, knowledge are usually presented there

Indicator 4.4 Rescaling

Rescaling refers the ability of an actor to move strategically between different scales of a given problem. In dealing with scale-sensitivity, actors have to have the ability to identify mismatches as well as the wide range of public and private actors operating at different levels (Termeer and Dewulf, 2014). The ability to 'rescale' is about establishing cross-scale connections, and the extent to which actors can reallocate roles and responsibilities between different levels. Aquaculture is a 'scale-sensitive' domain, as the different issue areas show cross-scale impacts, so mismatches occur between the level at which an issue is observed and the governance level at which it is dealt with (McDaniels et al, 2005; Anh et al., 2011).

Also, knowledge, financial and technical means to resolve issues are not always brought in at the right level. For example, top-down approaches do not always work for contributing to sustainable change at the farm level, especially for small-scale farmers in the Global South who rely much on local networks (Ha, 2012). Activities by (inter-)national actors are likely to become more relevant, efficient and effective if they are well-able to connect to the local level.

The indicator consists of the following criteria:

- A. Scale-sensitivity
- B. Lead in (re-)allocating tasks and/or roles
- C. Multi-level organization

A. Scale-sensitivity

Scale-sensitivity emphasises the ability to recognize mismatches between the level at which a problem occurs and at which it is to be addressed. This includes being well-aware of the wide range of public and private actors who operate at different levels includes Termeer and Dewulf (2014)

| Score | Guidance |
|-------|---|
| 5 | All actors have full attention to (mis-)matches between the scale at which issues occur, and at which these are addressed/governed. Actors have an excellent view of the diverse set of other actors involved, including those from state, market (horizontally), and civil society, and those at the local to global level (vertically). (Very strong ability) |
| 4 | The majority of actors have attention to (mis-)matches between scales. Actors have generally a good view of the diverse set of other actors involved, horizontally and vertically. (Strong ability) |
| 3 | The majority of actors have somewhat restricted attention to (mis-)matches between scales is. Actors have generally a reasonable view of the diverse set of other actors involved, horizontally and vertically. (Modest ability) |
| 2 | The majority of actors have restricted attention to (mis-)matches between scales. Actors have generally a limited view of the diverse set of other actors involved, horizontally and vertically. (Weak ability) |
| 1 | The majority of actors have neither attention to (mis-)matches between scales, nor a view of the diverse set of other actors involved, horizontally and vertically. (No ability) |

Scoring guidance

Scale-sensitivity refers to the extent to which the actors under assessment realise that there is an issue of scales for different problems, and this needs to be dealt with by a proper scale of governance such as local or national level. Actors need to realise that there is complexity in addressing the issues, and this can be assisted through the collaborations among broad set of actors, with different perspectives or expertise. If the actors are involved in one of the collaborative arrangements assessed in dimension 3, information about their involvement can be used to assess this criterion. Information from an organization's website, news articles or academic articles about the actors' partnerships is also informative. If needed, information can be obtained through interviews.

Sources:

- Expert judgment (based on for example interaction with actors, observation of behaviour in meetings)
- (Annual) reports and other documentation about their activities
- Academic articles, news article on how these actors presented or dealt with the aspects different scales of problems
- Interview with actors
- Interview with "third parties" or other actors on how (general or other) actors acknowledge or deal with the aspect of scales

B. Lead in (re-)allocating tasks and/or roles

Lead in (re-)allocating tasks and/or roles refers to the ability of actors to resolve mismatches, for example by decoupling the problem from a certain level, and moving responsibilities either within their own organization or by creating alliances.

| Score | Guidance |
|-------|--|
| 5 | All actors are widely recognized leaders or important (co-)coordinators, providing strong vision on the governance level(s) at which issues should be addressed and having full mandate/support from other actors to (re-)allocate tasks and/or roles. (Very strong ability) |
| 4 | The majority of actors have a (co-)coordinating role, contributing to developing vision on the governance level(s) at which issues should be addressed, and having general support from other actors for this position. (Strong ability) |
| 3 | The majority of actors are among the coordinating actors, but merely active in maintaining the status quo of the governance level(s) at which issues is/are addressed, having general support for this position. (Modest ability) |
| 2 | The majority of actors are merely active in maintaining the status quo of the governance level(s) at which issues is/are addressed, experiencing limited support. (Weak ability) |
| 1 | The majority of actors have no opportunity to (re-)allocate tasks and/or roles. (No ability) |

Scoring guidance

This criterion highlights the leading role of the actors under assessment. The assessor might find evidence of a high level of influence of the actors by looking at the identification phase of dimension 4, or at the involvement of the actors in the collaborative arrangements (dimension 3). In interviews, questions can be linked to the previous criterion (4.3A) by probing questions on who is leading and coordinating partnerships.

Sources:

- Expert judgment (based on for example interaction with actors, observation of behaviour in meetings)
- Websites of the actors
- (Annual) reports and other documentation
- Academic articles
- News articles, press release on how multiple organizations address, identify and response to problem together
- Interview with actors
- Observation of how actors interact with each other, how issues are discussed, how problem is identified during the meetings, collaborative arrangements

C. Multi-level organization

Multi-level organization refers to the extent actors organize their activities with attention to scale interactions and differences. If actors have a multi-level organization, with facilities such as regional and local offices next to their headquarter, and a wider geographical outreach, it is more likely that strategies enhancing their scale-sensitivity are well-enacted.

| Score | Guidance |
|-------|--|
| 5 | All actors organize activities with respect to multiple levels, geographical outreach (e.g. offices, key activities) covers all production regions. |
| 4 | The majority of actors organize activities with respect to multiple levels, geographical outreach covers not all but the main production regions. |
| 3 | The majority of actors have an organizational set-up that allows to some extent for geographical outreach, covering not all but the main production regions. |
| 2 | The majority of actors have an organizational set-up that allows to a limited extent for geographical outreach, covering some production regions. |
| 1 | The majority of actors have an organizational set-up that does not allow for geographical outreach (i.e. one office and virtually no outreach activities). |

Scoring guidance

Information needed to assess this indicator can be found by desk study or by conducting interviews. On the organization's website, news articles, and other documents evidence could be found on their geographical outreach: so whether an actor has a different offices in several locations in a country, or has projects throughout the country.

It can be assumed that the governmental actors selected for the assessment are anchored in a multi-level organization. While for market actors, this can be different, although a company does not have to be a multi-level organization in itself, but can be connected to different levels through branch/member associations. Important to note is that geographical outreach should cover main aquaculture production regions in the country. If the information is not available in online sources, actors can be interviewed.

Sources:

- Structure of the organization via websites, report, press release, news articles
- Interview with actors

Indicator 4.5 Responsiveness

Responsiveness refers to the ability of an actor to respond wisely to (changing) demands and agendas of others (Termeer et al, 2015). To become and stay connected, actors have to be able to get information from others as well as to bring their own message across. Responsiveness is a capability which is about accessing and using meaningful information, and targeting and responding to relevant audiences in appropriate ways—relying to a large extent on whether communication activities are well-anchored and supported in the organization.

The indicator consists of the following criteria:

- A. Reactive communication
- B. Proactive communication
- C. Resource allocation

A. Reactive communication

Reactive communication refers to the way the actors deal with information that is directed toward them and focuses on the ability of actors to access and use communication means which helps them to bring their message across.

| Score | Guidance |
|-------|--|
| 5 | All actors have excellent overview of a wide variety of media channels where news, claims and complaints relevant for its organization are disseminated. (Very strong ability) |
| 4 | The majority of actors have good overview of the main media channels where news, claims and complaints relevant for its organization are disseminated. (Strong ability) |
| 3 | The majority of actors have some overview of the main media channels where news, claims and complaints relevant for its organization are disseminated. (Modest ability) |
| 2 | The majority of actors have limited overview of the main media channels where news, claims and complaints relevant for its organization are disseminated. (Weak ability) |
| 1 | The majority of actors have no overview of the main media channels where news, claims and complaints relevant for its organization are disseminated. (No ability) |

Scoring guidance

If an actor has a communication department or a secretariat, it is likely that incoming information will be received. An organization's website and interviews with the actors will provide information about the degree to which the actors respond to news and complaints about their organization. Also, news articles about the actors can give complementary information.

Sources:

- Websites of the actors (information about communication department, secretariat)
- Interview with actors
- News articles, press release on how actor response to complaint, criticism

B. Proactive communication

Proactive communication refers to the ability of actors to acknowledge the variety of audiences, target the information they want to bring across, and be receptive to feedback. In other words, proactive communication focuses on the way the actors send out their information, news and how they communicate with their target groups.

| Score | Guidance |
|-------|---|
| 5 | All actors have excellent insight in the broad range of target audiences, are particularly sensitive to their point of interest, and work actively to facilitate feedback/two-way communication. Actors pay specific attention to overcome possible barriers to convey messages (such as language or limited access to media channels). (Very strong ability) |
| 4 | The majority of actors have good insight in the broad range of main target audiences, are sensitive to their point of interest, and work to facilitate feedback/two-way communication. (Strong ability) |
| 3 | The majority of actors have some insights in their main target audiences, communication activities are mostly one-way ("sender-receiver" approach). (Modest ability) |
| 2 | The majority of actors have limited insights in their main target audience, and no clear way of communicating with this audience. (Weak ability) |
| 1 | The majority of actors have no insight in their target audience. (No ability) |

Scoring guidance

The actors' websites and documentations are good a starting point to assess this criterion, including social media channels, if available. The assessor should look into the extent to which the actors are able to well-connect to their target audiences (for example, overcoming language barriers, allowing for two-way communication as in (positive) response to feedback.

Sources:

- Websites of the actors
- Social media channels
- News article, press release in communicating actor's objective, activities with audience
- Other documentation from the actors such as booklet, leaflets, brochures, reports, magazine by association, farmer's network
- Interview with actors on their media channels, how they reach out or communicate with audience, through which methods

C. Resource allocation

Resource allocation refers to the organizational setting enabling the enactment of a diverse set of communication strategies and provide room to communicate proactively to target audiences. The degree to which an organization is providing an enabling environment is captured in terms of allocation of human, financial and material resources.

| Score | Guidance |
|-------|--|
| 5 | All actors have considerable and structural allocation of resources, both human and financial/material, to communication activities |
| 4 | The majority of actors have considerable allocation of resources, both human and financial/material, to communication activities |
| 3 | The majority of actors have some allocation of resources, either both human and financial/material, or only human or financial/material, to communication activities |
| 2 | The majority of actors have limited allocation of resources, either only human or only financial/material, to communication activities |
| 1 | The majority of actors have no allocation of resources to communication activities |

Scoring guidance

This indicator addresses the allocation of resources to communication activities, and if there is, whether this allocation structural and considerable, and focused on human, financial and/or material resources? It is important to note that the extent to which an actor can engage in communication and the extent to which resources can be allocated to communication activities, is dependent on the nature and size of the organization.

In the scoring of this indicator, the assessor should pay attention to the characteristics of the six actors under assessment. For example, communication activities of a big (international) NGO can be expected to more substantial than those of a small or local NGO. If annual report is available, this can be checked for an account of an actor's communication activities (note that this might not be available information due to confidentiality). Most likely, the scoring of this indicator depends on information gathered in an interview with the actors under assessment.

Sources:

- Interview with actors on how they communicate, conduct their communication activities with others, and limitations on resources (if there is any)
- (Annual) reports and other documentation on communication activities
- Press release, online news or social media post promoting their activities or organization
- Structure of the organization (from report, website) if there is specific representative, or department responsible for this.

GLOSSARY OF TERMS

Actor - an organization constituted of structured interactions between individuals which have an interest in aquaculture governance, and share common features, like producer organizations bringing together farmers, and/or have a common goal/task, like a state agency responsible for a country's environmental management.

Agility - the ability of an actor to flexibly adapt to changing economic and socio-political trends under uncertain circumstances

Appropriateness – a measure of the suitability of rules, and associated levels and actors of application, in providing the highest possible probability of resolving an issue area.

Collaborative arrangement - an organized group of actors with different rights, interests and responsibilities, but who share, to a large extent, the same policy objectives (Van Tatenhove et al, 2000). Such an arrangement exists between public and private actors, who together deliberate, engage in processes of joint data collection, information exchange, coordinated action that underpin legislation and code/standard prescription (Warren, 1996; Healey, 1998; Fung & Wright, 2001).

Compliance - fulfilment by a party of its obligations under a convention or protocol (UNFCCC 2010).

Coordinated action - refers to any activity taken by actors involved in collaborative arrangements in response to information and deliberation.

Coverage – a measure of the degree to which a rule or set of rules includes actors, production systems and environments deemed necessary to resolve an issue area.

Credibility – a measure of the perception and assumption that the operations of an actor or agent are trustworthy, responsible, desirable and appropriate.

Data, coverage of data - a measure of the extent to which data is adequate to assess a particular issue area, including the percentage and types of production units to which the information is applicable.

Data, precision of data – a measure of the depth of knowledge presented, given the particular issue area which is under assessment.

Data, salience of data - a measure of the (relative) importance of data needed to adequately assess a particular issue area.

Deliberation - refers to processes of reflecting on information to come to decisions that resolve problems.

Dis-affected actors / representative inclusion - involvement of those groups (dis-)affected by the aquaculture industry in the process of the design and renewal of the standards (Mena and Palazzo, 2012), e.g. producers, processors, state regulators, NGOs.

Effectuation - The implementation and enactment of a governance arrangement through procedures and systems for implementation, leading to certain results including learning.

Experts - experts stem from a wide range of disciplines and geographical areas, and are scientifically oriented.

Governance - the range of social processes and practices involved “in solving societal problems and creating societal opportunities through interactions among civil, public and private actors” (Kooiman et al. 2005, p. 17).

Governance capabilities - the ability of an actor to observe such complex problems, to (re)act in a suited way, as well as the ability of the governance system to provide enabling conditions for this observing and acting (Termeer et al, 2013; Termeer and Dewulf, 2014); made up of Identification of problems and solutions , agility, rescaling, responsiveness, innovation drive.

Governance dimensions - governance dimensions relevant for steering towards responsible/sustainable aquaculture in a country, i.e. 1. Legislation; 2. Prescriptive codes and standards; 3. Collaborative arrangements; 4. Capabilities.

Inclusiveness - the extent to which experts from research and practice are involved in informational processes. Wider inclusion in terms of quantity and diversity is more likely to enable rigorous processes of collecting, analysing and exchanging data and information. Inclusiveness also refers to the possibilities for both involved experts and outsiders to provide feedback and are able to follow up on findings.

Informational processes - refer to the collection, collation and reporting of ideas, data and information that supports coordinated action to resolve problems (Fung and Wright, 2001).

Innovation drive - refers to the degree to which learning and innovation processes are coherently structured.

International coherence - measures the degree to which a country has developed their legislation in isolation or in alignment with international law, agreements and/or treaties.

Issue areas (of Seafood Watch) - effluent; habitat; chemical use; feed; escapes; disease, pathogen and parasite interaction; source of stock; predator and wildlife mortalities; escape of secondary species.

Knowledgeable others - e.g. scientists, experts, farmers.

Legitimacy - a measure of the acceptance of shared rule by a community as appropriate and justified given shared recognition of the necessity to resolve an issue area.

Multi-level organization - the extent actors organize their activities with attention to scale interactions and differences (Termeer & DeWulf, 2014).

Performance of legislation - refers to the level of authority of a government and the overall degree of transparency of the legislative process in a country.

Precautionary - refers to taking preventative action before there is complete scientific proof of a risk. This implies that action should not be delayed simply because full scientific evidence is lacking.

Prescriptive codes and standards - are commonly developed by civil society and/or industry either in the absence of state regulation and/or enforcement of regulation, or where regulation holds the potential to undermine good industry practice (Vandergeest 2007; Ponte et al. 2011); made up of structure, legitimacy, interaction.

Identification of problems and solutions - the ability of actors to actively seek, both formally and informally, definitions of problems and solutions, including its ability to draw on the expertise of knowledgeable others to define problems and solutions.

Rescaling - the ability of an actor to establish relationships with others at different governance levels and reallocate responsibilities to resolve problems.

Responsibility - is a measure of the suitability of rules, and associated levels and actors of application, in providing the highest possible probability of resolving an issue area.

Responsiveness - refers to the extent to which communication is organised different target groups.

Reflexivity of actors - their ability to draw upon a diversity in opinions and views, and to develop new courses of actions (Termeer et al, 2013; Van Tatenhove, 2017).

Scale-sensitivity - "the capability to observe and address cross-scale and cross-level issues" (Termeer and DeWulf, 2014:39).

Scope of legislation in a country - is determined by the degree of explicit relevance to the aquaculture industry and the coverage of the legislation with respect to the Seafood Watch issue areas.

Scope of law and regulation - refers to the extent of technical alignment with the environmental issue areas of Seafood Watch.

(Social) learning - 'a process of iterative reflection that occurs when we share our experiences, ideas and environments with others' (Keen et al., 2005).

Transparency - a measure of the extent to which actions, plans and processes are open for scrutiny in order to hold responsible/involved actors accountable.

Upwards convergence - refers to the alignment of state legislation to *global* treaties and/or agreements.

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ANNEX A: TEMPLATE WORKSHEET

The template worksheet is available as a separate Excel document.

ANNEX B: TEMPLATE REPORT

The template report is available as a separate Word document.

ANNEX C: INTERVIEW GUIDE

General points for the purpose of qualitative interviewing in this assessment:

- Interview questions do not relate one-to-one to indicators, rather the interviewee is invited to tell their own story in their own words. Interviewees are selected because of their expertise, considered to have valuable information and insights which can help the assessor to assess several indicators. The assessor needs to analyse the data, and through triangulation with data from other sources (other interviews, documentation, and possibly observation) will be able to score the indicators.
- The interview guide is not a survey, it is a topic list that serves as a prompt. For each interview, the assessor should consider which questions - and in what sequence - have to be addressed, because the interviewee has probably limited time, so it is likely not all questions can be answered. In tailoring the topic list for an interview, both the expertise of the interviewee and the assessor's need for (more) data to assess an indicator are taken into account. It is assumed that the assessor understands the possible biases and limitations of interviews as a data collection technique. The assessor can lower the quality score of an indicator if an interview is too much influenced by specific values affecting the scoring of this indicator. However, expert judgment based on triangulation should help to avoid this.
- For the purpose of the AGI assessment, interviews do not need to be recorded and fully transcribed. The assessor can make an interview summary.
- Assessor can adjust the interview questions, and think of new ones if that serves their assessment. Please note that the best interview questions are simple, open-ended, and preferably result in long answers from the interviewee.

Topic list

- 1) Role and responsibilities of the organization, related to the aquaculture species under assessment and the (main) issue areas.

This is often an introduction question, for the assessor to get familiar with the interviewee and the organization, but it can be used to gain information related to criteria 4.2C, 4.3C and 4.5C. If the interviewee's organization is a governmental body, the topic also refers to criterion 1.3A.

- When discussing the structure of the organization, probe on how communication activities, M&E-related activities, and R&D-related activities are embedded in the organization.
- Probe on whether the interviewee thinks the allocation of resources is sufficient (if possible/appropriate to ask).

- 2) Objectives or goals defined by the organization in relation to aquaculture: what are the main issue areas defined by the organization, and what are strategies, concrete action points and collaborations in place to achieve goals?

This topic refers to indicators of both dimension 3 and 4: 3.1; 3.2; and all criteria under dimension 4. If the interviewee's organization is a governmental body, the topic also refers to indicator 1.5, 1.6 and 1.7. If the interviewee's organization is a standards organization, the topic also refers to indicator 2.1, 2.5, 2.6 and 2.7. Note it is often useful to start with questions about the internal organization before zooming out to external relations (see also question 3).

- Probe on how issue areas and problem solving strategies are defined and discussed, how this is organized, and who is involved (both inside and outside the organization).

- If the interviewee's organization is a governmental body, probe on how identification and regulation of important issue areas are linked with international and regional regulations and policies. If the interviewee's organization is a standards organization, probe on how the standard relates to national legislation.
 - Probe on the results of discussions, whether it results in (change in) an overall vision, whether there is an action plan.
 - Probe on learning and openness to new developments, ask the way staff is involved (also refer to training), to what extent the organization is open to innovate (are there concrete examples like pilot projects), with whom do they collaborate regarding these innovations.
 - Probe on the opinion of the interviewee about the organization's strengths and weaknesses, e.g. in focussing on the most important issues, in translating ideas into practice, and connection to others.
- 3) Collaborations with others in relation to aquaculture, in meetings, workshops, working groups, committees, platforms: what are the main issue areas jointly addressed, and in what ways?
This topic focuses on dimension 3. Also, answers can contain additional information that refers to the indicators mentioned under 2.
- Probe on how the organization relates to others: with whom do they collaborate, on what issues, what are the organization's expectations of the collaboration.
 - Probe on what are the main goals and activities of a collaboration, how is it organized, who is involved, and how are roles and responsibilities divided.
 - Probe on the way discussions are organized, what topics are discussed, what and whose input is considered, what kind of information is available to collaborating partners, to outsiders, and the wider public.
 - Probe on the results of the collaborations, whether it results in (change in) an overall vision, whether there is an action plan.
 - Probe on the opinion of the interviewee about these collaborations, considering the results for the organization itself: are their expectations met, are collaborations useful and effective (why/why not)
 - Probe on the opinion of the interviewee about these collaborations in terms of contribution to improving a country's aquaculture, e.g. change in the way problems and solutions are framed, improvements in legislation and standards. Also, probe on the position and contribution of the discussed collaborations vis-a-vis other arrangements, whether and to what extent is this particular collaboration of added value?
- 4) Questions for clarification or confirmation referring to indicators for which the assessor did not find (enough) information. This can be any indicator.
- 5) Generally put questions can be asked to get insights in the interviewee's position, values and perspective, examples are:
- What are, in your opinion, the three most important organizations that can make a positive change?
 - What are, in your opinion, the three most important organizations that should make a change?
 - What are, in your opinion, the three most urgent issues/challenges that need to be addressed, and who is responsible for doing so?
 - What is, in your opinion, the good example of an issue/event/crisis which was well resolved?
 - What is, in your opinion, the good example of an issue/event/crisis which was badly dealt with?
 - What is a major lesson you have learnt, and which can help others as well?