THE GLOBAL FISHING INDEX 2021

Governance
Indicator
Codebook

MINDEROO FOUNDATION

About

This document outlines the indicators used by the Minderoo Foundation to compile the 2021 Global Fishing Index governance assessments. It should be read in conjunction with the Global Fishing Index Key Insights report, Technical methods and Governance Conceptual Framework.

Data statement

Visit www.globalfishingindex.org
to explore the data behind the Global Fishing Index and download country-level results.

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Disclaimer

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Our codebook

The Global Fishing Index's governance conceptual framework consists of a two-level hierarchical structure of conceptual elements, comprising six *dimensions*, the broader components of fisheries governance and 18 *attributes*, which represent various aspects of these broader dimensions. These components are measured using 72 indicators, which were selected for inclusion based on their relevance across fisheries contexts, objectivity and high-quality, globally available data.

This codebook outlines the purpose of each of the indicators used to assess fisheries governance, along with the data sources and scoring process for each indicator.

Indicator scoring

Each indicator was scored on a scale of zero to 100, with higher values corresponding to activities recognised as being more likely to constrain overfishing. The number of scoring levels varied across indicators, depending on the number of response options available. For example, *Indicator 2.1.3: Presence of an annual report* is a binary indicator – it only has two possible response options of YES and NO, and therefore two scoring levels: 0 and 100. Alternatively, *Indicator 2.2.4: Prevalence of science-based catch and/or effort limits* had five possible response options (i.e. NONE, FEW, SOME, MOST and ALL), and therefore five scoring levels: 0, 25, 50, 75, and 100.

Most of the indicators are 'positive', meaning that the presence of a policy or activity is considered to support effective governance and ensure overfishing does not occur. However, seven indicators are 'negative,' meaning that the presence of a policy or activity is considered to *enable* overfishing and/or hinder the effectiveness of the broader governance system (e.g. presence of harmful fishing subsidies). For negative indicators, the absence of a policy or activity results in the highest score (100 out of 100).

Assessment level

Nearly all indicators (64 of 72) in the framework focus on national-level aspects of fisheries governance. The remaining eight indicators refer specifically to a country's most valuable fishery, as identified by questionnaire and interview respondents. This fishery is used as a proxy for 'best practice' governance and management within the country, enabling direct comparison across different contexts.

Data types

The assessment was conducted using a combination of primary and secondary data. *Primary* data represents data collected directly from country-specific experts and/or publicly-available literature. These data were collected using the Global Fishing Index's governance assessment instrument, with researchers relying on a combination of desk-based research, online open-access questionnaire responses and/ or expert interviews to assess each indicator. *Secondary* data refers to data collected by an external organisation and made available for others to use. This includes data from existing global datasets, public lists and novel data generated in partnership with other research organisations.

Missing data

There were instances in the assessment process where we were unable to obtain information for a specific indicator, either because: no information exists or could be found for a country, resulting in an assessment result of 'unknown'; an indicator was determined to be 'not applicable'[a] for a country; or, where a country was not included in a secondary dataset.

We reviewed all instances of missing data to identify if there were any indicators or countries that should be removed due to limited information, and the appropriate methods for imputing missing data (such as using expert judgement or statistical methods).

a 'Not applicable' was assigned as a final response when the indicator was not relevant for a particular country. For example, a country that does not have foreign fishing vessels operating in its national waters cannot be assessed against its licensing and registration requirements for foreign vessels.

Missing data due to a final assessment response of 'unknown' in the 50 primary indicators were given the lowest score possible for that indicator. This scoring decision was applied to promote transparency within the fisheries sector, which is widely recognised as a key component of effective natural resource governance.[1]

Missing data where an indicator was 'not applicable' or where a country was not represented in a secondary dataset were imputed statistically. We statistically imputed missing data using k-nearest neighbour (kNN). This assumes that similar countries will act similarly and imputes responses based a country's 'nearest neighbour' in the dataset.

Exceptions to this approach were *Indicators 3.3.3: Registration of foreign fishing vessels* and *4.3.2: Licence requirements for foreign fishing vessels* and the adoption of international agreements by overseas, disputed and/or non-independent states (*Attributes 1.2* and *1.3*).

Where *Indicators 3.3.3* and *4.3.2* were identified as 'not applicable'[a] for a country (i.e. due to a lack of access provided to foreign fishing vessels) this was taken as a sign of strong governance and given the highest score. For *Attributes 1.2 and 1.3*, overseas, disputed and/or non-independent states were scored as having adopted an agreement where they were explicitly included under the terms of the 'parent' country's agreement.

How to use this codebook

We are committed to full transparency regarding the data used to inform the governance component of the Global Fishing Index. All indicator data, scoring scripts and country-level results are available for download on the Global Fishing Index website, and this codebook should be read in conjunction with the technical methods.

This codebook contains the following information for each of the 72 indicators used to assess fisheries governance:

Indicator	The indicator's name and number. The indicator name describes the information that is measured, with negative indicators identified using '(NEGATIVE)'.
	Each indicator is also identified using a unique three-digit code that identifies where it sits within the governance conceptual framework. The first number represents the dimension, the second represents the attribute within the dimension and the third is the indicator within the attribute. For example, Indicator 1.2.3 is the third indicator of the second attribute within dimension one (i.e. Adoption of *1995 United Nations Fish Stocks Agreement*).
Indicator description	A detailed description of the scope of each indicator, including definitions of key terms.
Scoring	A breakdown of each indicator's response options and corresponding scores.
Data type	The type of data (primary or secondary) used to inform each indicator.
Data source	The source of the data used.
Data extraction date	Date for which the data were collected or extracted from a secondary data source.
Comments	Additional technical notes and considerations.

ATTRIBUTE 1.1

National fisheries policy

Assesses a country's underlying policy framework used to govern fisheries, including stated fishery objectives and goals

Indicator 1.1.1:
Presence of a legal and/or customary framework for governing fisheries

Indicator description	There is evidence of a legal and/or customary framework used to govern fisheries. Framework must be currently enacted (not repealed). Legal framework refers to the use of relevant fisheries laws, regulations and/or policy instruments. Customary framework refers to governance arrangements founded upon traditional, long-continued practices and usage.
Scoring	100 / YES
	0 / NO/UNKNOWN
Data type	Primary
Data source	ECOLEX: The Gateway to Environmental Law. https://www.ecolex.org/ [15 January 2020]
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 1.1.2:
Stated environmental sustainability goal(s) for fisheries

Indicator description	Environmental sustainability goal(s), target(s) or policy exist and are explicitly stated.
	This includes achieving maximum sustainable yield, as well as other biological, ecological or environmental goals related to resource or ecosystem conservation or sustainable use.
	Explicitly stated refers to goals outlined in fisheries policy, fisheries agency websites or other relevant legislation.

Scoring	100	YES
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 1.1.3:
Stated economic goal(s) for fisheries

Indicator description	Economic goal(s), target(s) or policy exist and are explicitly stated.
	This includes achieving maximum economic yield, other goals related to industry development or economic benefits and interests.
	Explicitly stated refers to goals outlined in fisheries policy, fisheries agency websites or other relevant legislation.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 1.1.4:
Stated livelihood goal(s) for fisheries

Indicator description	Livelihood goal(s), target(s) or policy exist and are explicitly stated.	
	This includes goals related to supporting fishing and coastal communities, improving fishers' access to financial support or other goals related to improving livelihoods for individuals employed in the fisheries sector.	
	Explicitly stated refers to goals outlined in fisheries policy, fisheries agency websites or other relevant legislation.	
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

ATTRIBUTE 1.2

Alignment with regional and international standards for fisheries management

Assesses whether a country has committed to regional and international policy agreements related to sustainable governance and management of fisheries resources

Indicator 1.2.1:
Membership to all relevant regional fisheries management organisations (RFMOs)

Indicator description	Country is a contracting party or cooperating non-contracting party to all relevant high seas regional fisheries management organisations (RFMOs).
	RFMOs are defined as intergovernmental organisations that have competence, under international law, to adopt legally binding conservation and management measures regarding living marine resources placed under its responsibility, as defined by the convention or agreement by which it was established.[2]
	An RFMO is considered relevant for a coastal country where its area of legal competence touches or overlaps with the country's exclusive economic zone (EEZ) or equivalent waters.
	Does not include RFMOs for non-highly migratory species, bilateral or multilateral agreements or general RFMOs that do not include a high seas component.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	RFMO website and membership lists
Data extraction date	10 November 2020
Comments	The RFMOs included in this indicator: • International Commission for the Conservation of Atlantic Tunas (ICCAT) • Indian Ocean Tuna Commission (IOTC) • Western and Central Pacific Fisheries Commission (WCPFC) • Inter-American Tropical Tuna Commission (IATTC) • Commission for the Conservation of Southern Bluefin Tuna (CCSBT) • North-East Atlantic Fisheries Commission (NEAFC) • Northwest Atlantic Fisheries Organization (NAFO) • North Pacific Fisheries Commission (NPFC) • South-East Atlantic Fisheries Organisation (SEAFO) • South Indian Ocean Fisheries Agreement (SIOFA) • South Pacific Regional Fisheries Management Organisation (SPRFMO) • Convention on Conservation of Antarctic Marine Living Resources (CCAMLR) • General Fisheries Commission for the Mediterranean (GFCM)

Indicator 1.2.2:
Adoption of *1982 United Nations Convention for the Law of the Sea*

Indicator description	Country is party to the *1982 United Nations Convention for the Law of the Sea* (UNCLOS), as of 1 March 2020. Countries may become a party through the ratification, accession or succession of the convention.	
Scoring	100	PARTY
	50	SIGNATORY
	0	NOT PARTY
Data type	Secondary	
Data source	UNCLOS membership list	
Data extraction date	28 November 2019	
Comments	None	

Indicator 1.2.3:
Adoption of *1995 United Nations Fish Stocks Agreement*

Indicator description	Country is party to the *1995 United Nations Fish Stocks Agreement* (FSA), as of 1 March 2020.	
	Countries may become a party through the ratification or acceptance of the convention.	
Scoring	100	PARTY
	50	SIGNATORY
	0	NOT PARTY
Data type	Secondary	
Data source	FSA membership list	
Data extraction date	30 May 2019	
Comments	None	

Indicator 1.2.4:
Adoption of *2009 FAO Agreement on Port States Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*

Indicator description	Country is party to the *2009 Food and Agriculture Organization's (FAO) Agreement on Port States Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* (PSMA), as of 1 March 2020. Countries may become a party through the ratification, acceptance, approval or accession of the convention.
Scoring	100 — PARTY 50 — SIGNATORY 0 — NOT PARTY
Data type	Secondary
Data source	PSMA membership list
Data extraction date	14 January 2020
Comments	None

Indicator 1.2.5:
Adoption of *1993 Convention on Biological Diversity*

Indicator description	Country is party to the *1993 Convention on Biological Diversity* (CBD), as of 1 March 2020. Countries may become a party through the ratification, acceptance, approval, accession or succession of the convention.	
Scoring	100	PARTY
	50	SIGNATORY
	0	NOT PARTY
Data type	Secondary	
Data source	CBD membership list	
Data extraction date	14 January 2020	
Comments	None	

Indicator 1.2.6:
Adoption of *1975 Convention on International Trade in Endangered Species of Wild Fauna and Flora*

Indicator description	Country is party to the *1975 Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES), as of 1 March 2020.
	Countries may become a party through the ratification, acceptance, approval or accession of the convention.
	Does not include countries that have signed but not ratified the agreement.
Scoring	100 PARTY
	0 NOT PARTY
Data type	Secondary
Data source	CITES membership list
Data extraction date	14 January 2020
Comments	None

Indicator 1.2.7:
Adoption of *1983 Convention on the Conservation of Migratory Species*

Indicator description	Country is party to the *1983 Convention on the Conservation of Migratory Species* (CMS), as of 1 March 2020.	
	Countries may become a party through the ratification, acceptance, approval or accession of the convention.	
	Does not include countries that have signed but not ratified the agreement.	
Scoring	100	PARTY
	0	NOT PARTY
Data type	Secondary	
Data source	CMS membership list	
Data extraction date	14 January 2020	
Comments	None	

ATTRIBUTE 1.3

Alignment with international standards for protecting worker rights and safety in fisheries

Assesses whether a country has committed to international policy agreements for the protection of worker rights, working conditions and safety on board fishing vessels

Indicator 1.3.1:
Adoption of *2012 International Maritime Organization Cape Town Agreement*

Indicator description	Country is party to the *2012 International Maritime Organization Cape Town Agreement* (CTA), as of 1 March 2020. Countries may become a party through the ratification, acceptance, approval or accession of the convention. Does not include countries that have signed but not ratified the agreement.
Scoring	100 PARTY
	0 NOT PARTY
Data type	Secondary
Data source	CTA membership list
Data extraction date	15 September 2020
Comments	The *2012 IMO Cape Town Agreement* is the only international agreement in the Index's governance conceptual framework that is yet to enter into force. This agreement will not come into force until one year (12 months) after at least 22 states, with an aggregate 3600 fishing vessels that are 24 metres in length or over (or equivalent, in gross tonnes) operating on the high seas, ratify the agreement.[3] For this indicator, countries are considered party if they have ratified the agreement.

Indicator 1.3.2:
Adoption of *2007 International Labour Organization Work in Fishing Convention (No. 188)*

Indicator description	Country's status must be In Force for the *2007 International Labour Organization Work in Fishing Convention (No. 188)* (ILO 188), as of 1 March 2020. Does not include countries that have signed but not ratified the agreement.
Scoring	100 IN FORCE
	0 NOT IN FORCE
Data type	Secondary
Data source	ILO 188 membership list
Data extraction date	15 January 2020
Comments	None

Indicator 1.3.3:
Adoption of *2006 International Labour Organization Maritime Labour Convention*

Indicator description	Country's status must be In Force for the *2006 International Labour Organization Maritime Labour Convention* (ILO MLC), as of 1 March 2020. Does not include countries that have signed but not ratified the agreement.
Scoring	100 IN FORCE
	0 NOT IN FORCE
Data type	Secondary
Data source	ILO MLC membership list
Data extraction date	15 January 2020
Comments	None

Indicator 1.3.4:
Adoption of *1930 International Labour Organization Forced Labour Convention (No. 29)*

Indicator description	Country's status must be In Force for the *1930 International Labour Organization Forced Labour Convention (No. 29)* (ILO FLC), as of 1 March 2020. Does not include countries that have signed but not ratified the agreement.
Scoring	100 IN FORCE
	0 NOT IN FORCE
Data type	Secondary
Data source	ILO FLC membership list
Data extraction date	15 January 2020
Comments	None

Indicator 1.3.5:
Adoption of *1957 International Labour Organization Abolition of Forced Labour Convention (No. 105)*

Indicator description	Country's status must be In Force for the *1957 International Labour Organization Abolition of Forced Labour Convention (No. 105)* (ILO AFLC), as of 1 March 2020. Does not include countries that have signed but not ratified the agreement.	
Scoring	100	IN FORCE
	0	NOT IN FORCE
Data type	Secondary	
Data source	ILO AFLC membership list	
Data extraction date	15 January 2020	
Comments	None	

Indicator 1.3.6:
Adoption of Protocol of *2014 to the 1930 Forced Labour Convention (P029)*

Indicator description	Country's status must be In Force for the *Protocol of 2014 to the 1930 Forced Labour Convention (P029)* (ILO 2014 Protocol), as of 1 March 2020. Does not include countries that have signed but not ratified the agreement.	
Scoring	100	IN FORCE
	0	NOT IN FORCE
Data type	Secondary	
Data source	ILO 2014 Protocol membership list	
Data extraction date	27 August 2020	
Comments	None	

ATTRIBUTE 1.4

Fisheries subsidy programs

Assesses a country's provision of harmful and beneficial fisheries subsidies

Additional notes:

There are multiple types of fisheries subsidies, which are categorised into three broad groups based on their effects on fisheries over time: 'capacity-enhancing', 'beneficial' or 'ambiguous'.[4]

Capacity-enhancing subsidies are those that currently, or have the potential to, encourage fishing capacity to develop to a point where exploitation exceeds maximum economic yield (MEY, the maximum rent obtainable from a fishery). This includes all forms of capital input and public investment in infrastructure that reduces costs or enhances revenue, such as fuel subsidies, tax exemptions and construction and modernisation projects. These programs are generally considered to be harmful due to their negative impacts on fish stocks and the coastal economies that depend on these resources. Alternatively, subsidies that promote fishery resource conservation and management are regarded as 'beneficial'. This includes fisheries management programs and marine protected area subsidies. Finally, ambiguous subsidies refers to programs that can either be beneficial or harmful depending on the fisheries and broader context (e.g. vessel buyback programs).[5]

To allow for comparable results across countries, we took a single scoring approach to subsidies. In line with the Global Fishing Index's governance conceptual framework, we made the normative scoring decision that the provision of harmful, capacity-enhancing subsidies enabled overfishing (i.e. negatively affected fish stocks), while the provision of beneficial subsidies constrained overfishing (i.e. positively affected fish stocks). This approach aligns with the recognised links between harmful, capacity-enhancing subsidies with overcapacity and overfishing and reflects broader global commitment to remove these subsidies, as stated in Sustainable Development Goals, Target 14.6, and shifts toward beneficial forms of government intervention, such as investment in fisheries management.

Indicator 1.4.1:
Diversity of harmful subsidy programs (NEGATIVE)

Indicator description	Diversity of harmful subsidies provided by public entities to the fisheries sector.
	Harmful subsidies include programs that currently (or have the potential to) lead to the overexploitation of fishery resources, either through enhancing fishing capacity beyond sustainable limits or reducing the costs associated with fishing.
	This includes the following 'capacity-enhancing' subsidies:
	• fuel subsidies
	• tax exemptions
	• boat/vessel construction, renewal and modernisation subsidies
	• fisheries development projects and services
	• port construction and renovation subsidies
	• marketing, processing and storage, infrastructure and support subsidies[6]

Scoring	100	NO HARMFUL SUBSIDIES PROVIDED
	83	ONE TYPE OF HARMFUL SUBSIDY PROVIDED
	67	TWO TYPES OF HARMFUL SUBSIDIES PROVIDED
	50	THREE TYPES OF HARMFUL SUBSIDIES PROVIDED
	33	FOUR TYPES OF HARMFUL SUBSIDIES PROVIDED
	17	FIVE TYPES OF HARMFUL SUBSIDIES PROVIDED
	0	SIX TYPES OF HARMFUL SUBSIDIES PROVIDED

Data type	Secondary
Data source	R. Sumaila, D. Skerritt, A. Schuhbauer, N. Ebrahim, Y. Li, H.S. Kim, T.G. Mallory, V.W.L. Lam and D. Pauly (2019). A global dataset on subsidies to the fisheries sector, Data in brief 27, pp. 1-7, https://doi.org/10.1016/j.dib.2019.104706. [11 June 2021]
Data extraction date	25 September 2020
Comments	The identification and categorisation of harmful subsidy types was done in alignment with the data source listed above, except for 'fishing access subsidies'.
	Fishing access subsidies refer to the transfer of funds by one country to secure market access or access to fisheries resources in another country's national waters. This subsidy type was removed from this indicator as it refers *to funds provided for fishing activities outside a country's national waters*, which is currently outside the scope of the 2021 Global Fishing Index.

Indicator 1.4.2:
Prevalence of harmful subsidies (NEGATIVE)

Indicator description	Proportion of unambiguous subsidies provided in a country (based on value in USD) that are recognised as harmful.
	Unambiguous subsidies include subsidies that are recognised as 'beneficial' or 'capacity-enhancing' (i.e. Excluding ambiguous subsidies such as fisher assistance programs, vessel buyback programs and rural fisher community development programs.)[7]
	Harmful subsidies include programs that currently (or have the potential to) lead to the overexploitation of fishery resources, either through enhancing fishing capacity beyond sustainable limits or reducing the costs associated with fishing. This includes the following 'capacity-enhancing' subsidies:
	• fuel subsidies
	• tax exemptions
	• boat/vessel construction, renewal and modernisation subsidies
	• fisheries development projects and services
	• port construction and renovation subsidies
	• marketing, processing and storage, infrastructure and support subsidies[8]
	Beneficial subsidies include programs that promote the conservation and management of fisheries resources, including fishery management programs and services, fisheries research and development and investment in marine protected areas.[9]

Scoring	100	< 10 % HARMFUL SUBSIDIES
	80	10 – 30% HARMFUL SUBSIDIES
	60	30 – 50% HARMFUL SUBSIDIES
	40	50 – 70% HARMFUL SUBSIDIES
	20	70 – 90% HARMFUL SUBSIDIES
	0	> 90% HARMFUL SUBSIDIES

Data type	Secondary
Data source	R. Sumaila, D. Skerritt, A. Schuhbauer, N. Ebrahim, Y. Li, H.S. Kim, T.G. Mallory, V.W.L. Lam and D. Pauly (2019). *A global dataset on subsidies to the fisheries sector*, Data in brief 27, pp. 1-7, https://doi.org/10.1016/j.dib.2019.104706. [11 June 2021].
Data extraction date	25 September 2020
Comments	The identification and categorisation of harmful subsidy types was done in alignment with the data source listed above, except for 'fishing access subsidies'.
	Fishing access subsidies refer to the transfer of funds by one country to secure market access or access to fisheries resources in another country's national waters. This subsidy type was removed from this indicator as it refers to *funds provided for fishing activities outside a country's national waters*, which is currently outside the scope of the 2021 Global Fishing Index.

ATTRIBUTE 2.1

Resources provided for managing fisheries

Assesses the financial, technical and professional capacity to ensure the sustainable management of fisheries resources

Indicator 2.1.1:
Evidence of an annual budget for fisheries management

Indicator description	There is evidence of an annual budget allocated for fisheries management by the national fisheries authority.
	Fisheries management includes activities related to administration, licencing, research, monitoring, surveillance and enforcement.
	Does not include funds allocated for fisheries development or subsidies.
	This budget may or may not be publicly available.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 2.1.2:
Presence of a strategic plan for achieving fisheries objectives

Indicator description	The national authority has a strategic plan that outlines fisheries strategy, goals or direction.	
	The plan must be current or expired within the last five (5) years.	
	The plan may or may not be publicly available.	
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 2.1.3:
Presence of an annual report

Indicator description	The national authority publishes an annual report that provides information about agency objectives, aims and/or outcomes, fisheries financial statements, fleet structure and/or fish stock status.
	Does not refer to fisheries statistics reports or other reports that do not discuss a combination of these components.
	Report may or may not be publicly available.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 2.1.4:
Presence of an organisational chart

Indicator description	The national fisheries authority has an organisational chart, which identifies the line of authority and responsibility of each individual or position within the fisheries agency. The chart may or may not be publicly available.	
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 2.1.5:
Employment of fisheries observers

Indicator description	Fisheries observers are employed.
	A fisheries observer is a certified person on board fishing vessels that collects scientific and technical information on the fishing operations and catch.
	Observers may or may not have legal coercion powers and their data may or may not be used for non-scientific purposes (such as enforcement).
	Observers can be employed by the national management agency, relevant regional fisheries management organisations (RFMOs) or through external contractors.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

ATTRIBUTE 2.2

Management measures

Assesses the type and diversity of tools and controls used to achieve fisheries objectives

Indicator 2.2.1:
Use of harvest rules in the most valuable fishery

Indicator description	Use of harvest rules to regulate or control fishing effort in the most valuable fishery.
	Harvest rules, also known as harvest control rules, are a set of pre-defined management actions used to outline how harvest is to be managed, based on the state of specified indicators of stock status.[10]
	Harvest rules may or may not be implemented and/or enforced.
	The most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity is expected to be higher compared with other fisheries.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	The most valuable fishery was self-identified by informants in each country.

Indicator 2.2.2:
Use of catch and/or effort limits in the most valuable fishery

Indicator description	Use of catch or effort limits to regulate or control harvesting in the most valuable fishery.
	Catch limits are controls that restrict the amount (weight or number of individuals) of fish that can be caught or retained, such as through use of a total allowable catch or bag limits.
	Effort limits are controls that restrict fishing capacity, including fleet size or amount of time fishers/fleets can spend fishing, such as limited entry/licence limits, vessel day schemes, net/trap soaking times.
	Catch and effort limits may or may not be enforced.
	The most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity expected to be higher compared with other fisheries.

Scoring	100	YES
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	The most valuable fishery was self-identified by informants in each country.

Indicator 2.2.3:
Use of other management measures in the most valuable fishery

Indicator description	Use of other management measures or controls to regulate or control fishing effort in the most valuable fishery. Other management measures or controls refers to measures other than harvest rules or catch/effort limits. These include spatial and temporal, closures, species restrictions, gear restrictions, etc. Other management measures may or may not be enforced. The most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity expected to be higher compared with other fisheries.
Scoring	100 YES
	0 NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	The most valuable fishery was self-identified by informants in each country.

Indicator 2.2.4:
Prevalence of science-based catch and/or effort limits

Indicator description	Proportion of a country's fisheries that are actively managed using catch - or effort-based limits, which have been determined based on scientific information.
	Actively managed means that these limits are regularly reviewed and updated (i.e. at uniform intervals of time).
	Catch limits are controls that restrict the amount (weight or number of individuals) of fish that can be caught or retained, such as through use of a total allowable catch or bag limits.
	Effort limits are controls that restrict fishing capacity, including fleet size or amount of time fishers/fleets can spend fishing, such as limited entry/licence limits, vessel day schemes, net/trap soaking times.
	Limits may or may not be enforced.
Scoring	100	ALL (100%)
	75	MOST (67 – 99%)
	50	SOME (34 – 66%)
	25	FEW (1 – 33%)
	0	NONE (0%)/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 2.2.5:
Prevalence of rights-based tools

Indicator description	Proportion of a country's fisheries that use rights-based approaches.
	Rights-based approaches refer to measures that allocate a secure right to a certain volume of catch, to use a certain amount of fishing effort and/or to access certain fishing areas, such as individual transferrable quotas, fishing cooperatives, territorial user rights and customary marine tenure systems.
Scoring	100	ALL (100%)
	75	MOST (67 – 99%)
	50	SOME (34 – 66%)
	25	FEW (1 – 33%)
	0	NONE (0%)/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

ATTRIBUTE 3.1

Fisheries information and monitoring

Assesses the range, quality and resolution of fisheries information collected on a regular basis

Indicator 3.1.1:
Collection and verification of catch data in the most valuable fishery

Indicator description	Self-reported catch data is collected and verified in the most valuable fishery.
	Self-reported catch data refers to fisher-provided information about the landed catch (including weight, species composition etc.).
	Verification is the independent confirmation of reported data by another party (such as a buyer or processor) or through another process (catch certificate, blockchain, logbooks etc.).
	Information collection and verification must be implemented and enforced.
	Most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity expected to be higher compared with other fisheries.

Scoring	100	YES + VERIFIED + IMPLEMENTED/ENFORCED
	66	YES + NOT VERIFIED + IMPLEMENTED/ENFORCED
	33	YES + VERIFIED + NOT IMPLEMENTED/ENFORCED
	33	YES + NOT VERIFIED + NOT IMPLEMENTED/ENFORCED
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.
	The most valuable fishery was self-identified by informants in each country.

Indicator 3.1.2:
Collection and verification of effort data in the most valuable fishery

Indicator description	Self-reported effort data is collected and verified in the most valuable fishery.
	Self-reported effort data refers to fishery-provided information on the effort spent conducting fishing activities (such as time spent fishing, size of gear, number of gear units used etc.).
	Verification is the independent confirmation of reported data by another party (for example, buyer or processor) or through another process (catch certificate, blockchain, logbooks, etc).
	Information collection and verification must be implemented and enforced.
	Most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity expected to be higher compared with other fisheries.

Scoring	100	YES + VERIFIED + IMPLEMENTED/ENFORCED
	66	YES + NOT VERIFIED + IMPLEMENTED/ENFORCED
	33	YES + VERIFIED + NOT IMPLEMENTED/ENFORCED
	33	YES + NOT VERIFIED + NOT IMPLEMENTED/ENFORCED
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.
	The most valuable fishery was self-identified by informants in each country.

Indicator 3.1.3: Availability of biological information for the most valuable fishery

Indicator description	Biological information is available for the most valuable fishery.
	Biological information includes species or stock life history characteristics, ecological role, population age and/or size structure, reproduction rates, recruitment etc.
	This information may be held by government agencies, industry, academics, non-governmental organisations or other parties but should be available for use in fisheries management.
	Most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity expected to be higher compared with other fisheries.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	The most valuable fishery was self-identified by informants in each country.

Indicator 3.1.4: Data collection in-port

Indicator description	Proportion of landing sites where information about landed catch is collected.	
	Landing sites includes any location (such as ports or beaches) where fishers offload catch for sale, transportation and/or processing. This may include official and unofficial locations.	
	Landed catch is the proportion of the total catch that is retained and brought to the landing site, excluding any catch that is discarded or used at sea.	
	Information may not be collected at the species level (i.e. it can be collected at the species group level or total catch level).	
Scoring	100	MOST PLACES
	50	SOME PLACES
	0	NOT COLLECTED/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

ATTRIBUTE 3.2

Knowledge of stock health

Assesses the collection and analysis of biological and statistical information to determine changes in the abundance of fish stocks and where possible, predict future trends

Indicator 3.2.1: Proportion of fish stocks that are formally assessed

Indicator description	Proportion of fisheries for which a formal stock assessment is conducted as part of fishery management processes.
	A formal stock assessment is defined as the process of collecting and analysing biological and statistical information to determine the changes in the abundance of fishery stocks in response to fishing and, to the extent possible, to predict future trends of stock abundance.[11]
	Includes quantitative and qualitative (such as risk-based approaches) assessments completed by a recognised fisheries authority or research institute.
	Formal stock assessments may or may not be publicly available.
	Assessment may not have undergone external review.

Scoring	100	ALL (100%)
	75	MOST (67 – 99%)
	50	SOME (34 – 66%)
	25	FEW (1 – 33%)
	0	NONE (0%)/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 3.2.2:
Presence of stock assessment model for the most valuable fishery

Indicator Description	There is a stock assessment model for the most valuable fishery.
	A stock assessment model refers to a quantitative model used to determine the status and/or trend of a fish stock. This model may use various data inputs/indicators, including biological data (such as age structure of the stock, fecundity) and information about fishing activities (such as catch and effort).
	The model may or may not be published.
	Does not include risk-based or qualitative approaches.
	Most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity expected to be higher compared with other fisheries.

Scoring	100	YES
	0	NO/UNKNOWN

Data Type	Primary
Data Source	Global Fishing Index's governance assessment instrument
Data Extraction Date	Data collected from 12 August 2019 to 30 May 2020
Comments	The most valuable fishery was self-identified by informants in each country.

ATTRIBUTE 3.3

Information on fishing fleets

Assesses the availability of information regarding the size, composition and nationality of the fishing fleet operating in a country's national waters

Indicator 3.3.1:
Availability of national vessel registry

Indicator description	There is a register of all vessels operating in the country's national waters, including fishing and non-fishing (passenger, carrier, recreational etc.). This registry is made available to interested parties, via open-access publication, a fee or information request or sharing arrangements with regional organisations. A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[12]
Scoring	100 — YES + AVAILABLE
	50 — YES + NOT AVAILABLE
	0 — NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 3.3.2:
Availability of national fishing licence registry

Indicator description	There is a register of all individuals, companies and vessels licenced to fish in national waters.	
	This registry is made available to interested parties, via open-access publication, a fee or information request or sharing arrangements with regional organisations.	
Scoring	100	YES + AVAILABLE
	50	YES + NOT AVAILABLE
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 3.3.3:
Registration of foreign fishing vessels

Indicator description	All foreign fishing vessels are registered on an official list or registry.	
	Foreign refers to any vessel flying a flag other than that of the country in whose exclusive economic zone (EEZ) it is operating.[13]	
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[14]	
	Registration of foreign fishing vessels must be implemented/enforced.	
Scoring	100	YES + REQUIRED AND IMPLEMENTED/ENFORCED
	50	YES + REQUIRED
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.	

Indicator 3.3.4:
Registration of domestic large-scale commercial fishing vessels

Indicator description	Domestic large-scale commercial fishing vessels are registered on an official list or registry.
	Domestic refers to any vessel flying the flag of the country in whose exclusive economic zone (EEZ) it is operating (i.e. not foreign).
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[15]
	Large-scale refers to vessels considered under national policy or by the national fisheries authority as 'large-scale' or 'industrial'. The definition of 'large scale' varies across countries.
	Commercial fishing refers to the harvesting of resources, either in whole or in part, with the intention of making a profit,[16] excluding charter or recreational fishing operations.
	Registration must be implemented/enforced.

Scoring	100	YES + REQUIRED AND IMPLEMENTED/ENFORCED
	50	YES + REQUIRED
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 3.3.5:
Registration of domestic small-scale commercial fishing vessels

Indicator description	Domestic small-scale commercial fishing vessels are registered on an official list or registry.
	Domestic refers to any vessel flying the flag of the country in whose exclusive economic zone (EEZ) it is operating (i.e. not foreign).
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[17]
	Small-scale refers to vessels considered under national policy or by the national fisheries authority as 'small-scale' or 'artisanal'. This definition varies among countries.
	Commercial fishing refers to the harvesting of resources, either in whole or in part, with the intention of making a profit,[18] excluding charter or recreational fishing operations.
	Registration must be implemented/enforced.
Scoring	100	YES + REQUIRED AND IMPLEMENTED/ENFORCED
	50	YES + REQUIRED
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 3.3.6:
Registration of domestic non-commercial fishing vessels

Indicator description	Domestic non-commercial fishing vessels are registered on an official list or registry.
	Domestic refers to any vessel flying the flag of the country in whose exclusive economic zone (EEZ) it is operating (i.e. not foreign).
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[19]
	Non-commercial fishing refers to harvesting of resources, either in whole or in part, without the intention of making a profit (i.e. for personal consumption). This includes subsistence, recreational, leisure, sport and/or charter fishing.
	Registration must be implemented/enforced.

Scoring	100	YES + REQUIRED AND IMPLEMENTED/ENFORCED
	50	YES + REQUIRED
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 3.3.7:
Use of public vessel tracking technology

Indicator description	Coverage of public tracking technology on vessels greater than 12 metres in length, including the use of automatic identification systems (AIS) or public vessel monitoring systems.
	AIS is a satellite system that transmits a ship's location, along with other identifying information such as name, flag, course and speed, allowing for vessel identification and tracking.
	A vessel monitoring system operates in a similar manner to AIS, transmitting vessel location and identity; however, this data has historically been restricted for private use.

Scoring	100	HIGH (66 – 100%)
	50	MEDIUM (33 – 66%)
	0	LOW (0 – 33%)

Data type	Secondary
Data source	Global Fishing Watch (2020). Global Fishing Watch. https://globalfishingwatch.org/ [18 February 2021].
Data extraction date	15 July 2020
Comments	Where vessel size was unknown, the number of vessels over 12-metres in length was estimated using fleet structure statistics at the regional level, sourced from the Global Atlas of AIS-based fishing activity – Challenges and Opportunities.[20]
	For example, in the Western Central Pacific region (FAO Area 71), vessels over 12-metres in length were estimated to account for 6 per cent of the fleet of known size. Therefore, if a country in this region had an unknown fleet size of 100, it was estimated that six (6) of those vessels were over 12 metres in length.
	This novel dataset was generated in partnership with Global Fishing Watch. The raw data used to inform this indicator is available for download on the Global Fishing Index website.

ATTRIBUTE 4.1

Foreign fishing access

Assesses the level and type of access provided to foreign fishing fleets

Additional notes:

As per the *1982 United Nations Convention for the Law of the Sea* (UNCLOS), coastal States can provide access to foreign fleets to harvest surplus catch, where the coastal State does not have the capacity to harvest their entire allowable catch.[21]

However, short- and long-term economic incentives associated with providing foreign access often mean that access is granted despite a lack of scientific knowledge of surplus fish or sufficient programs in place (for example, in terms of limits, regulation, information and catch monitoring, or monitoring, control and surveillance [MCS] programs) to ensure foreign fishing is being conducted legally and does not contribute towards, or incentivise, overfishing.[22] Additionally, the resource rent provided through paid foreign access can also create a dependency problem, keeping countries from putting strong oversight mechanisms in place to ensure sustainable use.

To allow for direct comparison of results across countries, we took a single scoring approach for foreign fishing access. Based on these issues and in line with the Global Fishing Index's governance conceptual framework, we made the normative scoring decision that the provision of foreign access to fisheries resources enabled (rather than constrained) overfishing in national waters. This approach aligns with the recognised challenges associated with controlling foreign-flagged fleets and potentially negative effects of foreign fishing on fish stocks in a country's national waters.

We recognise, however, there are outliers to this scoring approach, particularly where a country has strong fisheries governance and management systems in place to ensure foreign fishing is conducted in line with national laws and regulations and does not contribute to the overexploitation of resources.

Indicator 4.1.1:
Observed foreign fishing in national waters (NEGATIVE)

Indicator description	Observed fishing activity by vessels that are operating under a foreign flag, as measured through automatic identification system (AIS) technology.
	Foreign refers to any vessel flying a flag other than that of the country in whose exclusive economic zone (EEZ) it is operating.[23]
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[24]
	Vessels may be operating in a country's national waters legally or illegally but does not include vessels fishing in the EEZs of their immediate neighbours.
	AIS is a satellite system that transmits a ship's location, along with other identifying information such as name, flag, course and speed, allowing for vessel identification and tracking.

Scoring	100	0 – 14 days
	75	14 – 90 days
	50	90 – 365 days
	25	1 – 5 years
	0	> 5 years

Data type	Secondary
Data source	Global Fishing Watch (2020). Global Fishing Watch. https://globalfishingwatch.org/ [18 February 2021].
Data extraction date	20 February 2021
Comments	This indicator excludes vessels fishing within the EEZ of their immediate neighbours.
	This ensures this indicator excludes fishing activity occurring on the border of two EEZs and areas where it may be inappropriate to consider some fishing activities 'foreign', such as joint management zones or disputed zones.
	One fishing day is calculated as 24 hours of fishing effort.
	This novel dataset was generated in partnership with Global Fishing Watch. The raw data used to inform this indicator is available for download on the Global Fishing Index website.

Indicator 4.1.2:
Foreign fishing access via joint venture or business agreements (NEGATIVE)

Indicator description	Foreign fishing vessels are currently permitted to fish in a country's national waters via joint venture or business agreements. Foreign refers to any vessel flying a flag other than that of the country in whose exclusive economic zone (EEZ) it is operating.[25] A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[26] Joint venture or business agreements refers to agreements between two or more parties, including foreign and domestic partners from the public and/or private sector.[27]
Scoring	100 NO
	0 YES/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 4.1.3:
Foreign fishing access via bi- or multilateral agreements (NEGATIVE)

Indicator description	Foreign fishing vessels are currently permitted to fish in a country's national waters via bi- or multi-lateral agreements.
	Foreign refers to any vessel flying a flag other than that of the country in whose exclusive economic zone (EEZ) it is operating.[28]
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[29]
	Bi- or multi-lateral agreements refers to agreements between two or more countries/governments.[30]
Scoring	100	NO
	0	YES/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

ATTRIBUTE 4.2

Use and extent of spatial access restrictions

Assesses the extent of spatial restrictions to manage or control fishing access

Indicator 4.2.1:
Presence of a coastal fisheries management area

Indicator description	There is an explicitly mandated coastal fisheries management zone or area that excludes all large-scale commercial fishing activities (i.e. reserves fishing rights for small-scale fishers).
	This zone must be documented in fisheries legislation or policy.
	Does not include areas closed to all fishing activities (such as no-take marine protected areas or equivalent).
	Large-scale refers to vessels considered under national policy or by the national fisheries management agency as 'large-scale' or 'industrial'. This definition varies among countries.
	Commercial fishing refers to the harvesting of resources, either in whole or in part, with the intention of making a profit,[31] excluding charter or recreational fishing operations.

Scoring	100	YES
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 4.2.2:
Proportion of national waters designated as a marine protected area

Indicator description	Proportion of national waters designated as a marine protected area (MPA).
	MPAs are a clearly defined geographical space, recognised, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.[32]
	Excludes areas designated for fisheries management or sustainable extraction purposes (such as spatial closures).
	Areas must be implemented (does not include proposed areas).
Scoring	100	> 30%
	66	10 – 30%
	33	0 – 10%
	0	< 1%
Data type	Secondary	
Data source	Marine Conservation Institute (2021). The Marine Protection Atlas. https://mpatlas.org/ [17 June 2020].	
Data extraction date	15 January 2020	
Comments	Any zones classified as 'Overlapping Claim' or 'Joint Regimes Area' in the original dataset were assigned to *all* countries that expressed claim over the area.	

ATTRIBUTE 4.3

Licencing requirements

Assesses the use of fishing licences or permits to monitor, restrict or limit access to national waters

Indicator 4.3.1:
Proportion of fishing vessels required to hold valid fishing licences or permits

Indicator description	Proportion of fishing vessels that must hold a valid fishing licence or permit to operate.
	A licence or permit is a document giving the holder the right to operate in a fishery according to the terms established by the regulating authority.
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[33]
	Includes both foreign and domestic vessels and commercial and non-commercial fishing activities.

Scoring	100	ALL (100%)
	75	MOST (67 – 99%)
	50	SOME (34 – 66%)
	25	FEW (1 – 33%)
	0	NONE (0%)/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 4.3.2:
Licencing requirements for foreign fishing vessels

Indicator description	Foreign fishing vessels are required to hold a valid fishing licence or permit to fish in national waters.
	A licence or permit is a document giving the holder the right to operate in a fishery according to the terms established by the regulating authority.
	Foreign refers to any vessel flying a flag other than that of the country in whose exclusive economic zone (EEZ) it is operating.[34]
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[35]
	Licencing requirements must be implemented/enforced.

Scoring	100	ALL + IMPLEMENTED/ENFORCED
	66	SOME + IMPLEMENTED/ENFORCED
	33	ALL + NOT IMPLEMENTED/ENFORCED
	33	SOME + NOT IMPLEMENTED/ENFORCED
	0	NO LICENSES REQUIRED/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 4.3.3:
Licencing requirements for domestic, large-scale commercial fishing vessels

Indicator description	Domestic large-scale commercial fishing vessels are required to hold a valid licence or permit to fish in national waters.
	A licence or permit is a document giving the holder the right to operate in a fishery according to the terms established by the regulating authority.
	Domestic refers to any vessel flying the flag of the country in whose exclusive economic zone (EEZ) it is operating (i.e. not foreign).
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[36]
	Large scale refers to vessels considered under national policy or by the national fisheries management agency as 'large-scale' or 'industrial'. This definition varies among countries.
	Commercial fishing refers to the harvesting of resources, either in whole or in part, with the intention of making a profit,[37] excluding charter or recreational fishing operations.
	Licencing requirements must be implemented/enforced.

Scoring	100	ALL + IMPLEMENTED/ENFORCED
	66	SOME + IMPLEMENTED/ENFORCED
	33	ALL + NOT IMPLEMENTED/ENFORCED
	33	SOME + NOT IMPLEMENTED/ENFORCED
	0	NO LICENSES REQUIRED/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 4.3.4:
Licencing requirements for domestic, small-scale commercial fishing vessels

Indicator description	Domestic small-scale commercial fishing vessels are required to hold a valid licence or permit to fish in national waters.
	A licence or permit is a document giving the holder the right to operate in a fishery according to the terms established by the regulating authority.
	Domestic refers to any vessel flying the flag of the country in whose exclusive economic zone (EEZ) it is operating (i.e. not foreign).
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[38]
	Small scale refers to vessels considered under national policy or by the national fisheries management agency as 'small-scale' or 'artisanal'. This definition varies among countries.
	Commercial fishing refers to the harvesting of resources, either in whole or in part, with the intention of making a profit,[39] excluding charter or recreational fishing operations.
	Licencing requirements must be implemented/enforced.

Scoring	100	ALL + IMPLEMENTED/ENFORCED
	66	SOME + IMPLEMENTED/ENFORCED
	33	ALL + NOT IMPLEMENTED/ENFORCED
	33	SOME + NOT IMPLEMENTED/ENFORCED
	0	NO LICENSES REQUIRED/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 4.3.5:
Licencing requirements for domestic non-commercial fishing vessels

Indicator description	Domestic non-commercial fishing vessels are required to hold a valid licence or permit to fish in national waters.
	A licence or permit is a document giving the holder the right to operate in a fishery according to the terms established by the regulating authority.
	Domestic refers to any vessel flying the flag of the country in whose exclusive economic zone (EEZ) it is operating (i.e. not foreign).
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[40]
	Non-commercial fishing refers to harvesting of resources, either in whole or in part, without the intention of making a profit (i.e. for personal consumption). This includes subsistence, recreational, leisure, sport or charter fishing.
	Licencing requirements must be implemented/enforced.

Scoring	100	ALL + IMPLEMENTED/ENFORCED
	66	SOME + IMPLEMENTED/ENFORCED
	33	ALL + NOT IMPLEMENTED/ENFORCED
	33	SOME + NOT IMPLEMENTED/ENFORCED
	0	NO LICENSES REQUIRED/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

ATTRIBUTE 5.1

Compliance monitoring and surveillance

Assesses the monitoring and surveillance systems used to prevent, detect and deter illegal fishing activities

Indicator 5.1.1:
Adoption of a *National* or *Regional Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*

Indicator description	Country has adopted a *National* or *Regional Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing*. This plan is consistent with the *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* (IPOA-IUU).[41]
Scoring	100 YES
	0 NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 5.1.2:
Use of targeted on-land or in-port inspections

Indicator description	Fishery inspections are completed on land or while a fishing vessel is in port, and there are specified targets for the number of inspections that occur.
	Fishery inspections are official checks and, where necessary, investigations of fishing vessels, gear, catch, licenses and permits to ensure compliance with fishery regulations.
	This includes planned or spontaneous inspections.
	On land or in-port includes inspections of fish processing plants, storage facilities, transport vessels, etc.
	Targets may be indicated as a frequency or total number of inspections, or any other metrics, and may or may not be publicly available.
	Inspections must be implemented/enforced.

Scoring	100	YES + TARGET + IMPLEMENTED/ENFORCED
	75	YES + NO TARGET + IMPLEMENTED/ENFORCED
	50	YES + TARGET + NOT IMPLEMENTED/ENFORCED
	25	YES + NO TARGET + NOT IMPLEMENTED/ENFORCED
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 5.1.3:
Use of targeted on-water inspections

Indicator description	Fishery inspections are conducted on the water or while a fishing vessel is at sea and there are specified targets for the number of inspections that occur. Fishery inspections are official checks and, where necessary, investigations of fishing vessels, gear, catch, licenses and permits to ensure compliance with fishery regulations. This includes planned or spontaneous inspections. Targets may be indicated as a frequency or total number of inspections, or any other metrics, and may or may not be publicly available. Inspections must be implemented/enforced.

Scoring	100	YES + TARGET + IMPLEMENTED/ENFORCED
	75	YES + NO TARGET + IMPLEMENTED/ENFORCED
	50	YES + TARGET + NOT IMPLEMENTED/ENFORCED
	25	YES + NO TARGET + NOT IMPLEMENTED/ENFORCED
	0	NO/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	Where evidence of a lack of implementation and/or enforcement was volunteered by questionnaire respondents or interviewees, it was incorporated into a country's final indicator response.

Indicator 5.1.4:
Primary agency that conducts fisheries inspections

Indicator description	Type of authority responsible for conducting most fisheries inspections in national waters.
	Authorities include the fisheries authority, coastguard, military personnel, customs officers etc.
	Fishery inspections are official checks and, where necessary, investigations of fishing vessels, gear, catch, licenses and permits to ensure compliance with fishery regulations.
	Inspections may take place on the water, at sea, in port or on land.
Scoring	100	FISHERY AGENCY OFFICERS
	50	OTHER GOVERNMENT OFFICIALS
	50	NON-GOVERNMENTAL OFFICIALS
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 5.1.5:
Use of randomised inspections

Indicator description	There are randomised fisheries inspections.	
	Randomised inspections refer to non-targeted checks of catch, landings and related documentation (logbooks, licenses, permits etc.).	
	Inspections may take place on the water, at sea, in port, or on land.	
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 5.1.6:
Risk-based prioritisation process for inspections

Indicator description	There is a risk-based prioritisation process for fisheries inspections. This includes the prioritisation of fisheries patrols or inspections based on the calculated risk of an offense occurring. These assessments can be quantitative or qualitative.	
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

ATTRIBUTE 5.2

Severity of fishery sanctions

Assesses the severity of fisheries sanctions for violating fishing laws, rules and regulations

Indicator 5.2.1:
Use of graduated sanctions

Indicator description	Graduated sanctions are used to penalise fishing offences.
	Graduated sanctions refer to penalties that increase with the severity and frequency of fisheries misbehaviour, violations or relapses.
	These sanctions may or may not be previously or consistently applied.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 5.2.2:
Maximum penalty for fisheries offences

Indicator description	Penalties for fisheries violations include imprisonment and other sanction types.
	Violations include any non-compliance with fisheries laws, rules and regulations.
	Imprisonment refers to jail term, for any duration of time.
	Other sanctions include small or large fines, confiscation of catch, fishing gear or fishing vessel, loss of licence, closure of fishing facilities and repayment of financial aid.
	These sanctions may or may not be previously or consistently applied.

Scoring	100	IMPRISONMENT
	50	OTHER SANCTIONS
	0	NO PENALTIES APPLY/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

ATTRIBUTE 5.3

Integrity of the fisheries enforcement system

Assesses opportunities for corruption and the perceived integrity of authorities in enforcing fisheries laws, rules and regulations

Indicator 5.3.1:
Complexity of licence approval process

Indicator description	The number of people and administrative levels involved in the granting of a new fishing licence or permit. A licence or permit is a document giving the holder the right to operate in a fishery according to the terms established by the regulating authority.	
Scoring	100	MULTIPLE PEOPLE – MULTIPLE ADMINISTRATIVE LEVELS
	50	MULTIPLE PEOPLE – ONE ADMINISTRATIVE LEVEL
	0	SINGLE PERSON/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 5.3.2:
Perceived integrity of the judicial system

Indicator description	Perceived integrity of the judicial system based on the frequency in which the government publicly attacks the judiciary's integrity.	
	Attacks include prepared statements by the media, press conferences, interviews and stump speeches.[42]	
Scoring	100	NO ATTACKS
	75	RARE ATTACKS
	50	MORE THAN ONCE
	25	MONTHLY
	0	DAILY OR WEEKLY
Data type	Secondary	
Data source	M. Coppedge, J. Gerring, C.H. Knutsen, S. Lindberg, I.J. Teorell, D. Altman, M. Bernhard, M.S. Fish, A. Glynn, A. Hicken, A. Luhrmann, K.L. Marquardt, K. McMann, P. Paxton, D. Pemstein, B. Seim, R. Sigman, S.-E. Skaaning, J. Staton, A. Cornell, L. Gastaldi, H. Gjerløw, V. Mechkova, J. von Römer, A. Sundtröm, E. Tzelgov, L. Uberti, Y.-t. Wang, T. Wig and D. Ziblatt (2020). *'V-Dem Codebook v10' Varieties of Democracy (V-Dem) Project*. https://www.v-dem.net/media/filer_public/28/14/28140582-43d6-4940-948f-a2df84a31893/v-dem_codebook_v10.pdf [13 January 2021].	
Data extraction date	27 August 2020	
Comments	Columns AZR (v2jupoatck) and BAD (v2jupoatck_nr) from the original dataset were used to inform this indicator.	
	This indicator was compiled in accordance with the cautionary notes outlined in the Varieties of Democracy's (V-Dem) v10 Codebook,[43] which strongly advises against using a response for any single year that was informed by three or fewer (≤3) ratings (i.e. experts).	
	Where a country had a 2019 value (column AZR) with three (3) or fewer ratings (column BAD), we used the next most recent year that had four (4) or more ratings.	
	Nineteen (19) countries were affected by this filter (year of data used for this indicator reported in brackets):	
	Angola (2018), Albania (2018), Barbados (2018), Ecuador (2018), El Salvador (2018), France (2017), Guatemala (2018), Iceland (2018), Israel (2018), Maldives (2018), New Zealand (2018), Papua New Guinea (2018), Republic of Congo (2018), Senegal (2018), Seychelles (2018), Sweden (2018), Tanzania (2018), Thailand (2018) and Uruguay (2018).	

Indicator 5.3.3:
Routine removal of corrupt or inept judges from post

Indicator description	Frequency in which corrupt or inept judges are removed from their posts or are otherwise disciplined when found to be responsible for serious misconduct.
	Misconduct refers to any action considered to be unethical or otherwise violating the judge's obligations to remain impartial, such as accepting bribes or other personal favours, violent or hostile behaviour.[44]

Scoring	100	ALWAYS
	75	USUALLY
	50	HALF OF THE TIME
	25	SELDOM
	0	NEVER

Data type	Secondary
Data source	M. Coppedge, J. Gerring, C.H. Knutsen, S. Lindberg, I.J. Teorell, D. Altman, M. Bernhard, M.S. Fish, A. Glynn, A. Hicken, A. Luhrmann, K.L. Marquardt, K. McMann, P. Paxton, D. Pemstein, B. Seim, R. Sigman, S.-E. Skaaning, J. Staton, A. Cornell, L. Gastaldi, H. Gjerløw, V. Mechkova, J. von Römer, A. Sundtröm, E. Tzelgov, L. Uberti, Y.-t. Wang, T. Wig and D. Ziblatt (2020). *'V-Dem Codebook v10' Varieties of Democracy (V-Dem) Project*. https://www.v-dem.net/media/filer_public/28/14/28140582-43d6-4940-948f-a2df84a31893/v-dem_codebook_v10.pdf [13 January 2021].
Data extraction date	27 August 2020
Comments	Columns BAR (v2juaccnt) and BBD (v2juaccnt_nr) from the original dataset were used to inform this indicator.
	This indicator was compiled in accordance with the cautionary notes outlined in the Varieties of Democracy's (V-Dem) v10 Codebook,[45] which strongly advises against using a response for any single year that was informed by three or fewer (≤3) ratings (i.e. experts).
	Where a country had a 2019 value (in column BAR) with three (3) or fewer ratings (in column BBD), we used the next most recent year that had four (4) or more ratings.
	Nineteen (19) countries were affected by this filter (year of data used for this indicator reported in brackets):
	Angola (2018), Albania (2018), Barbados (2018), Ecuador (2018), El Salvador (2018), France (2017), Guatemala (2018), Iceland (2018), Israel (2018), Maldives (2018), New Zealand (2018), Papua New Guinea (2018), Republic of Congo (2018), Senegal (2018), Seychelles (2018), Sweden (2018), Tanzania (2018), Thailand (2018) and Uruguay (2018).

Indicator 5.3.4:
Prevalence of executive bribery or corrupt exchanges

Indicator description	Frequency in which members of the executive, or their agents, grant favours in exchange for bribes, kickbacks or other material inducements.
	Executives refers to head of state, head of government and cabinet ministers.[46]

Scoring	100	NEVER OR HARDLY EVER
	75	OCCASIONALLY
	50	UNPREDICTABLE
	25	MORE OFTEN THAN NOT
	0	ROUTINE AND EXPECTED

Data type	Secondary
Data source	M. Coppedge, J. Gerring, C.H. Knutsen, S. Lindberg, I.J. Teorell, D. Altman, M. Bernhard, M.S. Fish, A. Glynn, A. Hicken, A. Luhrmann, K.L. Marquardt, K. McMann, P. Paxton, D. Pemstein, B. Seim, R. Sigman, S.-E. Skaaning, J. Staton, A. Cornell, L. Gastaldi, H. Gjerløw, V. Mechkova, J. von Römer, A. Sundtröm, E. Tzelgov, L. Uberti, Y.-t. Wang, T. Wig and D. Ziblatt (2020). *'V-Dem Codebook v10' Varieties of Democracy (V-Dem) Project*. https://www.v-dem.net/media/filer_public/28/14/28140582-43d6-4940-948f-a2df84a31893/v-dem_codebook_v10.pdf [13 January 2021].
Data extraction date	27 August 2020
Comments	Columns AJP (v2exbribe) and AKB (v2exbribe_nr) from the original dataset were used to inform this indicator.
	This indicator was compiled in accordance with the cautionary notes outlined in the Varieties of Democracy's (V-Dem) v10 Codebook,[47] which strongly advises against using a response for any single year that was informed by three or fewer (≤3) ratings (i.e. experts).
	Where a country had a 2019 value (in column AJP) with three (3) or fewer ratings (in column AKB), we used the next most recent year that had four (4) or more ratings.
	Sixteen (16) countries were affected by this filter (year of data used for this indicator reported in brackets):
	Croatia (2018), El Salvador (2018), Gabon (2018), Guinea (2018), Guinea-Bissau (2018), Guatemala (2018), Iceland (2016), Liberia (2018), Papua New Guinea (2017), Philippines (2018), Republic of Congo (2017), Seychelles (2018), Sierra Leone (2018), Sudan (2018), Timor Leste (2018) and Vietnam (2018).

ATTRIBUTE 5.4

Absence of high-risk fishing activities

Assesses the absence of vessels considered to be high-risk for illegal, unreported and unregulated fishing

Indicator 5.4.1:
Observed fishing by vessels operating under a
recognised flag of convenience (NEGATIVE)

Indicator description	Proportion of observed foreign and domestic fishing activity in national waters undertaken by vessels that are operating under a recognised flag of convenience. Foreign refers to any vessel flying a flag other than that of the country's exclusive economic zone (EEZ) in which it is operating.[48] Domestic refers to any vessel flying the flag of the country in whose exclusive economic zone (EEZ) it is operating (i.e. not foreign). A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[49] Vessels may be operating in a country's national waters legally or illegally but does not include vessels fishing in the EEZs of their immediate neighbours. A flag of convenience is defined as a vessel that flies the flag of a country other than the country of ownership, for whatever reasons of convenience, as declared by the International Transport Workers' Federation Fair Practices Committee.[50]
Scoring	100 — NONE/NEGLIGIBLE (0 – 5%) 66 — LOW (5 – 35%) 33 — MEDIUM (35 – 65%) 0 — HIGH (65 – 100%)
Data type	Secondary
Data source	Global Fishing Watch (2020). Global Fishing Watch. https://globalfishingwatch.org/ [18 February 2021].
Data extraction date	20 February 2021
Comments	This indicator excludes vessels fishing within the EEZ of their immediate neighbours. This ensures this indicator excludes fishing activity occurring on the border of two EEZs and areas where it may be inappropriate to consider some fishing activities 'foreign', such as joint management zones or disputed zones. This novel dataset was generated in partnership with Global Fishing Watch. The raw data used to inform this indicator is available for download on the Global Fishing Index website.

Indicator 5.4.2:
Observed port visits by fishing and carrier vessels operating under recognised flags of convenience (NEGATIVE)

Indicator description	Proportion of fishing or fish carrier vessels observed visiting a country's ports that are operating under a recognised flag of convenience.
	Foreign refers to any vessel flying a flag other than that of the country's exclusive economic zone (EEZ) in which it is operating.[51]
	A fishing vessel refers to any vessels used, or intended for use, for the purposes of the exploitation of living marine resources, including mother ships and vessels directly engaged in fishing activities.[52]
	Carrier vessels refer to large-scale 'reefers' (defined as vessels primarily involved in transhipment in port) and 'specialised reefers' (defined as vessels that are capable of transhipment at sea). This definition excludes 'container reefers' (defined as cargo vessels that carry refrigerated containers, small-scale fish tenders, or vessels often associated with aquaculture).[53]
	A flag of convenience is defined as a vessel that flies the flag of a country other than the country of ownership, for whatever reasons of convenience, as declared by the International Transport Workers' Federation Fair Practices Committee.[54]

Scoring	100	NONE/NEGLIGIBLE (0 – 5%)
	66	LOW (5 – 35%)
	33	MEDIUM (35 – 65%)
	0	HIGH (65 – 100%)

Data type	Secondary
Data source	Global Fishing Watch (2020). Global Fishing Watch. https://globalfishingwatch.org/ [18 February 2021].
Data extraction date	9 March 2021
Comments	Any port visits less than three hours were excluded for this indicator to remove noise and increase the likelihood that the remaining vessels were engaging in port activities, such as exchanging crew, offloading catch or refuelling.
	Any port visits followed by a less than three-hour voyage were also excluded, once again to remove noise and ensure only port visits followed by clear voyages remained.
	Container reefs, defined as cargo vessels that carry refrigerated containers, were excluded from these analyses, although there is a chance these vessels may transport fish. Small-scale fish tenders and well-boats were also excluded, as they are often associated with aquaculture (such as salmon) rather than wild capture fisheries.
	This novel dataset was generated in partnership with Global Fishing Watch. The raw data used to inform this indicator is available for download on the Global Fishing Index website.

ATTRIBUTE 6.1

Opportunities for stakeholder participation

Assesses the ability of fisheries stakeholders to meaningfully participate in fisheries decision-making processes

Indicator 6.1.1:
Responsibility of fisheries authority to include fisheries in management processes for the most valuable fishery

Indicator description	The fishery authority has a formal responsibility to involve fishers in fisheries decision-making processes in the most valuable fishery.
	A formal responsibility refers to an official obligation that is indicated in fishery policy but may or may not be legislated.
	Most valuable fishery refers to a species or stock that makes the most significant contribution to a country economically or socially. This is used as a proxy for the best managed fishery, as management intensity expected to be higher compared with other fisheries.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	The most valuable fishery was self-identified by informants in each country.

Indicator 6.1.2:
Lowest administrative division at which management decisions are made

Indicator description	Lowest administrative division at which fisheries decisions or recommendations can be made.	
	Administrative division refer to sub-national jurisdictions or regions, including states, provinces, municipals and local communities.	
Scoring	100	COMMUNITY/VILLAGE
	50	STATE/PROVINCE/REGIONAL
	0	NATIONAL/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 6.1.3:
Use of community-based and/or customary management arrangements

Indicator description	Community-based or customary arrangements are used to manage fisheries.
	Community-based management includes locally developed, decentralised management approaches in which user communities are ceded the rights and responsibilities for managing their own resources.[55]
	Customary management refers to fisheries administration based on a particular society's or place's customs or traditional practices, such as taboo areas, spiritual or religious closures, rules supporting cultural harvesting practices, inheritance, or ancestral access rules, etc.
	These approaches may or may not be facilitated by government.

Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

ATTRIBUTE 6.2

Stakeholder agency and capability to participate in management

Assesses stakeholders' capacity to act independently and meaningfully participate in fisheries management and decision-making processes

Indicator 6.2.1:
Prevalence of fisher working groups or organisations

Indicator description	Proportion of a country's fisheries that have fisher or fishing worker groups or organisations.
	Fisher or fishing worker groups promote the coordination and consultation of fisheries stakeholders (fishers, fish traders, processors etc.) in management processes.
Scoring	100	ALL (100%)
	75	MOST (67 – 99%)
	50	SOME (34 – 66%)
	25	FEW (1 – 33%)
	0	NONE (0%)/UNKNOWN
Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	None

Indicator 6.2.2:
Publication of fisheries management meeting notes

Indicator description	Minutes of fishery management meetings are published and made publicly available.
	Minutes refers to notes that are recorded during a meeting, highlighting the key issues and actions discussed.
	Fishery management meetings may involve information gathering, planning, decision-making and allocation of resources by which the fisheries management authority, or other relevant body, controls present and future fishery-related activities (such as catch limits or licensing requirements).
	Publicly available means freely available and accessible by members of the public.
Scoring	100	YES
	0	NO/UNKNOWN
Data type	Primary	
Data source	Global Fishing Index's governance assessment instrument	
Data extraction date	Data collected from 12 August 2019 to 30 May 2020	
Comments	None	

Indicator 6.2.3:
Stakeholder involvement in management processes

Indicator description	Diversity of stakeholders involved in a country's fisheries management processes.
	A stakeholder is any group(s) or individual with an interest or claim (whether stated or implied) in fisheries objectives and outcomes. This includes the following types of interest groups:
	• fisheries scientists • fisheries industry and cooperative representatives • elected government officials • non-governmental organisations • other civil society groups • Indigenous representatives
	Fisheries management processes refer to fisheries meetings, committees, consultations, information gathering, planning, decision-making etc.

Scoring	100	ANYONE/ALL STAKEHOLDERS
	82.5	FIVE STAKEHOLDER TYPES
	66	FOUR STAKEHOLDER TYPES
	49.5	THREE STAKEHOLDER TYPES
	33	TWO STAKEHOLDER TYPES
	16.5	ONE STAKEHOLDER TYPES
	0	NO STAKEHOLDERS/UNKNOWN

Data type	Primary
Data source	Global Fishing Index's governance assessment instrument
Data extraction date	Data collected from 12 August 2019 to 30 May 2020
Comments	This indicator's score is based on the diversity (i.e. number) of stakeholder 'types' involved in fisheries management processes, rather than any one specific (or 'ideal') combination of stakeholders.
	All stakeholder 'types' were considered equal (i.e. it is no more or less important to include one group over another) and therefore contributed equally to the final indicator score.
	For example, a country that involves elected government officials *and* fisheries scientists in fisheries management processes will receive the same score as a country that involves cooperative representatives *and* non-governmental organisations. Both countries involve two types of stakeholders.

Endnotes

1   Lockwood, M., Davidson, J., Curtis, A., Stratford, E. and Griffith, R. (2010). *Governance Principles for Natural Resource Management*, Society & Natural Resources 23, (10), pp. 986-1001, https://doi.org/10.1080/08941920802178214 [12 November 2020]

2   Food and Agriculture Organization of the United Nations (2019). *Regional Fisheries Management Organization*. http://www.fao.org/faoterm/viewentry/en/?entryId=53041 [1 June 2019]

3   International Maritime Organization (2021). *2012 Cape Town Agreement (Explained)*. https://sway.office.com/pGZcJtkSuHNxDzy5?ref=Link [15 September 2020]

4   Sumaila, U.R., Lam, V., Le Manach, F., Swartz, W. and Pauly, D. (2016). *Global fisheries subsidies: An updated estimate,* Marine Policy 69, pp. 189-193, https://doi.org/10.1016/j.marpol.2015.12.026 [19 December 2019]; Sumaila, R., Skerritt, D., Schuhbauer, A., Ebrahim, N., Li, Y., Kim, H.S., Mallory, T.G., Lam, V.W.L. and Pauly, D. (2019). *A global dataset on subsidies to the fisheries sector*, Data in brief 27, pp. 1-7, https://doi.org/10.1016/j.marpol.2019.103695 [9 April 2021]

5   Sumaila, U.R., Lam, V., Le Manach, F., Swartz, W. and Pauly, D. (2016). *Global fisheries subsidies: An updated estimate,* Marine Policy 69, pp. 189-193, https://doi.org/10.1016/j.marpol.2015.12.026 [19 December 2019]

6   Sumaila, U.R., Lam, V., Le Manach, F., Swartz, W. and Pauly, D. (2016). *Global fisheries subsidies: An updated estimate*, Marine Policy 69, pp. 189-193, https://doi.org/10.1016/j.marpol.2015.12.026 [19 December 2019]; Sumaila, R., Skerritt, D., Schuhbauer, A., Ebrahim, N., Li, Y., Kim, H.S., Mallory, T.G., Lam, V.W.L. and Pauly, D. (2019). *A global dataset on subsidies to the fisheries sector,* Data in brief 27, pp. 1-7, https://doi.org/10.1016/j.marpol.2019.103695 [9 April 2021]

7   As above.

8   As above.

9   As above.

10   Food and Agriculture Organization of the United Nations (2021). *Harvest Strategies and Control Rules*. http://www.fao.org/fishery/eaf-net/eaftool/eaf_tool_49/en [1 June 2020]

11   Food and Agriculture Organization of the United Nations (2019). *Fish stock assessment*. http://www.fao.org/faoterm/viewentry/en/?entryId=51960 [1 June 2019]

12   Food and Agriculture Organization of the United Nations (2019). *Fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

13   Food and Agriculture Organization of the United Nations (2019). *Foreign fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=58628 [1 June 2019]

14   Food and Agriculture Organization of the United Nations (2019). *Fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

15   As above.

16   Food and Agriculture Organization of the United Nations (2019). *Commercial fishing*. http://www.fao.org/faoterm/viewentry/en/?entryId=3479 [1 June 2019]

17   Food and Agriculture Organization of the United Nations (2019). *Fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

18   Food and Agriculture Organization of the United Nations (2019). *Commercial fishing*. http://www.fao.org/faoterm/viewentry/en/?entryId=3479 [1 June 2019]

19   Food and Agriculture Organization of the United Nations (2019). *Fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

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24   Food and Agriculture Organization of the United Nations (2019). *Fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

25   Food and Agriculture Organization of the United Nations (2019). *Foreign fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=58628 [1 June 2019]

26   Food and Agriculture Organization of the United Nations (2019). *Fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

27 Hamlisch, R. and Moore, G.K.F. (n.d.). *Joint Ventures in Fishery Development in the CECAF Area*. http://www.fao.org/3/h0222e/h0222e00.htm#Contents [29 April 2021]; The World Bank (2014). *Trade in Fishing Services - Emerging Perspectives on Foreign Fishing Arrangements.* http://documents1.worldbank.org/curated/en/504571468164949623/pdf/92622-REVISED-PUBLIC-Trade-in-Fishing-Services-WEB-withaddendum.pdf [1 June 2020]

28 Food and Agriculture Organization of the United Nations (2019). *Foreign fishing vessel.* http://www.fao.org/faoterm/viewentry/en/?entryId=58628 [1 June 2019]

29 Food and Agriculture Organization of the United Nations (2019). *Fishing vessel.* http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

30 The World Bank (2014). *Trade in Fishing Services - Emerging Perspectives on Foreign Fishing Arrangements.* http://documents1.worldbank.org/curated/en/504571468164949623/pdf/92622-REVISED-PUBLIC-Trade-in-Fishing-Services-WEB-withaddendum.pdf [1 June 2020]

31 Food and Agriculture Organization of the United Nations (2019)*. Commercial fishing.* http://www.fao.org/faoterm/viewentry/en/?entryId=3479 [1 June 2019]

32 Marine Conservation Institute (2021). *Marine Protection Glossary.* https://mpatlas.org/glossary#MPAGuide [17 June 2020]

33 Food and Agriculture Organization of the United Nations (2019). *Fishing vessel.* http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

34 Food and Agriculture Organization of the United Nations (2019). *Foreign fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=58628 [1 June 2019]

35 Food and Agriculture Organization of the United Nations (2019). *Fishing vessel*. http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

36 As above.

37 Food and Agriculture Organization of the United Nations (2019). *Commercial fishing.* http://www.fao.org/faoterm/viewentry/en/?entryId=3479 [1 June 2019]

38 Food and Agriculture Organization of the United Nations (2019). *Fishing vessel.* http://www.fao.org/faoterm/viewentry/en/?entryId=98389 [11 June 2021]

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41 Food and Agriculture Organization of the United Nations (2021). *International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing*. http://www.fao.org/fishery/ipoa-iuu/en [1 June 2020]

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43 As above.

44 As above.

45 As above.

46 As above.

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