The Illegal, Unreported and Unregulated Fishing Risk Index

DECEMBER 2023

GLOBAL INITIATIVE
AGAINST TRANSNATIONAL
ORGANIZED CRIME

POSEIDON
AQUATIC RESOURCE MANAGEMENT

The Illegal, Unreported and Unregulated Fishing Risk index 2023 Update

GLOBAL INITIATIVE
AGAINST TRANSNATIONAL
ORGANIZED CRIME

POSEIDON
AQUATIC RESOURCE MANAGEMENT

Contents

Tables

Acronyms

CCAMLR - Commission for the Conservation of Antarctic Marine Living Resources

EEZ - Exclusive economic zone

FAO - Food and Agriculture Organization (of the UN)

FMC - Fisheries monitoring centre

IUU - Illegal, unreported and unregulated (fishing)

MCS - Monitoring, control and surveillance

MSC - Marine Stewardship Council

NEAFC - North East Atlantic Fisheries Commission

NOAA - National Oceanic and Atmospheric Administration

NPOA-IUU - National plan of action (to prevent deter and eliminate illegal, unreported and unregulated fishing)

PSMA - Port State Measures Agreement

RAV - Record of authorized vessels

RFMO - Regional fisheries management organization

SDG - Sustainable Development Goal

UNCLOS - United Nations Convention on the Law of the Sea

UNFSA - United Nations Fish Stocks Agreement

VMS - Vessel monitoring system

Acknowledgements

Citation

This report should be cited as follows:

Macfadyen, G. and Hosch, G. 2023. The IUU Fishing Risk Index: 2023 Update. Poseidon Aquatic Resource Management Limited and the Global Initiative Against Transnational Organized Crime.

Executive summary

About the IUU Fishing Risk Index

In early 2019, the IUU Fishing Risk Index was launched as a way of benchmarking and ranking countries based on their vulnerability to, prevalence of and response to illegal, unreported and unregulated (IUU) fishing. The IUU Fishing Risk Index website (**www.iuufishingindex.net**) provides maps to visualize scores by indicator type and responsibility. Individual country profiles provide scores for each indicator for the country concerned and show how the country's scores compare with the average scores for the region and the ocean basin(s) in which the country is located.

Since its launch the Index has been widely used by:

· Donors, to inform the allocation of spending on projects to combat IUU fishing.

· Seafood buyers, to assess risk that their purchases of seafood are from legal sources.

· Trade agencies, to incorporate the risk of fish from IUU sources entering national markets.

· Aquaculture certification standards, as part of risk assessment of the origin of raw material being used in aquaculture feed.

· Countries and regional fisheries organizations in assessing IUU risk, benchmarking country performance and tracking change in indicators used in the Index.

· Academics, as part of research projects and as a data source for publications focusing on fisheries sustainability and IUU fishing, but also on wider issues such as human trafficking and security threats, where risks of IUU fishing may also increase risks in these other areas.

· Civil society in advocacy work, to highlight and combat IUU fishing.

The usefulness of the Index to its users is enhanced when indicator scores remain up to date. The Index was therefore updated in 2021 and again in 2023. This report provides the results of the 2023 update. The Index website provides 2019, 2021 and 2023 indicator scores. This report and the website allow the scores and performance to be compared across the three years.

The relevance of the Index:

· There continues to be a lack of reliable estimates of IUU fishing covering all countries and using a standardized methodology to generate comprehensive and reliable volumes and values for IUU fish catches. While the Index scores do not provide a measure of these volumes or values, they do provide a standardized measure of the degree to which states are vulnerable to and effectively combat IUU fishing, thus providing a **measure of the risk** that IUU fishing may be occurring.

· Despite many recent actions taken internationally, regionally and nationally to combat IUU fishing, malpractice remains a serious concern. The target to eliminate IUU fishing by 2020, associated with indicator 14.6.1 of the Sustainable Development Goal (SDG) 14: 'Life Below Water', was obviously not achieved. Therefore, it remains important to have an up-to-date assessment that tracks the current risk of IUU, and how the level of risk is changing over time.

· Incentives for IUU fishing are considerable, given the financial benefits that can be generated by both large- and small-scale fishing operations in both developed and developing countries. The negative impacts of IUU fishing are many and include the environmental impact of depleting fish stocks; the impact on fisheries management through impaired scientific research; and the profound social and economic impacts on communities, the fisheries sector as a whole and consumers.

This IUU Fishing Risk Index covers all 152 coastal countries of the world, and for each country a score is calculated based on a suite of 40 indicators. These relate to the prevalence of IUU fishing in each country, and the country's vulnerability and response to it, as assessed according to the country's coastal, flag, port and general state responsibilities. The database underpinning the IUU fishing risk scores in 2023 contains **5 690 separate data entries**, based on both publicly available data and expert opinion, with a high (98.2%) completion rate across all indicators and countries.

The methodology used for the 2023 version of the Index remains the same as for the 2021 version, and so allows for direct comparability. [1]

---

[1]   Note that indicator 7 'authorized vessel data provided to FAO high seas vessel authorization record (HSVAR)' in 2019 was changed to 'Registered vessels with foreign or unknown ownership' in the 2021 update for reasons explained in the 2021 report.

The 2023 Index scores and their implications

In 2023, the global score across all state responsibilities and types of indicators was 2.28, compared to 2.24 in 2021 and 2.29 in 2019. **The global score was slightly worse than in 2021**, given that scores closer to 1 indicate better performance, indicating that there has been **no notable shift or improvement in overall global IUU fishing risk. Global indicator scores improved for 18 indicators, got worse for 18 indicators and remained unchanged for four indicators.**

· Better performance for indicators: 1, 2, 6, 8, 9, 11, 12, 13, 14, 17, 22, 24, 25, 26, 27, 28, 34, and 40.

· Worse performance for indicators: 3, 4, 5, 7, 15, 16, 18, 19, 21, 23, 29, 30, 31, 35, 36, 37, 38 and 39.

· Unchanged performance for indicators: 10, 20, 32 and 33.

Indicators that showed the most improvement were 'Party to the Port State Measures Agreement',[2] 'Agreement over all maritime boundaries', and 'Demand for MSC products'.

Individual country scores range from 1.62 for Romania (the best-performing country) to 3.69 for China (the worst-performing country in 2023, as was the case in 2019 and 2021, but slightly improved from 3.86 in 2021). Between 2021 and 2023, **fifty-four countries improved their scores** (i.e. lower risk), five countries retained the same score, while **93 countries had a worse score.**

Between 2021 and 2023, the **countries that most improved their ranking** were Argentina, Seychelles and Trinidad and Tobago. The countries that **showed the greatest drop in overall ranking** were Peru, Sri Lanka and Papua New Guinea.

The tables below highlight the regions and ocean basins of most concern for IUU fishing risk, for different combinations of indicators related to state responsibilities and indicator types.

In 2019, Asia was the region of special concern, with the highest (worst) scores for all four types of state responsibility indicators, and the worst overall scores for indicators aggregated by responsibility and type. The 2019 Index scores also implied the need for action in the Western Pacific, the West Indian Ocean and the East Indian Ocean basins.

The Index scores in 2021 provided a more diverse picture of the regions and ocean basins that were of concern, as reflected in the table below. Although Asia remained the region of most concern based on all indicators aggregated by responsibility and type, Africa as a region became more prominent in 2021 as an area of concern for indicators related to coastal responsibility. The Eastern Pacific (high vulnerability) and the West Atlantic (poor response) ocean basins were of greater concern relative to 2019. The Middle East remained a region of specific concern for response indicators, potentially because its countries attribute low importance to the fisheries sector, signalling a weak policy focus.

In the 2023 Index, North America remained of most concern in terms of vulnerability, and there was also little change in terms of the regions and ocean basins showing the highest risk for prevalence indicators. For the response indicators, the Middle East was the worst-performing region for all indicator responsibilities, and the West Indian Ocean became more prominent as an ocean basin of concern compared to 2021. When considering all indicators combined, Asia was the region with the highest risk, as was the case in 2021, and the West Indian Ocean was the ocean basin of most concern.

[2] It is noted that while Index scores do improve for countries signing up to international agreements or adhering to best practice, real-world reductions in the levels of IUU fishing also require the actual and practical implementation of such agreements and the fulfilment of obligations incumbent upon countries committing to them.

Worst-performing regions and ocean basins by indicator group in 2019

		Type			
		Vulnerability	**Prevalence**	**Response**	**Overall**
Responsibility	**Coastal**	· Oceania / Western Pacific	· Asia / East Indian Ocean	· Caribbean and Central America / East Indian Ocean	· Asia / Western Pacific
	Flag	· North America / Eastern Pacific	· Asia / Western Pacific	· Middle East / Western Pacific	· Asia / Western Pacific
	Port	· North America / East Indian Ocean	· Asia / Western Pacific	· Middle East / West Indian Ocean	· Asia / Western Pacific
	General	· Asia / East Indian Ocean	· Asia / East Indian Ocean	· Middle East / West Indian Ocean	· Asia / East Indian Ocean
	Overall	· North America / Western Pacific	· Asia / Western Pacific	· Middle East / West Indian Ocean	· Asia / East Indian Ocean

Worst-performing regions and ocean basins by indicator group in 2021

		Type			
		Vulnerability	**Prevalence**	**Response**	**Overall**
Responsibility	**Coastal**	· Oceania / Western Pacific	· Africa / Eastern Pacific	· Caribbean and Central America / West Atlantic	· Africa / West Indian Ocean
	Flag	· North America / Eastern Pacific	· Asia / Western Pacific	· Middle East / West Indian Ocean	· Asia / Western Pacific
	Port	· North America / Eastern Pacific	· Asia / Western Pacific	· Middle East / West Indian Ocean	· Middle East / Western Pacific
	General	· Asia / East Indian Ocean	· North America / Eastern Pacific	· Middle East / West Atlantic	· Asia / East Indian Ocean
	Overall	· North America / Eastern Pacific	· Asia / Western Pacific	· Middle East / West Atlantic	· Asia / Western Pacific

Worst-performing regions and ocean basins by indicator group in 2023

		Type			
		Vulnerability	**Prevalence**	**Response**	**Overall**
Responsibility	**Coastal**	· North America / Western Pacific	· Africa / East Indian Ocean	· Middle East / West Indian Ocean	· Africa / West Indian Ocean
	Flag	· North America / Eastern Pacific	· Asia / Western Pacific	· Middle East / West Indian Ocean	· Asia / Western Pacific
	Port	· North America / Eastern Pacific	· Asia / Western Pacific	· Middle East / West Indian Ocean	· Middle East / Western Pacific
	General	· Africa / East Indian Ocean	· North America / Eastern Pacific	· Middle East / West Indian Ocean	· Middle East / West Indian Ocean
	Overall	· North America / Eastern Pacific	· Asia / Western Pacific	· Middle East / West Indian Ocean	· Asia / West Indian Ocean

The aggregated scores for all countries in a region or ocean basin can obscure the risk of IUU fishing in or by specific countries, and the need for action. **The tables below show the countries that had the worst scores for different indicator groups in 2019, 2021 and 2023.** The maps, ranking tables and country profiles on the IUU Fishing Risk Index website provide indicator scores for all individual countries for different combinations of indicator groups. In 2019, China, Taiwan, Indonesia, Russia, Vietnam and Cambodia were countries of particular concern. In 2021, China, Taiwan, Vietnam and Russia remained countries of high overall risk, while Ecuador, Eritrea, South Korea, Somalia and Yemen also gained prominence, with poor scores. In 2023 China, Russia, Taiwan, South Korea, Ukraine and Yemen remained on the list of the 10 worst-performing countries (as they were in 2021), while India, Iran, Indonesia and Comoros joined the list.

Worst-performing countries by indicator group in 2019

| Responsibility | Type | | | |
	Vulnerability	Prevalence	Response	Overall
Coastal	• Japan • Kiribati • Seychelles	• Ecuador • Philippines • Sierra Leone (+ 3 others)	• Timor Leste • Cambodia • Cameroon (+ 6 others)	• Cambodia • Somalia • Vietnam
Flag	• China • France • Japan (+ 4 others)	• China • Taiwan • Panama	• Singapore • China • Libya/Russia	• China • Taiwan • Panama
Port	• Canada • China • France (+ 9 others)	• China • Taiwan • Vietnam	• Bahrain • Benin • Brunei (+ 19 others)	• China • Russia • Cambodia
General	• India • Vietnam • Indonesia	• Thailand • Vietnam • Mexico	• Singapore • Grenada • Yemen	• Vietnam • Comoros • Cambodia
Overall	• China • Japan • Russia	• China • Taiwan • Vietnam	• Singapore • Cambodia • Yemen	• China • Taiwan • Cambodia

Notes: Countries with the same scores in rankings are listed alphabetically. Where more countries than shown in the table have the same score, the number of additional countries is provided in brackets.

Worst-performing countries by indicator group in 2021

| Responsibility | Type | | | |
	Vulnerability	Prevalence	Response	Overall
Coastal	• Japan • China • France	• Seychelles • Ecuador • Guinea-Bissau (+ 4 others)"	• Congo, R. • Argentina • Jamaica (+ 2 others)	• Congo, R. • Seychelles • Equatorial Guinea (+ 3 others)
Flag	• China • France • Japan (+ 4 others)	• China • South Korea • Taiwan	• Russia • Libya • Guinea-Bissau	• China • Taiwan • Russia
Port	• Canada • China • France (+ 9 others)	• China • Thailand • Uruguay	• Bahrain • Brunei Darussalam • China (+ 6 others)	• China • South Africa • Singapore
General	• Vietnam • India • Indonesia	• Mexico • China • Ecuador	• Singapore • Eritrea • Israel	• Somalia • Eritrea • China (+ 1 other)
Overall	• China • Japan • USA	• China • South Korea • Taiwan	• Eritrea • Singapore • Yemen	• China • Russia • South Korea

Note: Countries with the same scores in rankings are listed alphabetically. Where more countries than shown in the table have the same score, the number of additional countries is provided in brackets

Worst-performing countries by indicator group in 2023

| Responsibility | Type | | | |
	Vulnerability	Prevalence	Response	Overall
Coastal	• Japan • China • France	• Somalia • Indonesia • Vietnam	• Benin • Congo, R. • Jamaica (+ 4 others)	• Yemen • Congo, R. • Somalia
Flag	• China • France • Japan (+ 5 others)	• China • Taiwan • South Korea (+ Russia)	• Guinea Bissau • Libya • Russia	• Russia • China • Taiwan
Port	• Canada • Chile • China (+ 13 others)	• China • South Korea • Spain (+ 2 others)	• Jamaica • North Korea • Kuwait (+ 3 others)	• China • Spain • North Korea
General	• India • Indonesia • Myanmar + Peru	• Mexico • China • Vietnam	• Israel • Lebanon • United Arab Emirates	• Comoros • India • Yemen
Overall	• China • Japan • Russia	• China • Taiwan • Indonesia	• United Arab Emirates • Yemen • Kuwait (+ Qatar)	• China • Russia • Yemen

Note: Countries with the same scores in rankings are listed alphabetically. Where more countries than shown in the table have the same score, the number of additional countries is provided in brackets

Developing countries are often especially vulnerable to IUU fishing. These countries also often lack the resources to fully respond to the challenges of combating IUU fishing. This means that there is a need to pursue more vigorously many of the established mechanisms to support developing countries in their drive to combat IUU fishing across applicable state responsibilities. The strengthening of human resources through training alone, especially in the domain of port state measures, could lead to immediate and improved outcomes in many countries.

Nations operating distant-water fishing fleets that yield poor scores for both flag state/prevalence and flag state/response indicators may be considered as particularly problematic. Solving their poor performance would go a long way to eliminate IUU fishing globally, and there is a pressing need to hold these countries to account for their actions (or lack thereof), to monitor progress and to take remedial action where appropriate.

The summary insights flowing from this second update of the Index underline that the **risks of IUU fishing are dynamic**, and that the updates of the IUU Fishing Risk Index will help to track these dynamics in a meaningful way at the global scale.

Introduction

1

1. Introduction

1.1 Background

Between 2018 and 2020, annual global production from capture fisheries declined from 96.5 million tonnes to 90.3 million tonnes. This decline was probably due both to the disruption in fishing operations because of the COVID-19 pandemic and to reductions in China's reported catches. Considering longer trends over the past 25 years, capture fisheries production has remained stable, at around 90 million tonnes a year, with annual differences driven most strongly by variations in catches of anchoveta (*Engraulis ringens*).[3] Marine fisheries account for around 87% and inland fisheries for around 13% of capture fisheries production.[4]

In 2020, more than 38 million people were employed in capture fishing,[5] plus many millions of people who work in upstream businesses supplying inputs, and downstream marketing and processing. Activities range from individual entrepreneurs operating small, unmotorized dugout canoes, mainly for sustenance, to large, vertically integrated fishing companies, with single vessels valued at many millions of dollars that move between fishing zones globally.

Fish is a highly traded commodity and one of the most traded and valuable segments of the world food sector. In 2020, world exports of aquatic products (excluding algae) were valued at US$151 billion.[6] Different fish species have very different values, with some individual tuna selling for tens of thousands of dollars to sashimi markets, while small pelagic species, such as sardine and mackerel destined for canneries, selling for as little as US$100-200 per tonne. But even for low-value species, the large volumes of fish caught by larger vessels mean that the value of fish landed from a single fishing trip can run into hundreds of thousands of dollars.

These figures show that incentives for non-compliance and crime in the sector are considerable, given the financial benefits that can accrue across all scales of fishing operations. For larger industrial-scale vessels, the ability to catch large volumes of fish with a high first-sale value, and the need to cover high investment and operational costs, provide a motivation to engage in illegal activities. Motivations for illegal practices are equally prevalent in small-scale fisheries, given the weak management and enforcement of regulations in many countries. They include the relative financial benefits of illegal activity for those in small-scale fisheries with low incomes, increasing levels of trade from small-scale fisheries to high-value overseas markets, and the sector often serving as an 'activity of last resort' with people entering the sector when income-earning activities and ways to ensure food security from other sectors are limited.

As recognized in the Sustainable Development Goals,[7] sustainable management of the world's marine resources is vital for ensuring long-term benefits from the sector in terms of its contribution to food security, poverty alleviation and economic growth. However, between 1974 and 2019, it is estimated that the world's fisheries stocks remaining within biologically sustainable levels decreased from 90% to 64.6%.[8] Weak fisheries governance and IUU fishing have certainly contributed to these declines. The negative impacts of IUU fishing are not just environmental but also have profound social and economic impacts on communities, the wider supply chain and seafood sector, and ultimately consumers.

---

[3] FAO. 2022. The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome, FAO. https://doi.org/10.4060/cc0461en

[4] This paper focuses only on definitions and measurements of IUU fishing in capture fisheries. In 2020 the aquaculture sector produced an additional 88 million tonnes.

[5] Africa accounts for 15% of total employment, and for 15% of the world's fleet of 4.6 million fishing vessels

[6] FAO. 2022, op cit.

[7] SDG 14 is to 'Conserve and sustainably use the oceans, seas and marine resources for sustainable development'. https://sustainabledevelopment.un.org/sdg14

[8] FAO. 2016, op. cit.

Since the mid-1990s, many actions have been undertaken internationally, regionally, nationally and locally to eliminate IUU fishing. These have included international and regional agreements (voluntary and binding); improvements in monitoring, control and surveillance (MCS); sharing of intelligence; and the use of innovative technologies to identify and track fishing vessel activity. Yet despite these actions, IUU fishing remains a significant problem, as this Index highlights.

1.2 Why have an IUU Fishing Index?

Given the persistent concerns surrounding IUU fishing, several studies have attempted to measure and report on the extent of the problem. Perhaps the most widely quoted is a study from 2009, 'Estimating the worldwide extent of illegal fishing',[9] which indicated that in 2003, the volume of IUU-caught fish was equivalent to between 11% and 19% of reported catches, or 10-26 million tonnes of fish, with a value of between US$10 billion and US$23 billion. However, this study is of little practical use given its age (and use of 2005 data), the wide range between the upper and lower estimates, the lack of country-specific estimates and concerns over the basis for generating the global estimate. What it did provide was a much-needed wake-up call regarding the magnitude of the problem. More recent studies of IUU fishing do not provide the basis for a global estimate nor allow for meaningful comparisons at a global scale because they are often of low quality, use different methodologies, are patchy in terms of geographical coverage (focusing on specific regions or countries), or are limited to particular fisheries.

The IUU Fishing Risk Index was established in 2019 because of the lack of reliable global estimates of IUU fishing and data that allowed comparison between countries. The Index fills a critical gap, as it allows countries to be benchmarked for their exposure to and performance in combatting IUU fishing.

The Index measures and maps the prevalence of IUU fishing in 152 coastal states and their capacity to respond to and counter the threat of IUU fishing, as well as their exposure and vulnerability to the phenomenon. It also compares the degree to which states are exposed to and combat IUU fishing risk in four key 'responsibility' domains: coastal, flag, port and general. Each maritime state has its own strengths, weaknesses, challenges and vulnerabilities when it comes to IUU fishing risk. Therefore, combining these indicators into one comprehensive, comparative global index provides a tool for practitioners and policymakers to identify risk and determine where interventions need to be prioritized.

Having been launched in 2019 and updated in 2021, the 2023 update of the Index presented in this document provides an assessment of the current state of affairs, as well as recent changes in global IUU fishing risk dynamics.

---

[9] DJ Agnew et al., Estimating the Worldwide Extent of Illegal Fishing, PLOS ONE, 4, 2, 2009, e4570, doi:10.1371/journal.pone.0004570.

1.3 Methodology

The IUU Fishing Index uses 40 indicators, with each indicator applied to 152 countries with a maritime coastline. The suite of indicators provides a reliable and robust basis for an Index of IUU fishing and for assigning scores to countries.

The scores provide the basis for comparison between countries, regions and ocean basins, and serve to identify where action to combat IUU fishing is most needed.

For each country, a score is provided between 1 and 5 (1 = good/strong; 5 = bad/weak) comprised of weighted indicators belonging to different 'indicator groups'. Indicator groups relate to:

I. RESPONSIBILITIES

Coastal – indicators related to things states should do and their obligations in relation to IUU fishing that are specific to managing their exclusive economic zone (EEZ).

Flag – indicators related to things states should do and their obligations in relation to IUU fishing that are specific to vessels they flag (i.e. that are on their vessel register).

Port – indicators related to things states should do and their obligations in relation to IUU fishing that are specific to managing their ports.

General – indicators that are not specific to flag, coastal or port state responsibilities.

II. TYPES

Vulnerability – indicators that relate to risks that IUU fishing may occur.

Prevalence – indicators that relate to known/ suspected IUU incidents.

Response – indicators that relate to actions aimed at reducing IUU fishing.

The indicators are listed in tables 1 and 2.

Table 1
Indicator groups and names

Indicator Group	Indicator Name
Coastal state/ Vulnerability	· Size of EEZ · Agreement over all maritime boundaries · Authorized foreign vessels to operate in EEZ · Dependency on fish for protein
Coastal state/ Prevalence	· Has MSC-certified fisheries · Views of MCS practitioners on coastal compliance incidents[5]
Coastal state/ Response	· Coastal state is contracting party or cooperating non-contracting party to all relevant regional fisheries management organizations (RFMOs) · Operate a national vessel monitoring system (VMS) or fisheries monitoring centre (FMC)
Flag state/ Vulnerability	· Distant-water vessels on RFMO records of authorized vessels (RAVs) · Distant-water vessels under several RFMOs
Flag state/ Prevalence	· Vessels on IUU lists · View of fisheries observers on flag state compliance incidents · Views of MCS practitioners on flag state compliance incidents
Flag state/ Response	· Accepted Food and Agriculture Organization (FAO) Compliance Agreement · Registered vessels with foreign or unknown ownership · Provision of vessel data for inclusion in Global Record · Compliance with RFMO flag state obligations · Flag state is contracting party or cooperating non-contracting party to all relevant RFMOs
Port state/ Vulnerability	· Number of fishing ports · Port visits by foreign fishing or carrier vessels
Port state/ Prevalence	· Views of MCS practitioners on port compliance incidents · View of fisheries observers on port compliance incidents
Port state/ Response	· Party to the Port State Measures Agreement · Designated ports specified for entry by foreign vessels · Compliance with RFMO port state obligations
General/ Vulnerability	· Perception of levels of corruption · Gross national income per capita · Volume of catches · Trade balance for fisheries products · Share of global imports
General/Prevalence	· 'Carded' under the EU IUU Regulation · Identified by the National Oceanic and Atmospheric Administration (NOAA) for IUU fishing · Mentions of IUU fishing in media reports
General/ Response	· Mandatory vessel tracking for commercial seagoing fleet · Ratification/accession of United Nations Convention on the Law of the Sea (UNCLOS) · Ratification of UN Fish Stocks Agreement · Mentions in media reports on combating IUU fishing · Have a national plan of action to prevent, deter and eliminate IUU fishing (NPOA-IUU) · Demand for MSC products · Market state is contracting party or cooperating non-contracting party to relevant RFMOs

TABLE 2
Number of indicators in different indicator groups and subgroups

Responsibilities	Number	% of total
Flag	10	25.0%
Coastal	8	20.0%
Port	7	17.5%
General	15	37.5%
Total	**40**	

Types	Number	% of total
Vulnerability	13	32.5%
Prevalence	10	25.0%
Response	17	42.5%
Total	**40**	

Subgroups	Number	% of total
Flag vulnerability	2	5.0%
Flag prevalence	3	7.5%
Flag response	5	12.5%
Coastal vulnerability	4	10.0%
Coastal prevalence	2	5.0%
Coastal response	2	5.0%
Port vulnerability	2	5.0%
Port prevalence	2	5.0%
Port response	3	7.5%
General vulnerability	5	12.5%
General prevalence	3	7.5%
General response	7	17.5%
Total	**40**	

All countries are assigned individual scores, and their scores are also allocated to both a region and relevant ocean basin(s), allowing for Index scores to be analyzed by individual country, region and ocean basin. Scores for any region or ocean basin are the average scores of all countries in that region/ocean basin. Where countries have a coastline bordering two ocean basins, their scores are included in the averages of both ocean basins.

The database underpinning the IUU fishing risk scores contains 5 690 separate data entries, with a high (98.2%) response/completion rate across all indicators/countries. Sources of data for the indicators include a mix of publicly available sources, country correspondents for certain indicators that require factual data at country level, and expert opinion. A full methodological description is provided on the IUU Fishing Risk Index website at (**www.iuufishingindex.net/methodology**). The methodology paper describes the basis for selecting indicators, sources of data, thresholds used for scores between 1 and 5 for the values associated with each indicator, strengths and weaknesses of each indicator, weightings of different indicators, and other technical considerations.

The methodological paper acknowledges and discusses weaknesses of the Index and its indicators. No composite indicator, or index, can ever be 'perfect' and render through a score – or series of scores – a comprehensive and unfailingly accurate picture of a complex real-world situation. An index always remains an approximation and will always resonate more with the real-world situation on the ground in some instances and less in others.

Indicator groups and names

How to read this diagram

Type related
arrow head shape

Vulnerability ○

Prevalence □

Response △

Weighting
radius lenght

Low

Medium

High

COASTAL STATE

Size of EEZ
Agreement over all maritime boundaries
Dependency on fish for protein
Authorize foreign vessels to operate in EEZ
Views of MCS practitioners on coastal compliance incidents
Has MSC-certified fisheries
Operate a national VMS/FMC centre
Coastal State is contracting party or cooperating non-contracting party to all relevant RFMOs

FLAG STATE

Distant water vessels on RFMO RAVs
Distant water vessels under several RFMOs
View of fisheries observers on flag state compliance incidents
View of fisheries observers on flag state compliance incidents
Views of MCS practitioners on flag state compliance incidents
Compliance with RFMO flag state obligations
Provision of vessel data for inclusion in Global Record
Flag State is contracting party or cooperating non-contracting party to all relevant RFMOs
Accepted FAO Compliance Agreement
Registered vessels with foreign or unknown ownership

PORT STATE

Number of fishing ports
Port visits by foreign fishing or carrier vessels
Views of MCS practitioners on port compliance incidents
View of fisheries observer on port compliance incidents
Designated ports specified for entry by foreign vessels
Compliance with RFMO port state obligations
Party to the PSMA

GENERAL STATE

Perception of levels of corruption
Gross national income per capita
Volume of catches
Share of global imports
Trade balance for fisheries products
Mentions of IUU fishing in media reports
Identified by NOAA for IUU fishing
Trade balance for fisheries products
Mandatory vessel tracking for commercial seagoing fleet
Mentions in media reports to combatting IUU fishing
Demand for MSC products
Mentions in media reports to combatting IUU fishing
Market State is contracting party or cooperating non-contracting party to relevant RFMOs
Ratification/accession of UNCLOS Convention
Ratification/accession of UNFSA

17

18

Introduction
to the results

2

2. Introduction to the results

2.1 Structure of this report

For ease of comparison, the results of this 2023 update of the Index are presented using the same structure as the 2019 and 2021 reports. The report is organized into sections as follows:

Section 3 provides overall results for the combined flag, coastal, port and general indicators, highlighting the best- and worst-performing countries and exploring differences in scores between regions and ocean basins.

Section 4 provides results pertaining to **coastal** states, presenting data on scores by type (i.e. vulnerability, prevalence and response), and highlighting geographical differences.

Section 5 provides results for **flag** states, presenting data on scores by type and highlighting geographical differences.

Section 6 provides results for **port** states, states, presenting data on scores by type and highlighting geographical differences.

Section 7 provides results for **general** indicators not specific to other responsibilities, presenting data on scores by type and highlighting geographical differences.

Section 8 highlights key findings arising from the 2023 results.

Section 9 provides an introduction to the IUU Fishing Risk Index website (**www.iuufishingindex.net**).

2.2 Comments on interpretation of scores

The main use of the scores is to allow for a comparison of IUU fishing risk between countries, regions and ocean basins for single indicators or for different indicator groups. This enables users of the Index to identify more/less affected countries/regions/ocean basins and to determine where risk, and therefore action to combat IUU fishing, is most needed. The scores in 2023 are also useful for assessing change that may have occurred since 2019 and 2021.

Scores between indicator groups are not directly comparable because the specification thresholds and weightings differ across indicator groups. For example, a score of 2.5 for coastal state indicators is not directly comparable with a score of, say, 2.2 for port state indicators, and so does not imply that coastal state performance is worse than port state performance, or that more effort needs to be focused on coastal states than on port states.

The scores for countries contained in the Index are not a proxy for the volumes and values of IUU harvests. They represent a standardized risk score derived from the 40 indicators included in the Index. Therefore, the scores represent a unified measure of vulnerability, prevalence and response across different state responsibilities.

The IUU fishing country scores cannot – and should not – be used with any algorithm to generate estimated volumes and values of IUU fish catch for different countries. A score of 1 for vulnerability, prevalence and response indicators does not imply that a country has no IUU fishing, although it certainly implies low risk and very good performance. Likewise, a score of 5 for response indicators does not imply that a country is doing nothing to combat IUU fishing, but it does clearly indicate that there are actions to tackle IUU fishing which remain unexplored, and which such countries could/should envisage.

How to read the fishbone graphics used in this report

5

3

1

Skull and tail

Represents the overall IUU Fishing score, larger fish skull and tail showing high/poor scores

Coastal
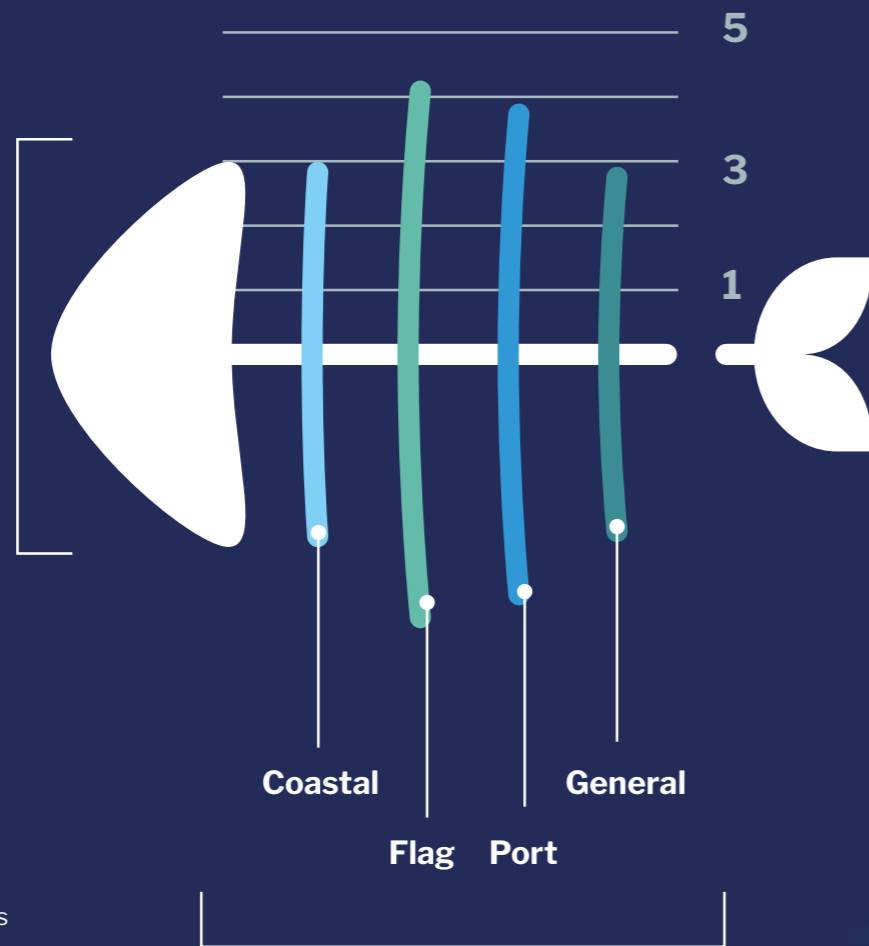
General

Flag   **Port**

Fishbones

The fishbones represent the coastal, flag, port, and general state responsibilities, with larger fishbones showing high/poor scores.

IUU fishing risk
scores combined
across coastal,
flag, port and
general state
responsibilities

3

- 5.0
- 4.5
- 4.0
- 3.5
- 3.0
- 2.5
- 2.0
- 1.5
- 1.0
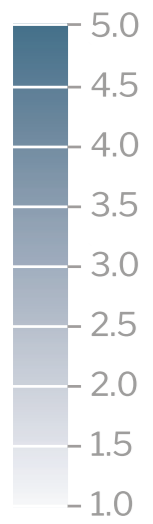
landlocked countries

2.28 World overall 2023
IUU score

3. IUU fishing risk scores combined across coastal, flag, port and general state responsibilities

3.1 Introduction and distribution of scores

No country has a score above 4.00 or below 1.49 when the individual country scores are aggregated by responsibility (Table 3, column 2). Many countries (126 or 83%) fall within the 2.00 to 2.99 range. When the scores aggregated by responsibility are broken down by indicator type (vulnerability, prevalence and response), scores for countries are more widely distributed for response and vulnerability indicators, while a high percentage (86%) of countries score between 1.00 to 1.99 for prevalence.

TABLE 3
Number of countries within score ranges for IUU fishing risk scores by type, aggregated across all responsibilities, 2023

Range	IUU Score Distribution	Vulnerability Score Distribution	Prevalence Score Distribution	Response Score Distribution
4.50—5.00	0	0	0	0
4.00—4.49	0	5	1	0
3.50—3.99	1	12	0	6
3.00—3.49	1	37	4	23
2.50—2.99	27	55	4	44
2.00—2.49	99	30	13	38
1.50—1.99	24	12	48	37
1.00—1.49	0	1	82	4

Notes: * 30 countries had no prevalence scores because of missing data; ** 9 countries had no response scores because of missing data.

3.2 Key findings

In 2023, the global total score, aggregated across all state responsibilities and types of indicator, **is 2.28, up slightly (+1%) from 2.24 in 2019. While this marginal increase falls within the range of reasonable error, the resulting score establishes that there has been no significant shift or improvement in overall global IUU fishing risk.**

Individual country scores, aggregated across all indicator responsibilities and types, **range from 1.62 for Romania (the best-performing country) to 3.69 for China (the worst-performing country in 2023**, as was the case in 2019 and 2021. A full list of scores for all 152 countries aggregated across responsibilities is provided in the Annex at the end of this report. The reasons underlying these scores are more fully discussed in later sections, which consider coastal, flag, port and general state responsibilities and the indicators associated with them.

Comparing 2021 to 2023, **countries that most improved their ranking** were Argentina, Seychelles and Trinidad and Tobago, while countries that had the greatest drop in ranking were Peru, Sri Lanka and Papua New Guinea.

Tables 4 and 5 show the 10 countries with the highest (worst performing) and lowest (best performing) scores for aggregated responsibilities and all types of indicators, as well as for indicators broken down by vulnerability, prevalence and response.

When scores aggregated across responsibilities and types of indicators in 2023 are compared to 2021, **China, Russia, South Korea, Yemen, Taiwan and Ukraine remained, while India, Iran, Indonesia and Comoros joined the list of the 10 worst-performing countries**. Somalia, Eritrea, Egypt and Libya dropped off the list.

As Table 4 shows, the 10 top-scoring countries for vulnerability in 2023 were largely unchanged from 2021, with the exception of France replacing Italy as one of the 10 worst-performing countries. In terms of prevalence, **five countries – Indonesia, India, Russia, Ghana and Cameroon – entered the list of**

worst-performing countries in 2023, joining China, Taiwan, South Korea, Vietnam and Ecuador. In 2023, only the United Arab Emirates, Yemen and North Korea remained on the list of the 10 worst-performing countries for response indicators, with Kuwait, Qatar, Jamaica, Lebanon, Democratic Republic of Congo, Israel and Iran entering the list for the first time.

As Table 5 shows, in 2023, four countries (Romania, Finland, Belgium and Sweden) remained on the list of the 10 best-performing countries for scores aggregated across responsibilities and types of indicators, with Australia, Iceland, Argentina, Monaco, Canada and Slovenia entering the top ten for the first time. **European countries continued to dominate the list of the 10 best-performing countries**, as they did in 2021.

Tables 6 and 7 show **scores by region and ocean basin**, again aggregated by responsibility and then broken down into vulnerability, prevalence and response.

In 2023, the only regions to improve their scores aggregated across responsibilities were Europe and North America. The scores for Africa and Asia were the same in 2023 as in 2021, while the other regions had worse scores. Asia remained the region with the worst rank/score. Regional scores for vulnerability aggregated for all types of state responsibility, changed very little in 2023 compared to 2021. Prevalence scores improved only in North America, while response scores improved in the Caribbean and Central America, Africa, Asia and North America but worsened in the other regions.

In 2023, for ocean basins, the **West Indian Ocean and the Western Pacific had the worst overall rank and score** aggregated across all responsibilities, **while the East Atlantic remained the best-performing ocean basin.** All ocean basins had worse scores for prevalence in 2023 than in 2021. For response indicators, the West Indian Ocean remained the worst-performing region and had a worse score than in 2021. The Mediterranean, East Atlantic and the East Indian Ocean also had worse scores, whereas the other ocean basins improved their scores since 2021.

TABLE 4

Ten worst-performing countries

for IUU fishing risk scores by type, for all types of state responsibility, 2023

All Types

#1 China
3.69

#2 Russia
3.20

#3 Yemen
2.99

#4 India
2.97

#5 Iran
2.93

#6 Indonesia
2.89

#7 Taiwan
2.88

#8 Comoros South
2.81

#9 Korea
2.76

#10 Ukraine
2.72
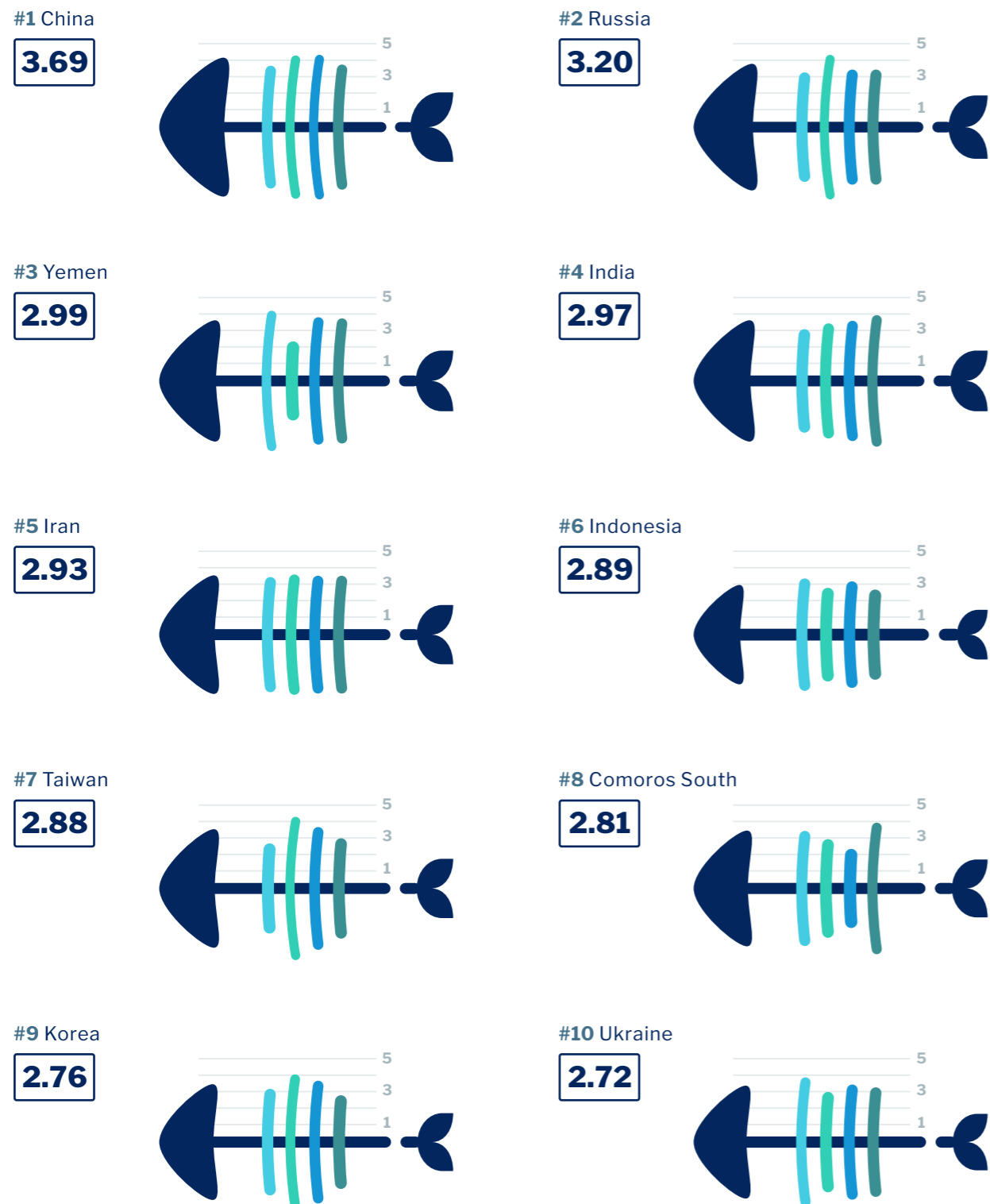
The fishbone colours, by responsibility:

● Coastal   ● Flag   ● Port   ● General

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	China	4.32	China	4.32	China	4.44
#2	Japan	4.28	Japan	4.28	Japan	4.28
#3	Russia	4.26	USA	4.12	Russia	4.22
#4	USA	4.12	Russia	4.09	USA	3.96
#5	Indonesia	4.08	Indonesia	4.08	France	3.92
#6	France	3.92	South Korea	4.00	Indonesia	3.92
#7	South Korea	3.88	France	3.92	Philippines	3.92
#8	Morocco	3.84	Morocco	3.72	South Korea	3.91
#9	Norway	3.68	Peru	3.68	Spain	3.91
#10	Peru	3.68	Italy	3.64	Morocco	3.84

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	China	4.3	China	4.19	China	4.44
#2	Taiwan	3.41	South Korea	3.15	Taiwan	4.28
#3	Indonesia	3.22	Taiwan	3.11	Vietnam	4.22
#4	South Korea	3.19	Thailand	2.74	Thailand	3.96
#5	Vietnam	3.11	Seychelles	2.52	Panama	3.92
#6	India	2.95	Vietnam	2.48	Russia	3.92
#7	Russia	2.78	Ecuador	2.44	Cambodia	3.92
#8	Ecuador	2.7	USA	2.33	Sierra Leone	3.91
#9	Ghana	2.56	Senegal	2.30	Ecuador	3.91
#10	Cameroon	2.48	Saint Vincent & the Grenadines[7]	2.19	Indonesia	3.84

Response

Rank	Country	2023	Country	2021	Country	2019
#1	United Arab Emirates	3.96	Eritrea	3.94	Singapore	4.29
#2	Yemen	3.86	Singapore	3.87	Cambodia	4.00
#3	Kuwait	3.8	Yemen	3.83	Yemen	4.00
#4	Qatar	3.8	United Arab Emirates	3.82	Sant Lucia	3.81
#5	North Korea	3.7	N Korea	3.80	Haiti	3.80
#6	Jamaica	3.69	Dominican Republic	3.80	N Korea	3.75
#7	Lebanon	3.48	Brunei Darussalam	3.80	Iraq	3.73
#8	Congo, DRC	3.48	Georgia	3.59	Cameroon	3.71
#9	Israel	3.44	Bahrain	3.50	Jamaica	3.71
#10	Iran	3.43	Congo, R. (+ 1 other)[8]	3.50	Grenada	3.71

7 Somalia also scores 2.19 for prevalence indicators.
8 Dominica also scores 3.50 for response indicators.

TABLE 5

Ten best-performing countries

for IUU fishing risk scores by type, for all types of state responsibility, 2023

All Types

#1 Romania

1.62

#2 Finland

1.72

#3 Belgium

1.75

#4 Sweden

1.80

#5 Australia

1.82

#6 Iceland

1.84

#7 Argentina

1.85

#8 Monaco

1.85

#9 Canada

1.85

#10 Slovenia

1.86
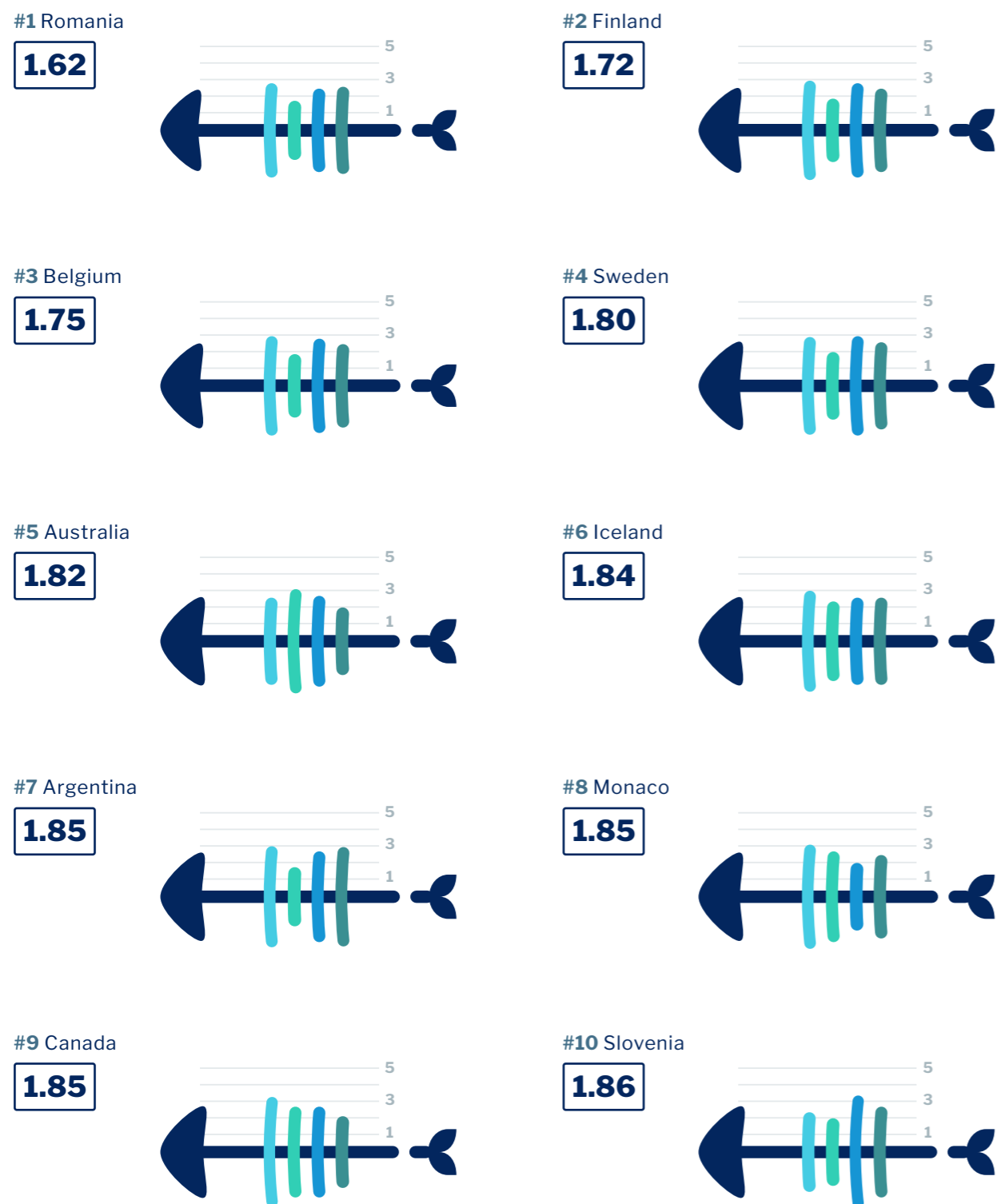
The fishbone colours, by responsibility:

● Coastal   ● Flag   ● Port   ● General

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Monaco	**1.33**	Germany	1.00	Monaco	1.56
#2	Bahrain	**1.55**	Monaco	1.67	Belgium	1.80
#3	Brunei Darussalam	**1.76**	Saint Vincent & the Grenadines	1.76	Slovenia	1.80
#4	Saudi Arabia	**1.77**	Dominica	1.80	Uruguay	1.87
#5	Dominica	**1.8**	Estonia	1.80	Barbados	1.95
#6	Slovenia	**1.84**	Saint Kitts & Nevis	1.89	Dominica	2.00
#7	Romania	**1.88**	Djibouti	1.91	Estonia	2.00
#8	Antigua & Barbuda	**1.89**	Barbados	1.95	Latvia	2.00
#9	Saint Vincent & the Grenadines	**1.91**	Finland	1.95	Finland	2.05
#10	Singapore	**1.92**	Bosnia & Herzegovina (+ 3 others)	2.00	Israel	2.05

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Denmark	**1**	Denmark	1.00	Canada	1.00
#2	Germany	**1**	Germany	1.00	Denmark	1.00
#3	Netherlands	**1**	New Zealand	1.07	Iceland	1.00
#4	Sweden	**1.07**	Solomon Isl.	1.07	New Zealand	1.00
#5	Argentina	**1.1**	Sweden	1.07	Norway	1.00
#6	Canada	**1.11**	Canada	1.11	Sweden	1.00
#7	Iceland	**1.11**	Netherlands	1.11	Ireland	1.07
#8	Estonia	**1.15**	Latvia	1.15	Estonia	1.15
#9	Ireland	**1.19**	Australia	1.22	Finland	1.22
#10	Latvia (+ 3 others)	**1.22**	Finland (+ 5 others)	1.22	France	1.22

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Canada	**1.22**	Canada	1.22	Belgium	1.28
#2	Australia	**1.36**	Ghana	1.36	Poland	1.50
#3	USA	**1.39**	Australia	1.39	Latvia	1.53
#4	Ghana	**1.44**	Chile	1.39	Bulgaria	1.53
#5	Ecuador	**1.5**	New Zealand	1.39	Ghana	1.56
#6	Thailand	**1.56**	Bulgaria	1.48	USA	1.56
#7	Japan	**1.58**	Sri Lanka	1.53	Australia	1.58
#8	Romania	**1.58**	USA	1.53	Belize	1.61
#9	Iceland	**1.61**	Iceland	1.56	Iceland	1.62
#10	Vietnam	**1.63**	Romania	1.56	Canada	1.64

TABLE 6

Scores for regions

by type, for all types of state responsibility, 2023

All Types

#1 Asia

2.51

#2 Middle East

2.36

#3 Africa

2.33

#4 South America

2.32

#5 Caribbean and Central America

2.26

#6 Oceania

2.17

#7 Europe

2.09

#8 North America

2.09

The fishbone colours, by responsibility:

● Coastal ● Flag ● Port ● General

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	North America	**3.84**	North America	3.84	North America	3.71
#2	Asia	**3.13**	Asia	3.16	Asia	3.32
#3	South America	**2.99**	South America	2.97	Oceania	3.06
#4	Africa	**2.95**	Africa	2.93	Africa	3.05
#5	Oceania	**2.87**	Oceania	2.84	South America	2.90
#6	Europe	**2.71**	Europe	2.70	Europe	2.75
#7	Caribbean & Central America	**2.54**	Caribbean & Central America	2.53	Middle East	2.60
#8	Middle East	**2.36**	Middle East	2.51	Caribbean and Central America	2.58
	World overall	**2.82**	**World overall**	2.82	**World overall**	2.91

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Asia	**2.16**	Asia	1.97	Asia	2.05
#2	Africa	**1.66**	North America	1.72	Africa	1.57
#3	South America	**1.64**	Africa	1.63	South America	1.15
#4	Caribbean & Central America	**1.58**	South America	1.56	Caribbean and Central America	1.48
#5	North America	**1.5**	Oceania	1.46	Oceania	1.44
#6	Oceania	**1.49**	Caribbean & Central America	1.45	North America	1.43
#7	Middle East	**1.47**	Europe	1.35	Europe	1.37
#8	Europe	**1.39**	Middle East	1.35	Middle East	1.33
	World overall	**1.62**	**World overall**	1.55	**World overall**	1.54

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Middle East	**3.16**	Middle East	3.12	Middle East	3.24
#2	Caribbean & Central America	**2.65**	Caribbean & Central America	2.73	Asia	2.77
#3	Africa	**2.43**	Asia	2.47	Caribbean and Central America	2.70
#4	South America	**2.36**	Africa	2.46	Africa	2.60
#5	Asia	**2.33**	South America	2.25	South America	2.27
#6	Oceania	**2.23**	Oceania	2.03	Oceania	2.15
#7	Europe	**2.17**	Europe	1.95	Europe	2.10
#8	North America	**1.31**	North America	1.38	North America	1.60
	World overall	**2.41**	**World overall**	2.36	**World overall**	2.48

TABLE 7

Scores for ocean basins

by type, for all types of state responsibility, 2023
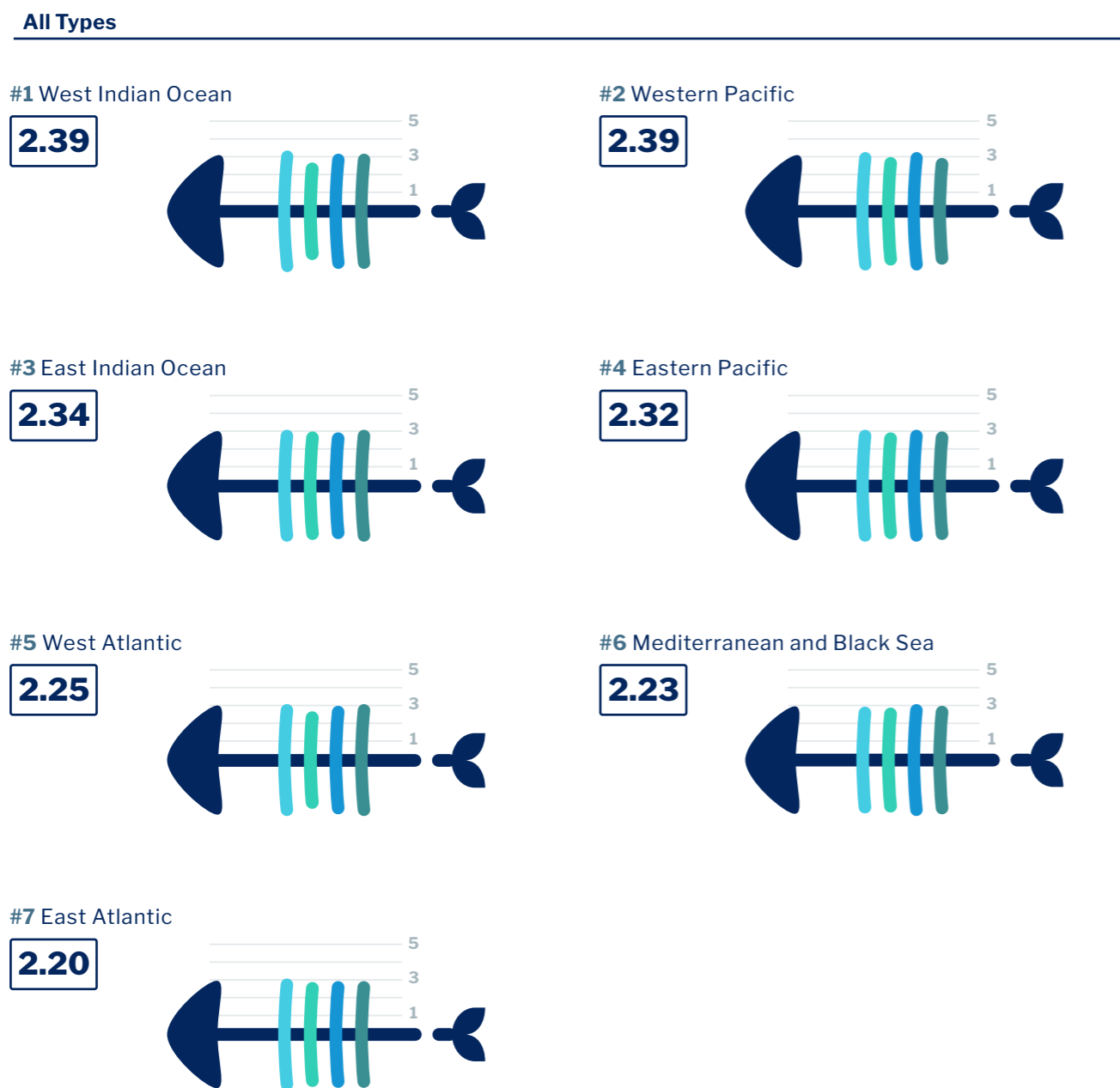
All Types

#1 West Indian Ocean

2.39

#2 Western Pacific

2.39

#3 East Indian Ocean

2.34

#4 Eastern Pacific

2.32

#5 West Atlantic

2.25

#6 Mediterranean and Black Sea

2.23

#7 East Atlantic

2.20

The fishbone colours, by responsibility:

● Coastal   ● Flag   ● Port   ● General

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Eastern Pacific	**3.23**	Eastern Pacific	3.24	Western Pacific	3.27
#2	Western Pacific	**3.08**	Western Pacific	3.09	East Indian Ocean	3.20
#3	East Indian Ocean	**3.03**	East Indian Ocean	3.03	Eastern Pacific	3.14
#4	East Atlantic	**2.91**	East Atlantic	2.88	East Atlantic	2.96
#5	Mediterranean & Black Sea	**2.72**	Mediterranean & Black Sea	2.79	West Indian Ocean	2.87
#6	West Indian Ocean	**2.7**	West Indian Ocean	2.71	Mediterranean and Black Sea	2.86
#7	West Atlantic	**2.68**	West Atlantic	2.67	West Atlantic	2.70
	World overall	**2.82**	**World overall**	2.82	**World overall**	2.91

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Western Pacific	**1.94**	Western Pacific	1.85	Western Pacific	1.88
#2	East Indian Ocean	**1.92**	East Indian Ocean	1.67	East Indian Ocean	1.76
#3	Eastern Pacific	**1.76**	Eastern Pacific	1.57	Eastern Pacific	1.60
#4	West Indian Ocean	**1.6**	West Indian Ocean	1.54	West Indian Ocean	1.50
#5	West Atlantic	**1.57**	East Atlantic	1.50	East Atlantic	1.47
#6	East Atlantic	**1.56**	West Atlantic	1.48	West Atlantic	1.47
#7	Mediterranean & Black Sea	**1.48**	Mediterranean & Black Sea	1.40	Mediterranean and Black Sea	1.42
	World overall	**1.62**	**World overall**	1.55	**World overall**	1.54

Response

Rank	Country	2023	Country	2021	Country	2019
#1	West Indian Ocean	**2.81**	West Indian Ocean	2.72	West Indian Ocean	2.78
#2	West Atlantic	**2.51**	West Atlantic	2.58	West Atlantic	2.57
#3	Mediterranean & Black Sea	**2.47**	Mediterranean & Black Sea	2.37	East Indian Ocean	2.51
#4	Western Pacific	**2.26**	Western Pacific	2.28	Mediterranean and Black Sea	2.51
#5	East Atlantic	**2.21**	East Atlantic	2.14	Western Pacific	2.41
#6	East Indian Ocean	**2.17**	Eastern Pacific	2.14	East Atlantic	2.28
#7	Eastern Pacific	**2.12**	East Indian Ocean	2.11	Eastern Pacific	2.07
	World overall	**2.41**	**World overall**	2.36	**World overall**	2.48

IUU scores on coastal state responsibilities

4

- 5.0
- 4.5
- 4.0
- 3.5
- 3.0
- 2.5
- 2.0
- 1.5
- 1.0
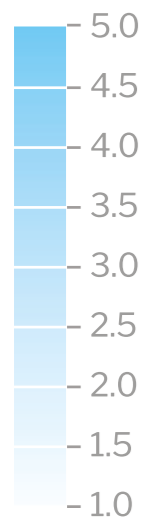
landlocked countries

2.46 World overall 2023 **Coastal score**

4. IUU scores on coastal state responsibilities

4.1 Introduction and distribution of scores

Table 8 shows the indicators included within coastal state responsibilities. The risk of IUU fishing tends to increase in countries that have large EEZs, do not have agreed maritime boundaries, authorize foreign vessels to fish in their EEZ and have high dependency on fish for protein. Having MSC-certified fisheries is an indication that actual levels of IUU fishing may be low given MSC criteria associated with certification. And the views of those working in MCS also provide a good indication of which countries are most commonly associated with IUU fishing incidents. Responses by states that contribute to reduced levels of IUU fishing in their EEZs include becoming a contracting party or cooperating non-contracting party to the regional fisheries management organizations (RFMOs) relevant to the ocean basins in which the state is located, and establishing a fisheries monitoring centre (FMC) capable of monitoring fishing vessel location using a vessel monitoring system (VMS).

TABLE 8
Coastal state indicators.

Indicator Group	Indicator Name
Coastal state/ Vulnerability	· Size of EEZ · Agreement over all maritime boundaries · Authorized foreign vessels to operate in EEZ · Dependency on fish for protein
Coastal state/ Prevalence	· Has MSC-certified fisheries · Views of MCS practitioners4 on coastal compliance incidents
Coastal state/ Response	· Coastal state is contracting party or cooperating non-contracting party to all relevant RFMOs · Operate a national VMS/FMC centre

As Table 9 shows, when all indicator types are combined for coastal state responsibilities, 148 countries (97% of those in the Index) scored between 1.50 and 3.49. The scores most evenly distributed across the entire range were for vulnerability, while prevalence and response indicators both had over 50% of countries scoring within a single score range (2.50 to 2.99 for prevalence and 1.00 to 1.49 for response indicators).

TABLE 9
Number of countries within score ranges for coastal state IUU fishing risk scores, 2023

Range	Coastal	Coastal by Vulnerability	Coastal by Prevalence	Coastal by Response
4.50—5.00	0	9	2	0
4.00—4.49	1	28	2	7
3.50—3.99	2	19	10	0
3.00—3.49	20	25	18	19
2.50—2.99	59	24	79	9
2.00—2.49	43	24	20	0
1.50—1.99	26	23	10	37
1.00—1.49	1	10	11	80

4.2 Key findings

Tables 10 and 11 show the 10 best- and 10 worst-performing countries in terms of coastal state responsibilities, by indicator type and by region and ocean basin.

In 2023, the average IUU fishing score for coastal state responsibilities, aggregated for all types of indicators, was 2.46, almost identical to 2.45 in 2021. Between 2021 and 2023, vulnerability scores improved very slightly, whereas prevalence and response scores worsened slightly.

Indicators with improved scores in 2023:

· 'Agreement over all maritime boundaries'. The 2023 data revealed eight more countries with previously unresolved maritime boundary issues that have managed to find a satisfactory agreement with their neighbour(s). While such maritime boundaries may not be fully established and permanently settled as per UNCLOS provisions, a formal agreement has been established to manage the area in a mutually agreeable manner (e.g. managed boundary between Senegal and Guinea Bissau).

· 'Authorize foreign vessels to operate in EEZ'. The overall score in 2023 improved primarily because blank country responses were further reduced, with the net outcome that more countries were identified as not authorizing foreign vessels to operate in their EEZ.

· 'Dependency on fish for protein'. In 2023, 13 countries changed their scoring band, with eight slipping into a lower and five into a higher fish-consumption band. Some of these changes were minor, such as a country moving to another band but with minimum change in actual consumption. The reasons for more important changes may include a civil conflict or a gradual change in diet away from seafood to other sources of protein.

· 'Has MSC-certified fisheries'. In 2023, 45 countries had at least one MSC-certified fishery, compared to 44 in 2021 (although developed countries continued to dominate the list of MSC client countries), and there were 247 certified fisheries, compared to 174 in 2021.

Indicators with worse scores in 2023:

- Views of MCS practitioners on coastal compliance incidents'. A larger number and greater variety of countries were highlighted as being of concern in 2023 (48 countries) than in 2021 (31 countries).

- Coastal state is contracting party or cooperating non-contracting party to all relevant RFMOs'.

Indicators with scores unchanged in 2023:

- Size of EEZ'. This indicator score did not change, which was to be expected as the same data source was used as in earlier updates.

- Operate a national VMS/FMC centre'. More country feedback was achieved, but the proportion of countries having/not having a national VMS/FMC centre, remained the same.

Individual **country scores**, aggregated across indicator types for coastal responsibilities **ranged from 1.44 for Poland** (the best-performing country) **to 4.00 for Yemen** (the worst-performing country). Somalia, Ukraine, Indonesia and Madagascar were among the 10 worst-performing countries in 2023 but not in 2021.

In **2023, the 10 worst-performing countries for combined indicator types were developing states** (as was the case in 2021 and 2019), highlighting the generally heightened risk of IUU fishing in developing coastal states. Conversely, **European countries dominated the list of best coastal state performers** across all types (as they did in 2021 and 2019).

The most vulnerable coastal states included both developed and developing countries, with the same 10 worst-performing countries in 2021 and 2023, except for **Cook Islands replacing Vanuatu in 2023.**

Developing countries featured strongly on the list of countries with the worst scores for coastal prevalence and response, underlining the combination of strong exposure to risk and weaker governance affecting such states – both of which are likely often correlated.

Between 2021 and 2023, there were many changes for prevalence indicators, with Indonesia, Philippines, Angola, Gabon, Guinea and India all joining the list of 10 worst-performing countries in 2023. In contrast, there were few changes for **response indicators in 2023 compared to 2021**, although Saudi Arabia, Ukraine and Yemen joined the list of the 10 worst-performing countries. Many of the best-performing countries for response in 2021 remained on the list in 2023, partly due to the large number of countries scoring 1.00 because the Index includes only two coastal prevalence indicators and two coastal response indicators.

When examined by region (Table 12), **Africa remained the worst-performing region** in 2023, and **Europe remained the best-performing region**. The Caribbean and Central America and Europe were the only two regions to improve their scores compared to 2021.

Among the ocean basins, the West Indian Ocean had the worst score in 2023, as was the case in 2021, with a slight worsening of its score in 2023. The Western Pacific and the Mediterranean and Black Sea were the only two regions to improve their scores in 2023 compared to 2021.

Vulnerability and prevalence scores improved very slightly in 2023 compared to 2021, while response scores got worse. The Mediterranean and Black Sea was the only ocean basin to significantly improve its vulnerability score, while the East Indian Ocean replaced West Indian Ocean as the worst-performing ocean basin for response, and the Eastern Pacific replaced the East Atlantic as the best-performing ocean basin for response. All ocean basins declined in performance for response indicators in 2023, with the overall coastal response score worsening from 1.54 in 2021 to 1.67 in 2023.

TABLE 10

Ten worst-performing countries

for coastal state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 Yemen

4.00

#2 Congo, R.

3.69

#3 Somalia

3.63

#4 Ukraine

3.44

#5 Equatorial Guinea

3.38

#6 Indonesia

3.38

#7 Sao Tome & Principe

3.38

#8 Guyana

3.25

#9 Madagascar

3.25

#10 Nigeria

3.19

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Japan	5.00	Japan	5.00	Japan	5.00
#2	China	4.83	China	4.83	Kiribati	5.00
#3	France	4.83	France	4.83	Seychelles	5.00
#4	Canada	4.67	Canada	4.67	China	4.83
#5	South Korea	4.67	South Korea	4.67	Fiji	4.83
#6	Mauritius	4.67	Mauritius	4.67	France	4.83
#7	USA	4.67	USA	4.67	Philippines	4.83
#8	Russia	4.50	Russia	4.50	Vietnam	4.75
#9	United Kingdom	4.50	United Kingdom	4.50	Denmark	4.67
#10	Cook Islands	4.33	Vanuatu	4.50	Mauritius	4.67

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Somalia	5.00	Seychelles	5.00	Ecuador	5.00
#2	Indonesia	4.60	Ecuador	4.40	Philippines	4.40
#3	Vietnam	4.40	Guinea-Bissau	4.40	Sierra Leone	4.40
#4	Philippines	4.00	Mozambique	4.40	Somalia	4.40
#5	Angola	3.80	Somalia	4.40	Taiwan	4.40
#6	Gabon	3.80	Tanzania	4.40	Thailand	4.40
#7	Ghana	3.80	Thailand	4.40	Cambodia	3.80
#8	Guinea	3.80	Vietnam	4.00	China	3.80
#9	Guinea-Bissau	3.80	Cote d'Ivoire	3.80	Colombia	3.80
#10	India	3.80	Ghana (+ 5 others)	3.80	Gabon	3.80

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Congo, R. of	5.00	Argentina	5.00	Timor-Leste	4.60
#2	Argentina	5.00	Congo, R.	5.00	Cambodia	4.20
#3	Jamaica	4.20	Benin	4.20	Cameroon	4.20
#4	Benin	4.20	Jamaica	4.20	Haiti	4.20
#5	Saint Kitts & Nevis	4.20	Saint Kitts & Nevis	4.20	Jamaica	4.20
#6	Equatorial Guinea	3.40	Equatorial Guinea	3.40	Myanmar	4.20
#7	Eritrea	3.40	Eritrea	3.40	Saint Kitts and Nevis	4.20
#8	Greece	3.40	Greece	3.40	Saint Lucia	4.20
#9	Guyana	3.40	Guyana	3.40	Togo	4.20
#10	Iraq (+ 7 others)	3.40	Iraq (+ 7 others)	3.40	Albania	3.40

TABLE 11

Ten best-performing countries

for coastal state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 Poland

1.44

#2 Latvia

1.50

#3 Syria

1.50

#4 Slovenia

1.56

#5 Denmark

1.63

#6 Ireland

1.63

#7 Netherlands

1.63

#8 Spain

1.63

#9 Belize

1.69

#10 Germany (+ 3 others)

1.69
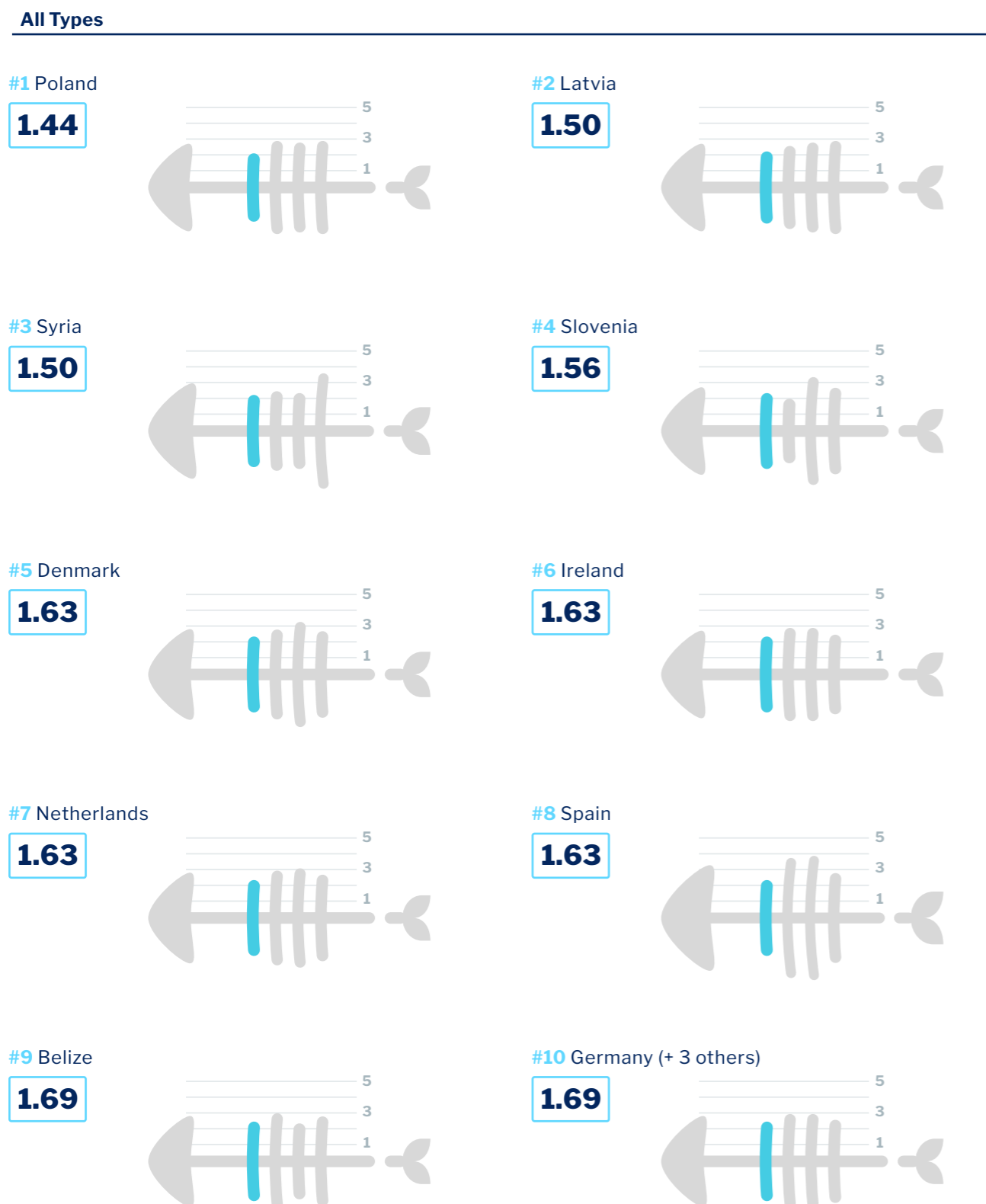
Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Djibouti	**1.00**	Djibouti	1.00	Djibouti	1.00
#2	Monaco	**1.00**	Monaco	1.00	Monaco	1.00
#3	Poland	**1.17**	Cameroon	1.17	Slovenia	1.17
#4	Slovenia	**1.17**	Poland	1.17	Bahrain	1.25
#5	Cameroon	**1.17**	Slovenia	1.17	Belgium	1.33
#6	Bahrain	**1.25**	Bahrain	1.25	Latvia	1.33
#7	Latvia	**1.33**	Congo (DRC)	1.33	Belize	1.50
#8	Uruguay	**1.33**	Dominica	1.33	Estonia	1.50
#9	Dominica	**1.33**	Latvia	1.33	Germany	1.50
#10	Congo, DRC	**1.33**	Uruguay	1.33	Lithuania	1.50

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Denmark	**1.00**	Canada	1.00	Australia	1.00
#2	France	**1.00**	Denmark	1.00	Canada	1.00
#3	Germany	**1.00**	Germany	1.00	Denmark	1.00
#4	Netherlands	**1.00**	Netherlands	1.00	France	1.00
#5	Russia	**1.00**	Russia	1.00	Germany	1.00
#6	Spain	**1.00**	United Kingdom	1.00	Iceland	1.00
#7	Argentina	**1.40**	Argentina	1.40	Netherlands	1.00
#8	Ireland	**1.40**	Chile	1.40	New Zealand	1.00
#9	South Korea	**1.40**	Mexico	1.40	Norway	1.00
#10	Sweden (and Taiwan)	**1.40**	New Zealand (+ 3 others)	1.40	Russia	1.00

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Albania	**1.00**	Albania	1.00	Algeria	1.00
#2	Algeria	**1.00**	Algeria	1.00	Angola	1.00
#3	Angola	**1.00**	Angola	1.00	Australia	1.00
#4	Australia	**1.00**	Australia	1.00	Bahrain	1.00
#5	Bahrain	**1.00**	Bahrain	1.00	Barbados	1.00
#6	Bangladesh	**1.00**	Bangladesh	1.00	Belgium	1.00
#7	Barbados	**1.00**	Barbados	1.00	Belize	1.00
#8	Belgium	**1.00**	Belgium	1.00	Bosnia and Herzegovina	1.00
#9	Belize	**1.00**	Belize	1.00	Brazil	1.00
#10	Bosnia & Herzegovina (+ 69 others)	**1.00**	Bosnia & Herzegovina (+ 89 others)	1.00	Bulgaria	1.00

TABLE 12

Coastal state scores for region

and indicator type, 2023

All Types

#1 Africa

2.75

#2 Oceania

2.68

#3 North America

2.56

#4 Asia

2.50

#5 South America

2.47

#6 Middle East

2.44

#7 Caribbean & Central America

2.33

#8 Europe

2.07
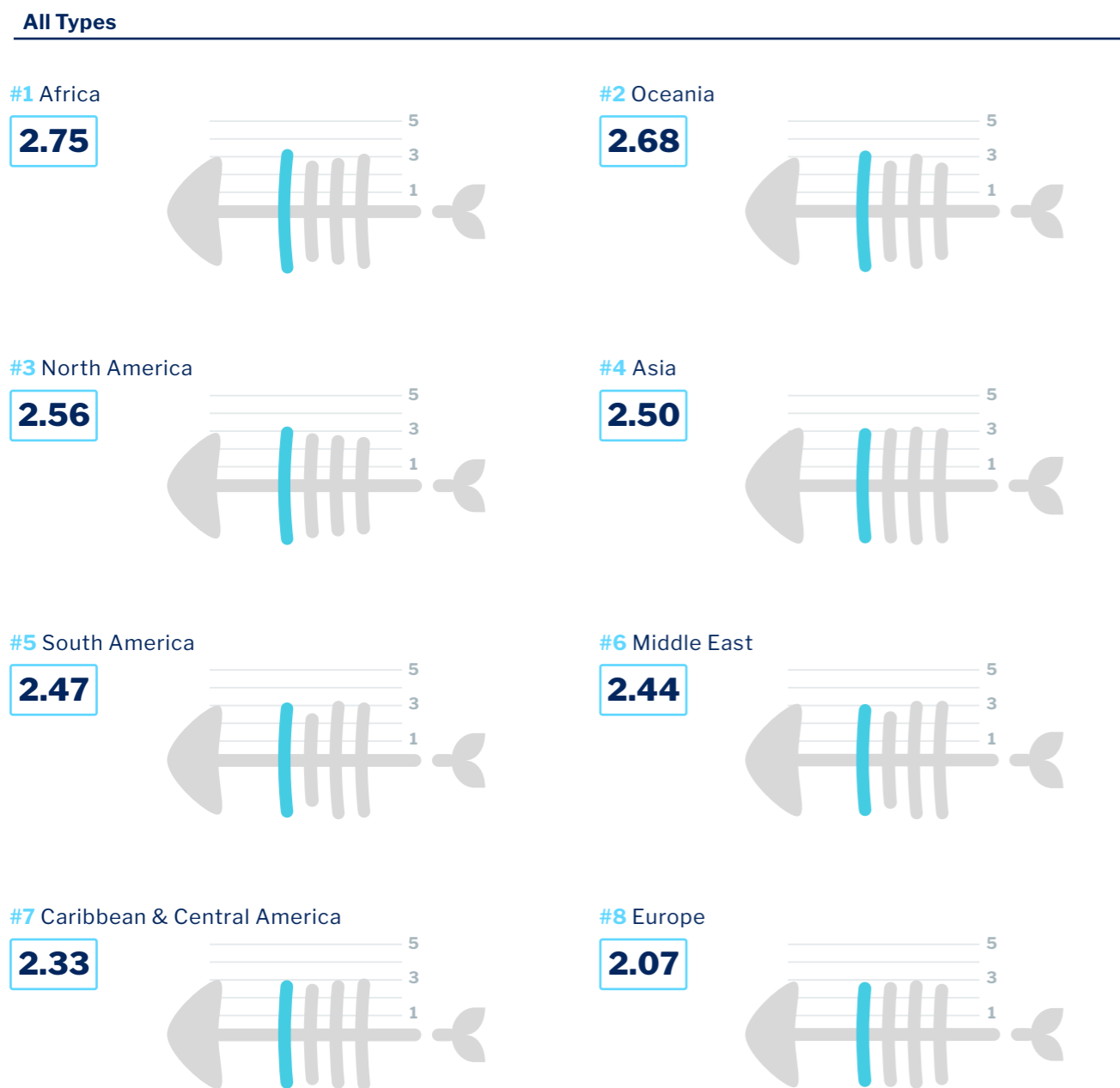
Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	North America	4.67	North America	4.67	Oceania	4.28
#2	Oceania	3.92	Oceania	3.91	North America	4.20
#3	Africa	3.28	Africa	3.30	Asia	3.48
#4	Asia	3.05	Asia	3.08	Africa	3.37
#5	South America	3.02	South America	3.08	South America	3.00
#6	Europe	2.69	Europe	2.68	Europe	2.70
#7	Caribbean & Central America	2.50	Caribbean & Central America	2.59	Caribbean and Central America	2.67
#8	Middle East	2.25	Middle East	2.49	Middle East	2.44
	World overall	**3.00**	**World overall**	**3.05**	**World overall**	**3.17**

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Africa	3.03	Africa	2.99	Asia	3.00
#2	Asia	2.86	Asia	2.90	South America	2.90
#3	Middle East	2.76	Middle East	2.60	Africa	2.83
#4	Caribbean & Central America	2.53	South America	2.58	Caribbean and Central America	2.60
#5	South America	2.50	Caribbean & Central America	2.54	Middle East	2.60
#6	Oceania	2.32	Oceania	2.39	Oceania	2.40
#7	Europe	2.04	Europe	2.15	Europe	1.99
#8	North America	1.60	North America	1.30	North America	1.80
	World overall	**2.41**	**World overall**	**2.36**	**World overall**	**2.58**

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Middle East	2.26	Caribbean & Central America	1.90	Caribbean and Central America	2.28
#2	Caribbean & Central America	1.89	Middle East	1.71	Asia	2.14
#3	Africa	1.82	Africa	1.70	Africa	1.64
#4	South America	1.80	South America	1.60	Oceania	1.48
#5	Oceania	1.53	Oceania	1.48	Middle East	1.33
#6	Asia	1.43	Asia	1.34	South America	1.20
#7	Europe	1.37	Europe	1.27	Europe	1.18
#8	North America	1.00	North America	1.00	North America	1.00
	World overall	**1.67**	**World overall**	**1.00**	**World overall**	**1.60**

TABLE 13

Coastal state scores for ocean basin

and indicator type, 2023

All Types

#1 West Indian Ocean

2.73

#2 Western Pacific

2.62

#3 East Atlantic

2.42

#4 East Indian Ocean

2.41

#5 Eastern Pacific

2.41

#6 West Atlantic

2.41

#7 Mediterranean & Black Sea

2.19

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Western Pacific	**3.62**	Western Pacific	3.63	Western Pacific	4.13
#2	Eastern Pacific	**3.31**	Eastern Pacific	3.31	West Indian Ocean	3.37
#3	East Atlantic	**3.14**	West Indian Ocean	3.13	East Atlantic	3.17
#4	West Indian Ocean	**3.04**	East Atlantic	3.09	Eastern Pacific	3.14
#5	West Atlantic	**2.79**	West Atlantic	2.87	East Indian Ocean	3.02
#6	East Indian Ocean	**2.74**	East Indian Ocean	2.76	West Atlantic	2.87
#7	Mediterranean & Black Sea	**2.44**	Mediterranean & Black Sea	2.58	Mediterranean and Black Sea	2.60
	World overall	**3.00**	**World overall**	3.05	**World overall**	3.17

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	East Indian Ocean	**2.98**	West Indian Ocean	2.99	East Indian Ocean	2.78
#2	West Indian Ocean	**2.93**	East Indian Ocean	2.98	West Indian Ocean	2.72
#3	Western Pacific	**2.51**	Western Pacific	2.61	Eastern Pacific	2.67
#4	Mediterranean & Black Sea	**2.51**	Mediterranean & Black Sea	2.52	Western Pacific	2.63
#5	East Atlantic	**2.46**	Eastern Pacific	2.45	West Atlantic	2.61
#6	West Atlantic	**2.43**	West Atlantic	2.40	Mediterranean and Black Sea	2.48
#7	Eastern Pacific	**2.40**	East Atlantic	2.40	East Atlantic	2.28
	World overall	**2.59**	**World overall**	2.60	**World overall**	2.58

Response

Rank	Country	2023	Country	2021	Country	2019
#1	West Indian Ocean	**2.10**	West Atlantic	1.83	East Indian Ocean	2.28
#2	West Atlantic	**1.89**	West Indian Ocean	1.67	West Atlantic	1.99
#3	East Atlantic	**1.53**	East Atlantic	1.51	Western Pacific	1.62
#4	Western Pacific	**1.52**	Western Pacific	1.43	West Indian Ocean	1.52
#5	Mediterranean & Black Sea	**1.50**	East Indian Ocean	1.36	East Atlantic	1.42
#6	East Indian Ocean	**1.44**	Mediterranean & Black Sea	1.30	Mediterranean and Black Sea	1.21
#7	Eastern Pacific	**1.34**	Eastern Pacific	1.20	Eastern Pacific	1.14
	World overall	**1.67**	**World overall**	1.54	**World overall**	1.60

IUU scores for flag state responsibilities

5

5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
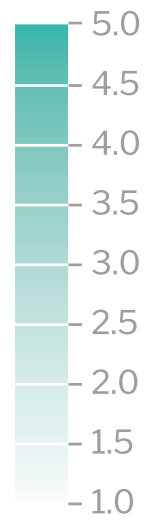
landlocke
countries

2.04

World overall 2023
Flag score

5. IUU scores for flag state responsibilities

5.1 Introduction and distribution of scores

Table 14 shows the indicators included within the flag state responsibilities. Having vessels fishing outside of a state's own waters increases flag state vulnerability to the risk of IUU fishing. Having vessels on IUU lists indicates that illegal fishing is taking place by vessels flagged to given countries, and views of observers and MCS practitioners also provide an indication of IUU fishing and faltering flag state responsibility. Responses that flag states can make to combatting IUU fishing include adherence to relevant international instruments and initiatives, active engagement with relevant RFMOs and honouring of flag state obligations, as specified in the conservation and management measures of those RFMOs.

TABLE 14
Flag state indicators

Indicator Group	Indicator Name
Flag state/ Vulnerability	• Distant-water vessels on RFMO RAVs • Distant-water vessels under several RFMOs
Flag state/ Prevalence	• Vessels on IUU lists • View of fisheries observers on flag state compliance incidents • Views of MCS practitioners on flag state compliance incidents
Flag state/ Response	• Accepted FAO Compliance Agreement • Registered vessels with foreign or unknown ownership • Provision of vessel data for inclusion in Global Record • Compliance with RFMO flag state obligations • Flag state is contracting party or cooperating non-contracting party to all relevant RFMOs

As Table 15 shows, 110 countries (72%) had scores of between 1.50 and 2.50 for all flag indicators combined. Scores were widely distributed for vulnerability and response, but highly concentrated in the lower score bands for prevalence.

TABLE 15
Number of countries within score ranges for flag state IUU fishing risk scores, 2023

Range	Flag	Flag by Vulnerability	Flag by Prevalence	Flag by Response
4.50—5.00	0	13	2	0
4.00—4.49	3	8	2	2
3.50—3.99	2	12	0	7
3.00—3.49	6	12	5	38
2.50—2.99	11	7	3	45
2.00—2.49	39	12	11	34
1.50—1.99	71	16	19	12
1.00—1.49	20	72	110	14

5.2 Key findings

Tables 16–19 list the 10 best- and 10 worst-performing countries in terms of flag state responsibilities, by indicator type, and flag state responsibility scores by region and ocean basin.

In 2023, the average IUU fishing score for flag state responsibilities, aggregated for all types of indicators, was 2.04, compared to 1.96 in 2021, marking a small decline in performance and increase in risk.

Changes in scores for 2023 compared to 2021 for flag state responsibilities reflect the direction of change in the different flag state indicators as shown below:

Indicators with improved scores in 2023:

• Distant-water vessels on RFMO RAVs'. In 2023, the number of vessels on RFMO RAVs dropped for some countries (e.g. Seychelles), making them slip into a lower band. This phenomenon was more pronounced for countries that dropped vessels than for those that added vessels.

• Distant-water vessels under several RFMOs'. The same phenomenon as above also occurred, with more countries diminishing than increasing the total number of RAVs on which their vessels are listed. Some countries, such as Angola, disappeared from the list and were no longer assigned a score, while others, such as Grenada, were included.

• Accepted FAO Compliance Agreement' (FAOCA). Of the 107 countries with fishing vessels on at least one RFMO RAV in 2021, 44 had not signed the FAOCA in 2021. This dropped to 43 in 2023, after the United Kingdom rejoined the FAOCA as a sovereign party.

- Provision of vessel data for inclusion in Global Record'. Cameroon, Japan and Romania provided data in 2023 but not in 2021.

- Flag state is contracting party or cooperating non-contracting party to all relevant RFMOs'. Several flag states with vessels operating in RFMO areas of competence that were not members or cooperating non-members in 2021, joined these RFMOs or ceased alleged non-authorized operations. A notable exception was Singapore, which continued to operate one reefer vessel across several RFMOs, while not signaling any intent to participate in the related RFMO-based processes.

Indicators with worse scores in 2023:

- Vessels on IUU lists'. Between 2021 and 2023, the number of countries with vessels listed rose from 25 to 45. The total number of vessels on IUU lists also increased, from 60 in 2021 to 173 in 2023.

- View of fisheries observers on flag state compliance incidents'. A larger number and greater variety of countries were highlighted as being of concern in 2023 than in 2021.

- Views of MCS practitioners on flag state compliance incidents'. A larger number and greater variety of countries were highlighted as being of concern in 2023 than in 2021.

- Registered vessels with foreign or unknown ownership'. In 2023, the total number of fishing vessels listed in the data source (which can be attributed to individual countries) whose owners were either unknown or a foreign increased to 4 148 (from 3 193 in 2021). Countries that had at least one vessel with an unknown or foreign owner increased from 111 in 2021 to 113 in 2023.

- Compliance with RFMO flag state obligations'. In 2023, a number of flag states scored substantially worse than in 2021. One of the major reasons for this is that the North East Atlantic Fisheries Commission (NEAFC) changed its compliance reporting, which came online, adding 444 flag state infringements that were not accounted for in 2019 and 2021. At the same time, the South East Atlantic Fisheries Organisation's compliance reporting became confidential, but with only three vessels on the RAV – compared to 2 623 at NEAFC – and no reported flag state infringements in 2021, this had no impact.

Individual country scores, aggregated across indicator types for flag state responsibilities, **ranged from 1.10 for Argentina** (which replaced Sweden as the best-performing country) **to 4.33 for Russia** (which replaced China as the worst-performing country in 2023). **China had the worst score for both vulnerability and prevalence in 2023.**

Aggregated across indicator types, **the 10 worst-performing countries in 2023 were largely the same as those in 2021** (albeit with slightly different ranks and with France and Iran entering the list). The worst performers have diverse locations and included **developed nations, such as Japan, France, South Korea and Spain, which were among the worst performers** in terms of vulnerability and prevalence, chiefly owing to the size and activities of their distant-water fleets.

In terms of regional performance, **Asia remained the worst-performing and South America the best-performing region. In 2023, only North America and Africa improved their scores (slightly)** compared to 2021, while scores for other regions got worse.

Between 2023 and 2021, the **flag state vulnerability score improved, but prevalence and response scores worsened slightly.**

The worst-performing regions by indicator type remained unchanged in 2023, with North America having the worst score for vulnerability, Asia for prevalence and the Middle East for response. **The Middle East had the best vulnerability score**, owing to the fact that relatively few distant-water fishing vessels hail from this region.

In 2023, the Western Pacific remained the worst-performing ocean basin, with few changes in ranking, based on all indicator types or vulnerability, prevalence and response indicators. As in 2021, **the West Indian Ocean was the best-performing ocean basin in 2023** for all types of flag state indicators, and for vulnerability and prevalence indicators.

The Western Pacific and East Indian Ocean were the ocean basins with the worst prevalence and response scores (respectively), and the East Indian Ocean replaced the West Indian Ocean as the worst-performing ocean basin for response.

TABLE 16

Ten worst-performing countries

for flag state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 Russia

4.33

#2 China

4.21

#3 Taiwan

4.17

#4 Panama

3.75

#5 South Korea

3.67

#6 Indonesia

3.33

#7 Spain

3.21

#8 France

3.17

#9 Iran

3.00

#10 Libya (+ Portugal)

3.00

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	China	5.00	China	5.00	China	5.00
#2	France	5.00	France	5.00	France	5.00
#3	Japan	5.00	Japan	5.00	Japan	5.00
#4	South Korea	5.00	South Korea	5.00	South Korea	5.00
#5	Panama	5.00	Panama	5.00	Panama	5.00
#6	Russia	5.00	Spain	5.00	Spain	5.00
#7	Spain	5.00	Taiwan	5.00	Taiwan	5.00
#8	Taiwan	5.00	Australia	4.50	Australia	4.50
#9	Australia	4.50	Portugal	4.50	Canada	4.50
#10	New Zealand (+ 3 others)	4.50	Russia (+ 2 others)	4.50	Italy	4.50

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	China	5.00	China	5.00	China	5.00
#2	Taiwan	4.67	South Korea	4.00	Taiwan	4.00
#3	South Korea	4.33	Taiwan	3.67	Panama	3.67
#4	Russia	4.33	Russia	3.33	Spain	3.33
#5	Indonesia	3.33	Spain	2.67	South Korea	3.00
#6	Panama	3.33	Panama	2.33	Russia	3.00
#7	India	3.00	USA	2.33	India	2.67
#8	Sri Lanka	3.00	Indonesia	2.00	Indonesia	2.33
#9	Vietnam	3.00	Iran	2.00	Sierra Leone	2.33
#10	Ecuador (+ 2 others)	2.67	Japan (+ 4 others)	2.00	Belize	2.00

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Guinea-Bissau	4.00	Russia	4.22	Singapore	4.60
#2	Libya	4.00	Guinea-Bissau	4.00	China	4.13
#3	Russia	3.89	Libya	4.00	Libya	4.00
#4	Sao Tome & Principe	3.88	Ukraine	3.89	Russia	4.00
#5	Grenada	3.86	Grenada	3.86	Liberia	3.88
#6	India	3.67	Dominica	3.80	Dominica	3.86
#7	Mauritius	3.67	Comoros Isl.	3.78	Albania	3.67
#8	Senegal	3.67	Saint Vincent & the Grenadines	3.78	Egypt	3.67
#9	Ukraine	3.56	Taiwan	3.78	Japan	3.67
#10	Lebanon (+ Tunisia)	3.44	Tunisia	3.78	Namibia	3.67

TABLE 17

Ten best-performing countries

for flag state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 Argentina

1.10

#2 Belgium

1.10

#3 Romania

1.13

#4 Sudan

1.16

#5 Finland

1.19

#6 Uruguay

1.24

#7 Bulgaria

1.25

#8 Tonga

1.29

#9 Sweden

1.33

#10 Trinidad & Tobago

1.33
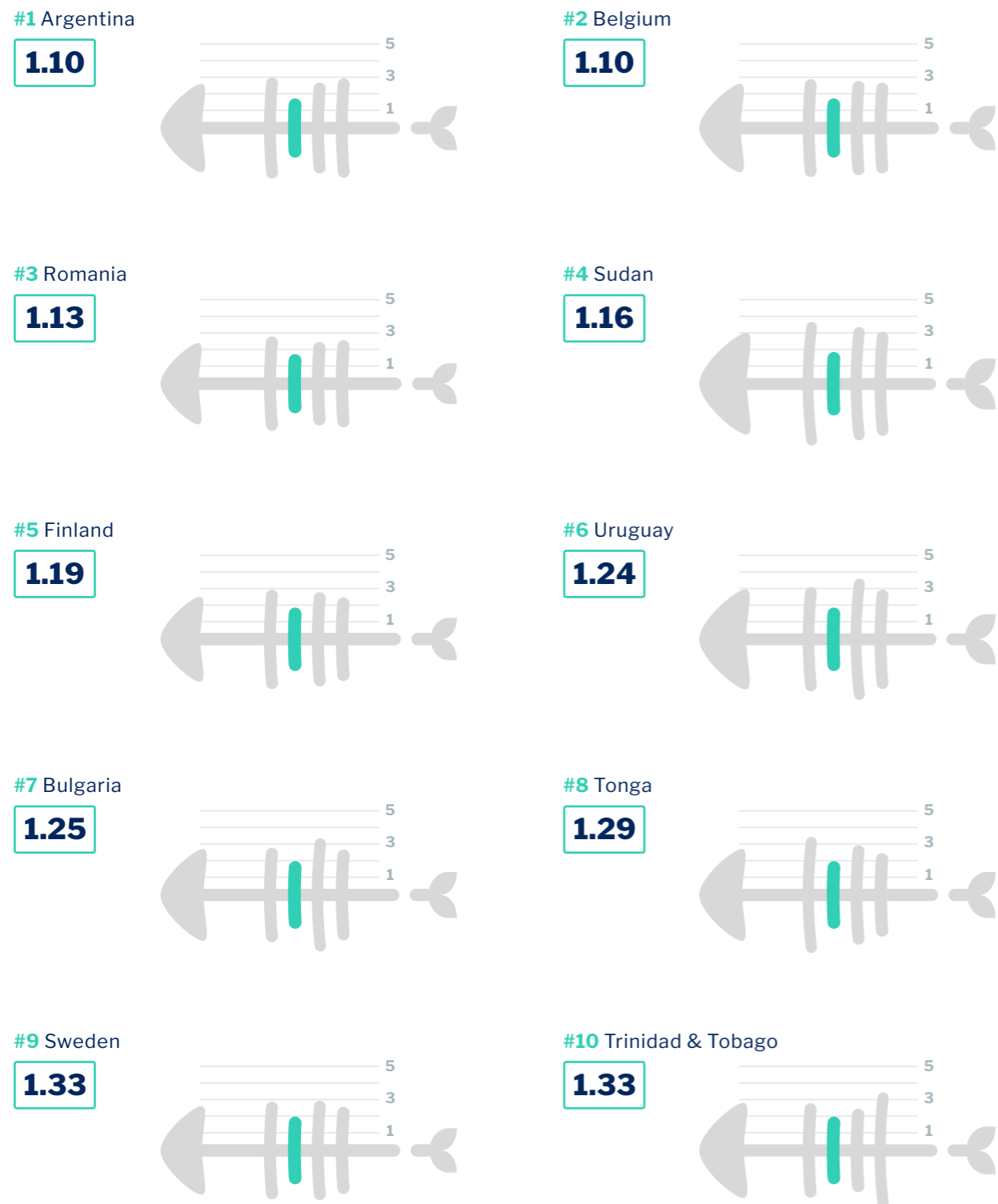
Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Angola	**1.00**	Angola	1.00	Angola	1.00
#2	Antigua & Barbuda	**1.00**	Antigua & Barbuda	1.00	Antigua and Barbuda	1.00
#3	Argentina	**1.00**	Argentina	1.00	Argentina	1.00
#4	Bahrain	**1.00**	Bahrain	1.00	Bahrain	1.00
#5	Bangladesh	**1.00**	Bangladesh	1.00	Bangladesh	1.00
#6	Barbados	**1.00**	Barbados	1.00	Barbados	1.00
#7	Belgium	**1.00**	Belgium	1.00	Belgium	1.00
#8	Benin	**1.00**	Benin	1.00	Benin	1.00
#9	Bosnia & Herzegovina	**1.00**	Bosnia & Herzegovina	1.00	Bosnia and Herzegovina	1.00
#10	Brunei Darussalam (+ 61 others)	**1.00**	Brunei Darussalam (+ 59 others)	1.00	Brunei	1.00

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Albania	**1.00**	Albania	1.00	Albania	1.00
#2	Antigua & Barbuda	**1.00**	Algeria	1.00	Algeria	1.00
#3	Argentina	**1.00**	Antigua & Barbuda	1.00	Angola	1.00
#4	Australia	**1.00**	Argentina	1.00	Antigua and Barbuda	1.00
#5	Bahrain	**1.00**	Australia	1.00	Argentina	1.00
#6	Bangladesh	**1.00**	Bahamas	1.00	Australia	1.00
#7	Barbados	**1.00**	Bahrain	1.00	Bahamas	1.00
#8	Belgium	**1.00**	Bangladesh	1.00	Bahrain	1.00
#9	Benin	**1.00**	Barbados	1.00	Bangladesh	1.00
#10	Bosnia & Herzegovina (+ 69 others)	**1.00**	Belgium (+ 105 others)	1.00	Barbados	1.00

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Bulgaria	**1.00**	Bulgaria	1.00	Belize	1.00
#2	Cameroon	**1.00**	Croatia	1.11	Argentina	1.11
#3	Argentina	**1.22**	Estonia	1.11	Belgium	1.22
#4	Belgium	**1.22**	Greece	1.11	Bulgaria	1.22
#5	Romania	**1.33**	Peru	1.11	Estonia	1.22
#6	Sudan	**1.43**	Poland	1.11	Sweden	1.22
#7	Brazil	**1.44**	Chile	1.22	Finland	1.33
#8	Canada	**1.44**	Cyprus	1.22	Chile	1.44
#9	Finland	**1.44**	Ireland	1.22	Guatemala	1.50
#10	Ghana (+ 4 others)	**1.44**	Latvia (+ 3 others)	1.22	Iceland	1.50

TABLE 18

Flag state scores for region

and indicator type, 2023

All Types

#1 Asia

2.46

		5
		3
		1

#2 North America

2.10

		5
		3
		1

#3 Europe

2.07

		5
		3
		1

#4 Caribbean & Central America

2.01

		5
		3
		1

#5 Oceania

1.96

		5
		3
		1

#6 Africa

1.95

		5
		3
		1

#7 Middle East

1.88

		5
		3
		1

#8 South America

1.83

		5
		3
		1

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	North America	4.25	North America	4.25	North America	4.50
#2	Europe	2.90	Europe	2.97	Europe	2.78
#3	Asia	2.72	Asia	2.75	Asia	2.64
#4	South America	2.29	South America	2.25	Oceania	2.15
#5	Oceania	2.11	Oceania	2.00	South America	2.00
#6	Caribbean & Central America	2.03	Caribbean & Central America	1.97	Africa	1.84
#7	Africa	1.75	Africa	1.84	Caribbean and Central America	1.84
#8	Middle East	1.50	Middle East	1.73	Middle East	1.57
	World overall	**2.27**	**World overall**	2.31	**World overall**	2.23

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Asia	2.12	Asia	1.75	Asia	1.85
#2	Caribbean & Central America	1.44	North America	1.67	North America	1.50
#3	South America	1.37	Africa	1.24	Europe	1.30
#4	North America	1.33	Caribbean & Central America	1.16	Africa	1.27
#5	Africa	1.32	Oceania	1.16	Caribbean and Central America	1.24
#6	Europe	1.32	Europe	1.15	South America	1.13
#7	Oceania	1.27	Middle East	1.09	Oceania	1.11
#8	Middle East	1.43	South America	1.03	Middle East	1.07
	World overall	**1.00**	**World overall**	1.25	**World overall**	1.31

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Middle East	2.90	Middle East	2.98	Middle East	3.09
#2	Africa	2.77	Caribbean & Central America	2.88	Asia	3.08
#3	Asia	2.71	Africa	2.86	Africa	2.95
#4	Caribbean & Central America	2.69	Asia	2.74	Caribbean and Central America	2.75
#5	Oceania	2.57	Oceania	2.60	Oceania	2.72
#6	Europe	2.30	South America	1.94	Europe	2.28
#7	South America	2.04	Europe	1.91	South America	2.11
#8	North America	1.44	North America	1.61	North America	1.72
	World overall	**2.57**	**World overall**	2.54	**World overall**	2.69

TABLE 19

Flag state scores for ocean basin

and indicator type, 2023

All Types

#1 Western Pacific

2.34

#2 East Indian Ocean

2.30

#3 Eastern Pacific

2.21

#4 Mediterranean & Black Sea

2.11

#5 East Atlantic

2.07

#6 West Atlantic

1.93

#7 West Indian Ocean

1.88

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Eastern Pacific	3.12	Eastern Pacific	3.12	Eastern Pacific	3.08
#2	Mediterranean & Black Sea	2.67	Mediterranean & Black Sea	3.02	Mediterranean and Black Sea	2.71
#3	Western Pacific	2.65	Western Pacific	2.60	Western Pacific	2.65
#4	East Atlantic	2.44	East Atlantic	2.42	East Atlantic	2.38
#5	East Indian Ocean	2.40	East Indian Ocean	2.40	East Indian Ocean	2.27
#6	West Atlantic	2.12	West Atlantic	2.07	West Atlantic	1.91
#7	West Indian Ocean	1.51	West Indian Ocean	1.50	West Indian Ocean	1.60
	World overall	**2.27**	**World overall**	**2.31**	**World overall**	**2.23**

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Western Pacific	1.89	Western Pacific	1.68	Western Pacific	1.62
#2	East Indian Ocean	1.78	Eastern Pacific	1.31	East Indian Ocean	1.52
#3	Eastern Pacific	1.77	East Indian Ocean	1.30	Eastern Pacific	1.41
#4	East Atlantic	1.41	East Atlantic	1.27	East Atlantic	1.35
#5	West Atlantic	1.39	West Atlantic	1.16	Mediterranean and Black Sea	1.24
#6	Mediterranean & Black Sea	1.31	Mediterranean & Black Sea	1.15	West Atlantic	1.22
#7	West Indian Ocean	1.28	West Indian Ocean	1.07	West Indian Ocean	1.19
	World overall	**1.43**	**World overall**	**1.25**	**World overall**	**1.31**

Response

Rank	Country	2023	Country	2021	Country	2019
#1	East Indian Ocean	2.83	West Indian Ocean	2.81	Western Pacific	2.95
#2	West Indian Ocean	2.80	Western Pacific	2.76	East Indian Ocean	2.92
#3	Western Pacific	2.62	West Atlantic	2.60	West Indian Ocean	2.85
#4	Mediterranean & Black Sea	2.58	Mediterranean & Black Sea	2.48	Mediterranean and Black Sea	2.78
#5	East Atlantic	2.56	East Indian Ocean	2.46	East Atlantic	2.55
#6	West Atlantic	2.45	East Atlantic	2.39	West Atlantic	2.53
#7	Eastern Pacific	2.06	Eastern Pacific	2.25	Eastern Pacific	2.29
	World overall	**2.57**	**World overall**	**2.54**	**World overall**	**2.69**

IUU scores
on port state
responsibilities

6

- 5.0
- 4.5
- 4.0
- 3.5
- 3.0
- 2.5
- 2.0
- 1.5
- 1.0
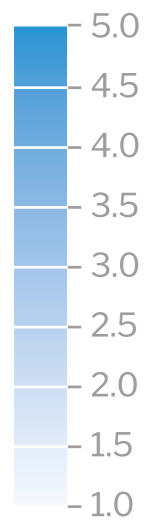
landlocked countries

2.37 World overall 2023
Port score

6. IUU scores on port state responsibilities

6.1 Introduction and distribution of scores

Table 20 shows the indicators for the port state responsibilities indicator group. Having large numbers of fishing ports and visits by foreign fishing and carrier vessels to those ports increase the risks of a state having illegally harvested fish passing through its ports. The views of observers and MCS practitioners provide insight into which countries are perceived as being most at risk of IUU-caught fish passing through their ports. However, port states can respond positively to both vulnerability and prevalence dimensions by becoming party to the Port States Measures Agreement (PSMA), implementing the provisions of the PSMA and complying with port state obligations as they may be provided in RFMO resolutions.

TABLE 20
Port state indicators

Indicator Group	Indicator Name
Port state/ Vulnerability	• Number of fishing ports • Port visits by foreign fishing or carrier vessels
Port state/ Prevalence	• • Views of MCS practitioners on port compliance incidents • View of fisheries observers on port compliance incidents
Port state/ Response	• Party to the Port State Measures Agreement • Designated ports specified for entry by foreign vessels • Compliance with RFMO port state obligations

In 2023, scores for all types of indicators were widely distributed (Table 21), with scores for response indicators being more widely distributed than those for vulnerability and prevalence indicators. Vulnerability scores were highly distributed in the upper score bands, whereas prevalence scores were highly concentrated in lower score bands (with 50% of countries scoring below 1.49).

TABLE 21
Number of countries within score ranges for port state IUU fishing risk scores, 2023

Range	Port	Port by Vulnerability	Port by Prevalence	Port by Response
4.50—5.00	0	47	1	8
4.00—4.49	1	55	1	0
3.50—3.99	0	17	3	29
3.00—3.49	20	4	1	6
2.50—2.99	36	4	8	21
2.00—2.49	47	13	13	5
1.50—1.99	38	8	19	20
1.00—1.49	10	4	76	54

Notes: * 32 countries have no prevalence scores because of missing data; ** 8 countries have no response scores because of missing data.

6.2 Key findings

Table 22–25 list the 10 best- and 10 worst-performing countries in terms of port state responsibilities, by indicator type, and port state responsibility scores by region and ocean basin.

The average IUU fishing score for port state responsibilities, aggregated for all types of indicators, **worsened, from 2.27 in 2021 to 2.37 in 2023**. Between 2021 and 2023, world overall scores for vulnerability and response indicators worsened, whereas scores for prevalence remained unchanged.

Changes in scores for 2023 compared to 2021 for port state responsibilities reflect the direction of change in the different port state indicators as shown below:

Indicators with improved scores in 2023:

• Party to the Port States Measures Agreement'. Since the PSMA's introduction in 2009, ratification by countries has been rapid. Angola, Eritrea, Morocco and Nigeria have all ratified the PSMA since 2021, leading to an overall improved score for this indicator.

Indicators with worse scores in 2023:

• Number of fishing ports'. In 2023, more fishing ports (+4.5%) were reported/detected than in 2021. This is less an indication that more ports were built, but rather that fishing ports in some countries were not easily identified or that existing ports had over time begun to cater for fisheries-related calls.

- Port visits by foreign fishing or carrier vessels'. The number of port states catering for foreign fishing vessels rose from 115 (76%) in 2021 to 119 (78%) in 2023, indicating a marginal increase in risk.

- View of fisheries observers on port compliance incidents'. A larger number and greater variety of ports/countries were highlighted as being of concern in 2023 than in 2021.

- Designated ports specified for entry by foreign vessels'. In 2023, the percentage of designated ports was checked against the online FAO PSMA database, which is now routinely updated by the FAO. As a result, fewer ports were officially designated and reported to the FAO (as provided for under article 3 of the PSMA) than were self-reported by countries to the authors in 2021.

- Compliance with RFMO port state obligations'. While 16 countries improved their port state compliance score in 2023, 28 countries had a worse score, leading to a poorer overall result.

Indicators for which scores remained unchanged:

- Views of MCS practitioners on port compliance incidents'. More countries in 2023 (35) than in 2021 (24) had ports of risk, but the placing of those countries within different scoring bands resulted in no change overall.

Only China retained its 2021 place on the list of the top 10 worst-performing port states in 2023.

Overall, only 17.5% of indicators in the Index reflect port state responsibilities (see Table 2). The reason for the limited number of port state indicators (fewer than for coastal, flag or general responsibility) is that **binding port state control mechanisms are the latest addition to the arsenal of international fisheries rule-making**, and few data sources are publicly available to easily generate port state indicators.

Countries that are most vulnerable to IUU fishing products being landed in their ports, or IUU transactions taking place in ports, **are large industrial fishing nations for which fishing, processing and trading are very important sub-sectors**. Conversely,

small countries with few or no large commercial ports, and which do not receive foreign visits, **score a lot better on the vulnerability scale**.

Developed and developing countries featured in the 10 worst-performing countries for prevalence, and **countries in the Middle East featured strongly in the 10 worst-performing countries for response indicators**.

In terms of regional performance when considering all types of indicators aggregated, **the Middle East remained the worst-performing region in 2023**, while **North America replaced Europe as the best-performing region**. The worst-performing regions for vulnerability (North America), prevalence (Asia) and response (the Middle East) remained unchanged in 2023.

In 2023, **the Western Pacific replaced the West Indian Ocean as the worst-performing ocean basin** (these two ocean basins have been trading the worst rank in recent iterations of the Index), while the East Atlantic remained the best performer.

TABLE 22

Ten worst-performing countries

for port state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 China
4.33

#2 Spain
3.39

#3 North Korea
3.33

#4 Pakistan
3.28

#5 Solomon Isl.
3.28

#6 Yemen
3.28

#7 Saint Lucia
3.27

#8 United Arab Emirates
3.27

#9 Marshall Islands
3.17

#10 Jamaica
3.13

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Canada	5.00	Canada	5.00	Canada	5.00
#2	Chile	5.00	China	5.00	China	5.00
#3	China	5.00	France	5.00	France	5.00
#4	Croatia	5.00	Germany	5.00	Germany	5.00
#5	Denmark	5.00	Indonesia	5.00	Indonesia	5.00
#6	France	5.00	Italy	5.00	Italy	5.00
#7	Germany	5.00	Japan	5.00	Japan	5.00
#8	Greece	5.00	Norway	5.00	Norway	5.00
#9	Indonesia	5.00	Philippines	5.00	Philippines	5.00
#10	Japan (+ 6 others)	5.00	Sweden (+ 2 others)	5.00	Sweden	5.00

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	China	5.00	China	5.00	China	5.00
#2	South Korea	4.00	Thailand	4.50	Taiwan	4.50
#3	Spain	3.50	Uruguay	4.50	Vietnam	4.50
#4	Taiwan	3.50	Cambodia	4.00	Mauritius	3.00
#5	Uruguay	3.50	Taiwan	4.00	Russia	3.00
#6	Indonesia	3.00	South Korea	3.50	Uruguay	3.00
#7	Cote d'Ivoire	2.50	Seychelles	3.50	Cambodia	2.50
#8	Fiji	2.50	Cote d'Ivoire	3.00	Madagascar	2.50
#9	Malta	2.50	Kiribati	3.00	Micronesia	2.50
#10	Marshall Islands (+ 4 others)	2.50	South Africa (+ 1 other)	3.00	Singapore	2.50

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Jamaica	5.00	Bahrain	5.00	Bahrain	5.00
#2	North Korea	5.00	Brunei Darussalam	5.00	Benin	5.00
#3	Kuwait	5.00	China	5.00	Brunei	5.00
#4	Qatar	5.00	Dominican Republic	5.00	Cambodia	5.00
#5	Saint Lucia	5.00	North Korea	5.00	Cameroon	5.00
#6	United Arab Emirates	5.00	Kuwait	5.00	Colombia	5.00
#7	Pakistan	4.63	Qatar	5.00	Congo (DRC)	5.00
#8	Yemen	4.63	Singapore	5.00	Congo, R.	5.00
#9	Mauritania	3.63	United Arab Emirates	5.00	Dominica	5.00
#10	Sudan	3.63	Angola (+ 4 others)	4.63	Grenada	5.00

TABLE 23

Ten best-performing countries

for port state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 Bosnia & Herzegovina

1.00

#2 Congo, DRC

1.00

#3 Dominica

1.00

#4 Nauru

1.00

#5 Saint Vincent & the Grenadines

1.22
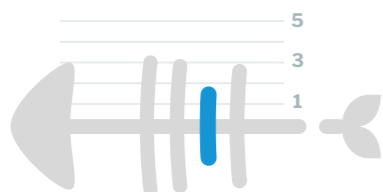
#6 Cook Islands

1.29

#7 Guinea-Bissau

1.29

#8 Jordan

1.29

#9 Monaco

1.29

#10 Nicaragua

1.44

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Bosnia & Herzegovina	1.00	Barbados	1.00	Barbados	1.00
#2	Congo, DRC	1.00	Belize	1.00	Dominica	1.00
#3	Dominica	1.00	Bosnia &Herzegovina	1.00	Eritrea	1.00
#4	Nauru	1.00	Comoros Isl.	1.00	Haiti	1.00
#5	Cameroon	1.50	Congo (DRC)	1.00	Belize	3.00
#6	Cook Islands	1.50	Dominica	1.00	Bosnia & Herzegovina	3.00
#7	Guinea-Bissau	1.50	Haiti	1.00	Comoros	3.00
#8	Iraq	1.50	Nauru	1.00	Congo (DRC)	3.00
#9	Jordan	1.50	Benin	1.50	Nauru	3.00
#10	Monaco	1.50	Djibouti (+ 6 others)	1.50	Vanuatu	3.00

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Albania	1.00	Albania	1.00	Albania	1.00
#2	Angola	1.00	Algeria	1.00	Algeria	1.00
#3	Bahamas	1.00	Angola	1.00	Angola	1.00
#4	Bangladesh	1.00	Australia	1.00	Antigua and Barbuda	1.00
#5	Barbados	1.00	Bahamas	1.00	Argentina	1.00
#6	Belgium	1.00	Bahrain	1.00	Australia	1.00
#7	Benin	1.00	Bangladesh	1.00	Bahamas	1.00
#8	Bulgaria	1.00	Belgium	1.00	Bahrain	1.00
#9	Canada	1.00	Brunei Darussalam	1.00	Bangladesh	1.00
#10	Chile (+ 65 others)	1.00	Bulgaria (+ 79 others)	1.00	Belgium	1.00

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Angola	1.00	Albania	1.00	Albania	1.00
#2	Argentina	1.00	Antiga & Barbuda	1.00	Australia	1.00
#3	Australia	1.00	Australia	1.00	Bahamas	1.00
#4	Belize	1.00	Barbados	1.00	Barbados	1.00
#5	Benin	1.00	Belgium	1.00	Belgium	1.00
#6	Bosnia & Herzegovina	1.00	Belize	1.00	Bulgaria	1.00
#7	Brazil	1.00	Benin	1.00	Cape Verde	1.00
#8	Cambodia	1.00	Bosnia & Herzegovina	1.00	Costa Rica	1.00
#9	Canada	1.00	Bulgaria	1.00	Estonia	1.00
#10	Cape Verde (+ 43 others)	1.00	Cambodia (+ 55 others)	1.00	Finland	1.00

TABLE 24

Port state scores for region

and indicator type, 2023

All Types

#1 Middle East

2.62

```
5
3
1
```

#2 South America

2.58

```
5
3
1
```

#3 Asia

2.58

```
5
3
1
```

#4 Oceania

2.49

```
5
3
1
```

#5 Europe

2.32

```
5
3
1
```

#6 Caribbean & Central America

2.27

```
5
3
1
```

#7 Africa

2.20

```
5
3
1
```

#8 North America

1.97

```
5
3
1
```
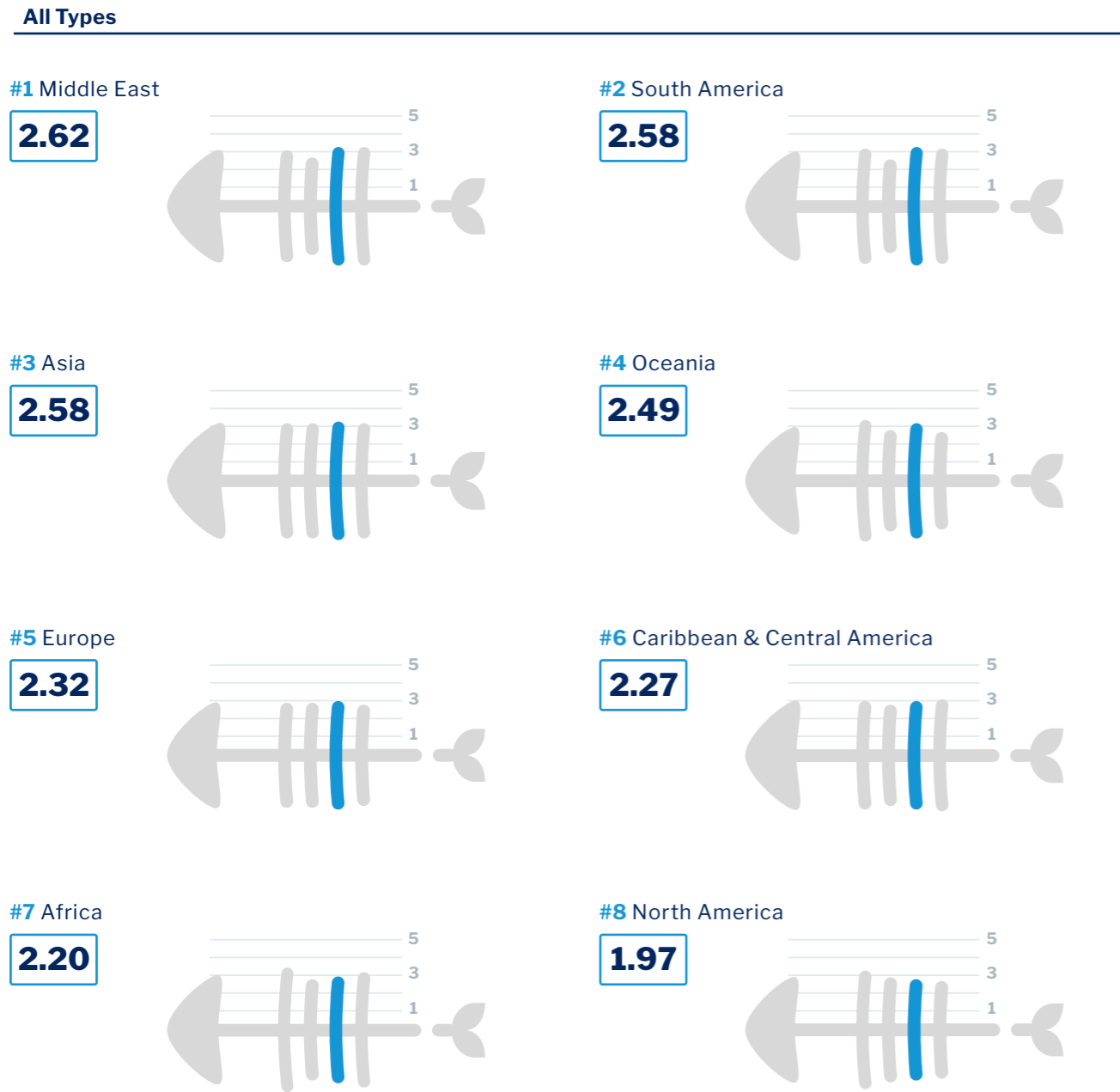
Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	North America	5.00	North America	5.00	North America	5.00
#2	Asia	4.10	Asia	3.98	Asia	4.38
#3	Europe	4.07	South America	3.95	Europe	4.29
#4	South America	3.95	Europe	3.75	South America	4.15
#5	Oceania	3.62	Oceania	3.62	Middle East	4.03
#6	Africa	3.61	Africa	3.40	Oceania	3.80
#7	Caribbean & Central America	3.39	Middle East	3.37	Africa	3.74
#8	Middle East	3.20	Caribbean & Central America	3.07	Caribbean and Central America	3.50
	World overall	**3.74**	**World overall**	**3.58**	**World overall**	**3.98**

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Asia	2.03	Asia	2.03	Asia	1.98
#2	Oceania	1.65	North America	2.00	Oceania	1.43
#3	South America	1.63	South America	1.72	South America	1.35
#4	Africa	1.35	Oceania	1.50	Africa	1.26
#5	Europe	1.27	Africa	1.45	Europe	1.16
#6	North America	1.25	Caribbean & Central America	1.11	Middle East	1.07
#7	Middle East	1.06	Europe	1.04	Caribbean and Central America	1.06
#8	Caribbean & Central America	1.03	Middle East	1.00	North America	1.00
	World overall	**1.41**	**World overall**	**1.41**	**World overall**	**1.31**

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Middle East	3.19	Middle East	3.49	Middle East	3.89
#2	Oceania	2.49	Caribbean & Central America	2.40	Asia	2.75
#3	South America	2.46	South America	2.38	Caribbean and Central America	2.63
#4	Caribbean & Central America	2.42	Asia	2.25	Africa	2.43
#5	Europe	2.11	Africa	2.21	South America	2.13
#6	Asia	2.05	Oceania	1.89	Oceania	2.12
#7	Africa	2.03	Europe	1.40	Europe	2.02
#8	North America	1.00	North America	1.00	North America	1.50
	World overall	**2.25**	**World overall**	**2.12**	**World overall**	**2.43**

TABLE 25

Port state scores for ocean basin
and indicator type, 2023

All Types

#1 Western Pacific
2.62

#2 West Indian Ocean
2.48

#3 Mediterranean & Black Sea
2.41

#4 Eastern Pacific
2.37

#5 West Atlantic
2.32

#6 East Indian Ocean
2.24

#7 East Atlantic
2.20

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Eastern Pacific	4.19	Eastern Pacific	4.23	East Indian Ocean	4.44
#2	East Indian Ocean	4.11	East Indian Ocean	4.00	Eastern Pacific	4.23
#3	Western Pacific	3.96	Western Pacific	3.91	Western Pacific	4.14
#4	East Atlantic	3.93	East Atlantic	3.78	Mediterranean and Black Sea	4.13
#5	Mediterranean & Black Sea	3.75	Mediterranean & Black Sea	3.41	East Atlantic	4.09
#6	West Atlantic	3.54	West Indian Ocean	3.38	West Indian Ocean	3.79
#7	West Indian Ocean	3.44	West Atlantic	3.37	West Atlantic	3.74
	World overall	**3.74**	**World overall**	3.58	**World overall**	3.98

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Western Pacific	2.02	Western Pacific	1.90	Western Pacific	1.95
#2	East Indian Ocean	1.57	East Indian Ocean	1.71	East Indian Ocean	1.33
#3	East Atlantic	1.34	West Indian Ocean	1.50	West Indian Ocean	1.26
#4	West Indian Ocean	1.31	West Atlantic	1.43	East Atlantic	1.20
#5	Eastern Pacific	1.29	Eastern Pacific	1.23	Eastern Pacific	1.19
#6	Mediterranean & Black Sea	1.26	East Atlantic	1.23	Mediterranean and Black Sea	1.12
#7	West Atlantic	1.19	Mediterranean & Black Sea	1.06	West Atlantic	1.12
	World overall	**1.41**	**World overall**	1.41	**World overall**	1.31

Response

Rank	Country	2023	Country	2021	Country	2019
#1	West Indian Ocean	2.70	West Indian Ocean	2.79	West Indian Ocean	2.96
#2	Mediterranean & Black Sea	2.37	West Atlantic	2.47	Mediterranean and Black Sea	2.60
#3	West Atlantic	2.33	Western Pacific	2.20	West Atlantic	2.47
#4	Western Pacific	2.32	Eastern Pacific	2.05	Western Pacific	2.46
#5	Eastern Pacific	2.20	Mediterranean & Black Sea	2.01	East Indian Ocean	2.38
#6	East Atlantic	1.89	East Atlantic	1.76	East Atlantic	2.10
#7	East Indian Ocean	1.55	East Indian Ocean	1.46	Eastern Pacific	1.99
	World overall	**2.25**	**World overall**	2.12	**World overall**	2.43

IUU scores on general indicators not specific to other responsibilities

7

5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
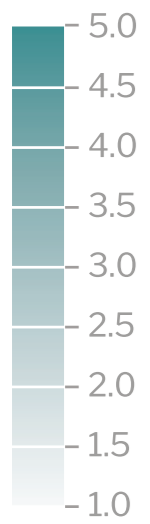
landlocked
countries

2.31

World overall 2023
General score

7. IUU scores on general indicators not specific to other responsibilities

7.1 Introduction and distribution of scores

The Index includes indicators that can be considered 'general', as they cover a range of state responsibilities, rather than being linked to responsibilities as coastal, flag or port states. Indicators of vulnerability relate to trade in fish products and the volume of catches made by different countries. The Index also draws on other assessments of IUU fishing and media reports for 'general' indicators of prevalence. Indicators in this category also assess whether countries have acted in a number of areas to combat IUU fishing, such as having developed a national plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing (NPOA-IUU), as reflected by the response indicators. This indicator group also includes indicators for corruption and national income levels, which are considered as likely to increase or result in vulnerability to IUU fishing.

The category 'general' also includes indicators that relate specifically to market state responsibilities, as the Index does not include a dedicated group of indicators of market state responsibilities. This is because this specific and highly relevant category – covering fish trade – has even less publicly available data than the port state domain. It is also the only remaining domain of the four state-type responsibilities that still lacks a dedicated (i.e. fisheries-specific) international regulatory framework, making it difficult to identify a relevant suite of dedicated – and accessible – indictors

Indicators included within the 'general' indicator group are shown in Table 26.

TABLE 26
General indicators

Indicator Group	Indicator Name
General/ Vulnerability	• Perception of levels of corruption • Gross national income per capita • Volume of catches • Trade balance for fisheries products • Share of global imports
General/Prevalence	• 'Carded' under the EU IUU Regulation • Identified by National Oceanic and Atmospheric Administration (NOAA) for IUU fishing • Mentions of IUU fishing in media reports
General/ Response	• Mandatory vessel tracking for commercial seagoing fleet • Ratification/accession of UNCLOS • Ratification of United Nations Fish Stocks Agreement (UNFSA) • Mentions in media reports to combatting IUU fishing • Have an NPOA-IUU • Demand for MSC products • Market state is contracting party or cooperating non-contracting party to relevant RFMOs

As Table 27 shows, individual country scores were well distributed across the score ranges for vulnerability and response indicators, whereas prevalence indicators were concentrated (80% of countries) in one score band (1.00–1.49), reflecting the specific indicators included.

TABLE 27
Number of countries within score ranges for 'general' state responsibility IUU fishing risk scores, 2023

Range	General	General by Vulnerability	General by Prevalence	General by Response
4.50—5.00	0	0	0	0
4.00—4.49	0	2	0	10
3.50—3.99	1	10	2	28
3.00—3.49	9	42	2	16
2.50—2.99	39	27	5	16
2.00—2.49	65	35	10	62
1.50—1.99	36	27	12	17
1.00—1.49	2	9	121	3

7.2 Key findings

Table 28–31 list the 10 best-performing and 10 worst-performing countries in terms of general state responsibilities, by indicator type, and general state responsibility scores by region and ocean basin.

The average IUU fishing score for general state responsibilities, aggregated for all types of indicators **was 2.31, unchanged from 2021**.

However, individual scores for different general state indicators have both improved and worsened, as shown below.

Indicators with improved scores in 2023:

• 'Perception of levels of corruption', which simply reflects changes in the Transparency International Corruption Perceptions Index.

• 'Gross national income per capita'. An improvement in scores in 2023 reflected increases in a country's gross national income per capita since 2021, while the scoring threshold bands remained unchanged. Nineteen countries improved their indicator score because of an increase in gross national income per capita.

• 'Mandatory vessel tracking for commercial seagoing fleet'. The steady progression in this indicator has been clearly observable since 2019, with more and more states requiring VMS technology onboard their commercial-scale vessels. Cambodia was one of the most recent examples.

• 'Ratification of UNFSA'. Saudi Arabia and Togo have ratified the United Nations Fish Stocks Agreement (UNFSA) since the 2021 update of the Index.

• 'Demand for MSC products'. Twenty-four countries (mostly developed countries but including some middle-income countries, such as Chile, Mexico, Thailand, Philippines, Peru and Malaysia) improved their scores, as a result of the increase in MSC-certified products sold as a proportion of their food fish supply, while only eight countries had worse scores.

Indicators with worse scores in 2023:

• 'Volume of catches'. Turkey, Spain, New Zealand and Sri Lanka had better scores in 2023 than in 2021, reflecting a slightly reduced share of total global catches by these countries. However, Angola, Argentina, Denmark, Ecuador, Mauritania and Oman had worse scores in 2023, reflecting a proportion of global catches sufficient to move them into a different scoring band based on the indicator thresholds.

• 'Trade balance for fisheries products'. Twenty-four countries changed their scores, which either improved or worsened. The overall worsening of the indicator score reflected the extent to which countries with different scores in 2023 moved between one or more scoring bands.

• 'Share of global imports'. This indicator worsened slightly, but only six countries had a different score in 2023 compared to 2021.

• 'Carded under the EU IUU Regulation'. Cameroon was identified and listed in 2023.

• 'Identified by NOAA for IUU fishing'. The NOAA report pre-identified Ecuador, Japan, Malta and Ukraine, and identified China, Guyana, Costa Rica, Russia, Senegal and Taiwan as 'of concern'. Ecuador received a negative certification for issues identified in the 2021 report.

• 'Mentions in media reports to combatting IUU fishing'. The USA, Thailand, Mexico, Japan, Indonesia, Ecuador and Australia were countries often cited in a positive light in media reports as combatting IUU fishing (in some cases reflecting the need for action as highlighted by negative mentions in the media – see below).

• 'Have an NPOA-IUU'. This appears to be a counterintuitive result, as the score for an existing NPOA-IUU does not have a 'due-by date'. The slight decrease was due to the fact that most countries with no data (blank) and with data obtained in

2023 scored a five ('do not have an NPOA-IUU'). In addition, some countries had previously indicated that they had an NPOA-IUU but in 2023 responded that they had never developed one.

• 'Market state is contracting party or cooperating non-contracting party to relevant RFMOs'. This indicator is driven primarily by data and information from the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Commission for the Conservation of Southern Bluefin Tuna. In its most recent Commission Report (2023), CCAMLR identified more than double the number of market states importing toothfish on a regular basis and not cooperating with its catch documentation scheme, which explains the result.

Indicators for which scores remained unchanged:

• 'Mentions of IUU fishing in media reports'. While the overall indicator score remained unchanged in 2023, China, South Korea, Mexico, the USA and Vietnam were the countries mentioned the most frequently in terms of IUU incidence or risk.

• 'Ratification/accession of UNCLOS'. No countries have ratified UNCLOS since the 2021 update of the Index.

Aggregated across types for general state responsibilities, **individual country scores ranged from 1.27 for Australia** (the best-performing country, as was the case in 2021) **to 3.53 for Comoros** (the worst-performing country).

This category of general indicators has a large number of indicators, and so provides **high differentiation and resolution between countries** (as opposed to the limited port state indicators discussed earlier), except for prevalence indicators, which are fewer in number. In this category, the mix of countries from different regions is more diverse, since a more varied mix of indicators is used to raise scores.

Developing countries dominated the rankings of countries that are highly vulnerable and have a high prevalence of IUU fishing.

In terms of the best response to IUU fishing, the top performers were large, developed fishing nations, such as Australia, Canada and France. This underscores the inherent weakness of developing countries to effectively combat IUU fishing, despite the social and economic importance of fishing. However, the list of best-performing countries in terms of response also included many developing states, highlighting that **all states can act to reduce IUU fishing risks.**

In terms of regions, the Middle East and Asia had the worst scores. Africa and Asia are of most concern in terms of vulnerability. In both 2021 and 2023, North America and the Middle East had the worst scores for prevalence and response (respectively). Reflecting the 2021 and 2019 results, the **Middle East scored the worst for response indicators** by a very wide margin, signalling insufficient policy drive and action on fisheries in the region. Conversely, **Oceania and Europe both yielded good scores for different types of indicators compared to other regions**, emphasizing the presence of strong action to combat IUU fishing in these regions and signalling the importance that fisheries play in the public sphere, which is reflected in policy, law-making and international collaboration.

The West and East Indian Ocean basins displayed the greatest levels of IUU risk when considering all types of indicators, with the East Indian Ocean being the most vulnerable. Prevalence scores were highest in the Eastern Pacific and East Indian Ocean. As in 2021, response scores were best for the Western Pacific, reflecting the continued strength and dedication of regional institutions and fisheries policy in this part of the world.

TABLE 28

Ten worst-performing countries

for general state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 Comoros

3.53

#2 India

3.47

#3 Yemen

3.23

#4 China

3.20

#5 Madagascar

3.11

#6 Bangladesh

3.07

#7 Cameroon

3.07

#8 Peru

3.00

#9 Somalia

3.00

#10 Syria

3.00

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	India	4.00	Vietnam	4.11	India	4.22
#2	Indonesia	4.00	India	4.00	Vietnam	4.11
#3	Myanmar	3.78	Indonesia	4.00	Indonesia	4.00
#4	Peru	3.78	Peru	3.78	Myanmar	3.78
#5	Comoros	3.67	Myanmar	3.78	Russia	3.78
#6	Syria	3.67	Congo (DRC)	3.67	Eritrea	3.67
#7	Vietnam	3.67	North Korea	3.56	Peru	3.67
#8	North Korea	3.56	Haiti	3.56	Syria	3.67
#9	Mauritania	3.56	Guinea-Bissau	3.56	China	3.56
#10	Morocco (+ 2 others)	3.56	Mauritania	3.56	Mauritania	3.56

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Mexico	3.86	Mexico	3.14	Thailand	3.29
#2	China	3.57	China	3.00	Vietnam	3.29
#3	Vietnam	3.29	Ecuador	2.86	Mexico	3.00
#4	Taiwan	3.14	Ghana	2.86	China	2.71
#5	Ghana	2.86	South Korea	2.71	Comoros	2.57
#6	Ecuador	2.71	Cambodia	2.57	Australia	2.29
#7	Russia	2.71	Vietnam	2.43	Indonesia	2.29
#8	USA	2.71	Sierra Leone	2.43	North Korea	2.29
#9	Cameroon	2.57	Indonesia	2.29	Nigeria	2.29
#10	Sierra Leone	2.43	Russia (+ 2 others)	2.29	Russia	2.29

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Israel	4.29	Singapore	4.57	Singapore	4.25
#2	Lebanon	4.27	Eritrea	4.43	Grenada	4.14
#3	United Arab Emirates	4.27	Israel	4.43	Yemen	4.14
#4	Comoros	4.14	Yemen	4.14	Eritrea	4.00
#5	Grenada	4.14	Grenada	4.14	Israel	4.00
#6	Singapore	4.14	United Arab Emirates	4.09	North Korea	4.00
#7	Yemen	4.14	North Korea	4.00	Libya	4.00
#8	Brunei Darussalam	4.00	Venezuela	4.00	Sudan	4.00
#9	Libya	4.00	Syria	4.00	Syria	4.00
#10	Qatar	4.00	Brunei Darussalam (+ 1 other)	4.00	Venezuela	4.00

TABLE 29

Ten best-performing countries

for general state responsibility IUU fishing risk scores, by indicator type, 2023

All Types

#1 Australia

1.27

#2 Canada

1.40

#3 New Zealand

1.50

#4 Portugal

1.53

#5 Seychelles

1.57

#6 Nauru

1.64

#7 France

1.67

#8 Greece

1.70

#9 Monaco

1.73

#10 Finland

1.73
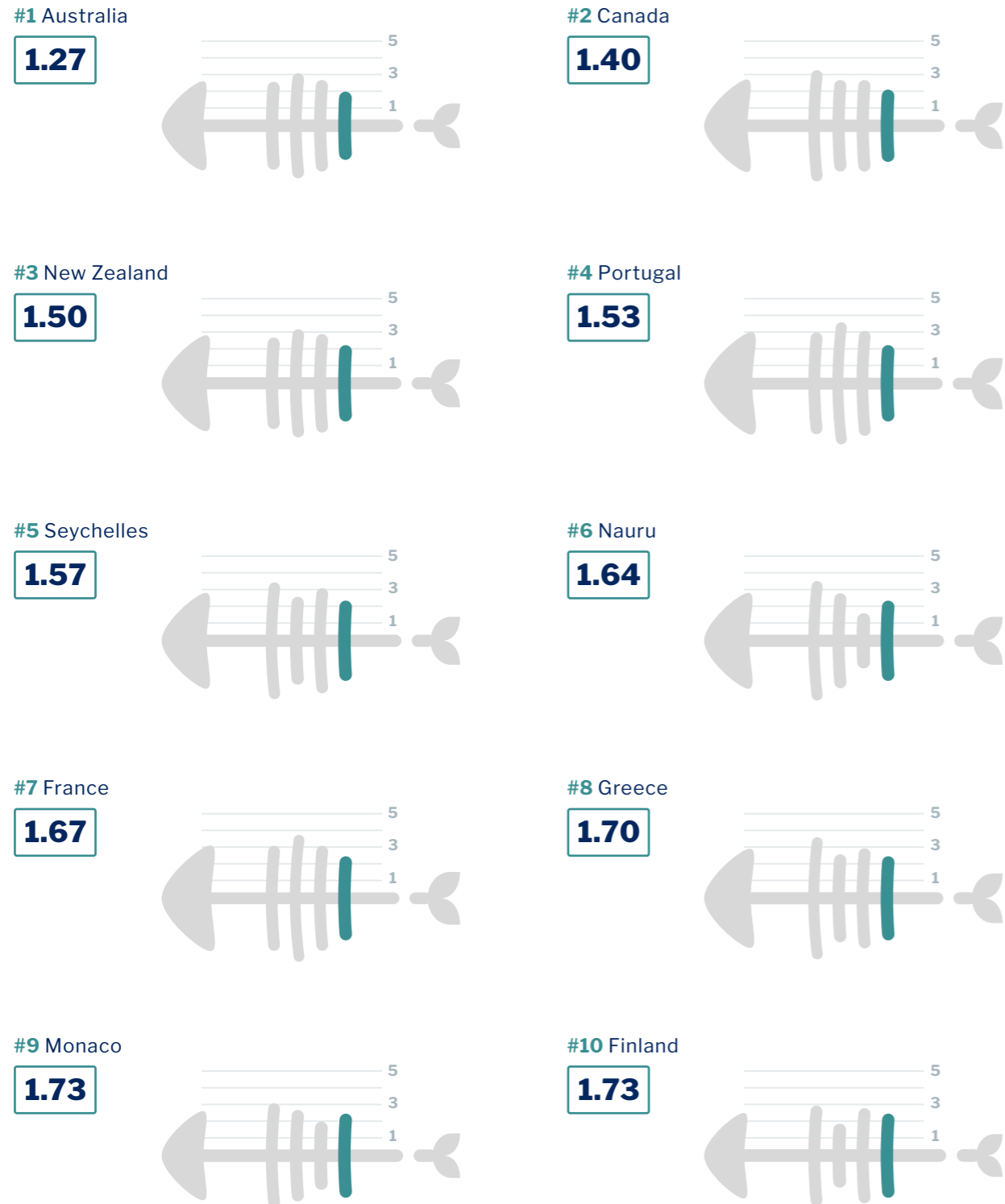
Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Monaco	**1.00**	Monaco	1.00	Cook Islands	1.00
#2	Brunei Darussalam	**1.17**	Finland	1.22	Monaco	1.00
#3	Finland	**1.22**	Netherlands	1.22	Netherlands	1.22
#4	Estonia	**1.33**	Singapore	1.33	Singapore	1.33
#5	New Zealand	**1.33**	Sweden	1.33	Sweden	1.33
#6	Sweden	**1.33**	Denmark	1.44	Denmark	1.44
#7	Ireland	**1.44**	Cook Islands	1.50	Finland	1.44
#8	Singapore	**1.44**	Nauru	1.50	Germany	1.44
#9	United Arab Emirates	**1.44**	Palau	1.50	Ireland	1.44
#10	Morocco (+ 2 others)	**3.56**	Australia (+ 4 others)	1.56	Nauru	1.50

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Albania	**1.00**	Albania	1.00	Albania	1.00
#2	Algeria	**1.00**	Algeria	1.00	Algeria	1.00
#3	Angola	**1.00**	Angola	1.00	Antigua and Barbuda	1.00
#4	Antigua & Barbuda	**1.00**	Antigua & Barbuda	1.00	Argentina	1.00
#5	Argentina	**1.00**	Australia	1.00	Bahamas	1.00
#6	Bahrain	**1.00**	Bahamas	1.00	Bahrain	1.00
#7	Belgium	**1.00**	Bahrain	1.00	Bangladesh	1.00
#8	Benin	**1.00**	Bangladesh	1.00	Barbados	1.00
#9	Bosnia & Herzegovina	**1.00**	Barbados	1.00	Belgium	1.00
#10	Sierra Leone	**2.43**	Belgium (+ 94 others)	1.00	Benin	1.00

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Australia	**1.00**	France	1.14	Australia	1.14
#2	Canada	**1.29**	Australia	1.29	UK	1.55
#3	France	**1.29**	Canada	1.29	Belgium	1.57
#4	Indonesia	**1.57**	New Zealand	1.43	Canada	1.57
#5	Japan	**1.57**	Chile	1.57	France	1.57
#6	South Korea	**1.57**	Benin	1.64	Japan	1.57
#7	Chile	**1.71**	Ghana	1.71	New Zealand	1.57
#8	Ecuador	**1.71**	South Korea	1.71	Spain	1.57
#9	Italy	**1.71**	Mozambique	1.71	Ghana	1.71
#10	Qatar	**4.00**	Cook Islands (+ 15 others)	1.86	South Korea	1.71

TABLE 30

General state scores for region

and indicator type, 2023

All Types

#1 Middle East

2.57

#2 Asia

2.51

#3 South America

2.47

#4 Africa

2.46

#5 Caribbean & Central America

2.42

#6 Europe

1.98

#7 North America

1.88

#8 Oceania

1.87
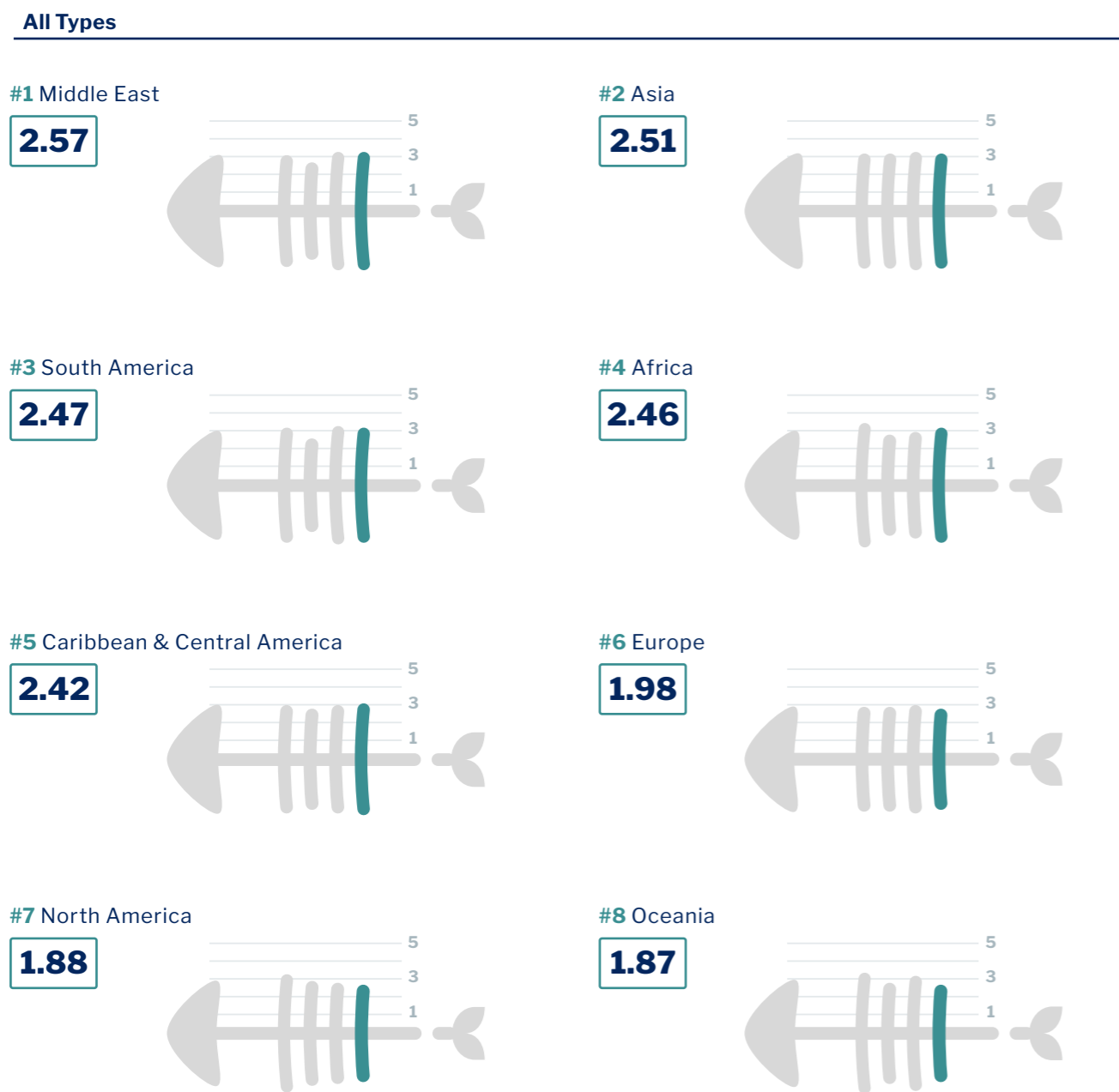
Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	Africa	**3.03**	Asia	3.06	Asia	3.14
#2	Asia	**2.96**	Africa	3.03	Africa	3.13
#3	South America	**2.93**	South America	2.84	South America	2.81
#4	North America	**2.50**	Middle East	2.53	Middle East	2.52
#5	Middle East	**2.47**	Caribbean & Central America	2.52	Caribbean and Central America	2.49
#6	Caribbean & Central America	**2.43**	North America	2.50	North America	2.33
#7	Oceania	**2.17**	Oceania	2.17	Oceania	2.27
#8	Europe	**2.01**	Europe	2.07	Europe	2.05
	World overall	**2.59**	**World overall**	2.63	**World overall**	2.66

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	North America	**1.86**	North America	1.86	Asia	1.70
#2	Asia	**1.81**	Asia	1.55	North America	1.43
#3	Caribbean & Central America	**1.39**	South America	1.40	Africa	1.31
#4	South America	**1.39**	Africa	1.29	Caribbean and Central America	1.31
#5	Africa	**1.35**	Caribbean & Central America	1.25	Europe	1.19
#6	Europe	**1.12**	Europe	1.22	Oceania	1.18
#7	Oceania	**1.06**	Oceania	1.14	South America	1.13
#8	Middle East	**1.03**	Middle East	1.00	Middle East	1.00
	World overall	**1.32**	**World overall**	1.28	**World overall**	1.28

Response

Rank	Country	2023	Country	2021	Country	2019
#1	Middle East	**3.61**	Middle East	3.48	Middle East	3.55
#2	Caribbean & Central America	**3.01**	Caribbean & Central America	3.07	South America	2.90
#3	South America	**2.74**	Asia	2.81	Africa	2.82
#4	Africa	**2.67**	South America	2.66	Caribbean and Central America	2.82
#5	Asia	**2.57**	Africa	2.62	Asia	2.81
#6	Europe	**2.42**	Europe	2.52	Europe	2.37
#7	Oceania	**2.12**	Oceania	1.93	Oceania	2.08
#8	North America	**1.50**	North America	1.57	North America	1.79
	World overall	**2.65**	**World overall**	2.67	**World overall**	2.68

TABLE 31

General state scores for ocean basin

and indicator type, 2023

All Types

#1 West Indian Ocean

2.54

#2 East Indian Ocean

2.39

#3 West Atlantic

2.38

#4 Eastern Pacific

2.35

#5 Mediterranean & Black Sea

2.27

#6 East Atlantic

2.19

#7 Western Pacific

2.16

Vulnerability

Rank	Country	2023	Country	2021	Country	2019
#1	East Indian Ocean	3.10	East Indian Ocean	3.14	East Indian Ocean	3.26
#2	Eastern Pacific	2.81	Eastern Pacific	2.83	West Indian Ocean	2.84
#3	West Indian Ocean	2.75	West Indian Ocean	2.76	Eastern Pacific	2.75
#4	East Atlantic	2.57	Western Pacific	2.60	Western Pacific	2.70
#5	Western Pacific	2.54	East Atlantic	2.60	East Atlantic	2.63
#6	West Atlantic	2.50	West Atlantic	2.54	Mediterranean and Black Sea	2.53
#7	Mediterranean & Black Sea	2.47	Mediterranean & Black Sea	2.48	West Atlantic	2.52
	World overall	**2.59**	**World overall**	**2.63**	**World overall**	**2.66**

Prevalence

Rank	Country	2023	Country	2021	Country	2019
#1	Eastern Pacific	1.66	Eastern Pacific	1.57	East Indian Ocean	1.78
#2	East Indian Ocean	1.57	Western Pacific	1.50	Western Pacific	1.55
#3	Western Pacific	1.56	East Atlantic	1.34	Eastern Pacific	1.43
#4	West Atlantic	1.40	West Atlantic	1.27	East Atlantic	1.28
#5	East Atlantic	1.28	East Indian Ocean	1.19	West Atlantic	1.26
#6	West Indian Ocean	1.26	West Indian Ocean	1.12	West Indian Ocean	1.23
#7	Mediterranean & Black Sea	1.09	Mediterranean & Black Sea	1.12	Mediterranean and Black Sea	1.14
	World overall	**1.32**	**World overall**	**1.28**	**World overall**	**1.28**

Response

Rank	Country	2023	Country	2021	Country	2019
#1	West Indian Ocean	3.11	West Indian Ocean	3.00	West Indian Ocean	3.06
#2	West Atlantic	2.86	West Atlantic	2.91	West Atlantic	2.85
#3	Mediterranean & Black Sea	2.79	Mediterranean & Black Sea	2.87	Mediterranean and Black Sea	2.71
#4	East Atlantic	2.42	East Indian Ocean	2.48	East Atlantic	2.53
#5	Eastern Pacific	2.40	Eastern Pacific	2.45	East Indian Ocean	2.40
#6	East Indian Ocean	2.33	East Atlantic	2.43	Western Pacific	2.35
#7	Western Pacific	2.26	Western Pacific	2.32	Eastern Pacific	2.30
	World overall	**2.65**	**World overall**	**2.67**	**World overall**	**2.68**

Key conclusions and implications from the 2021 update

8

8. Key conclusions and implications from the 2023 update

The third edition of the Index has enabled a longitudinal analysis of the risks of IUU fishing, tracking changes in the listings of best- and worst-performing countries, regions and ocean basins at the global scale and highlighting that the risk of **IUU fishing is a dynamic issue**.

The global score across all state responsibilities and types of indicators was 2.28 in 2023, up from 2.24 in 2019, **representing a decline in performance and increased risks of IUU fishing**.

Using the results presented in earlier sections, Table 32 highlights the worst-performing regions and ocean basins for different combinations of indicators related to state responsibilities and indicator types. **It serves as a call to action in specific regions and ocean basins**.

TABLE 32
Worst-performing regions and ocean basins by indicator group in 2023

		Type			
		Vulnerability	**Prevalence**	**Response**	**Overall**
Responsibility	**Coastal**	*North America / Western Pacific*	*Africa / East Indian Ocean*	*Middle East / West Indian Ocean*	*Africa / West Indian Ocean*
	Flag	*North America / Eastern Pacific*	*Asia / Western Pacific*	*Middle East / East Indian Ocean*	*Asia / Western Pacific*
	Port	*North America / Eastern Pacific*	*Asia / Western Pacific*	Middle East / West Indian Ocean	*Middle East / Western Pacific*
	General	*Africa / East Indian Ocean*	*North America / Eastern Pacific*	Middle East / West Indian Ocean	*Middle East / West Indian Ocean*
	Overall	*North America / Eastern Pacific*	*Asia / Western Pacific*	Middle East / West Indian Ocean	*Asia / West Indian Ocean*

Note: Regions and oceans entering this table in 2021 that were not the worst performing in 2019 are shown in italic.

Of note is that the aggregated scores for all countries in a region or ocean basin do not reveal the need for action in or by specific countries. Table 33 draws from earlier tables to highlight the countries that had the worst scores for different indicator groups, with the implication that **specific action may be most required by and in these countries** (although not limited to these countries).

TABLE 33
Worst-performing countries by indicator group in 2023

		Type			
		Vulnerability	**Prevalence**	**Response**	**Overall**
Responsibility	**Coastal**	• Japan • China • France	• Somalia • Indonesia • Vietnam	• Benin • Congo, R. • Jamaica (+ 4 others)	• Yemen • Congo, R. • Somalia
	Flag	• China • France • Japan (+ 5 others)	• China • Taiwan • South Korea (+ Russia)	• Guinea-Bissau • Libya • Russia	• Russia • China • Taiwan
	Port	• Canada • Chile • China (+ 13 others)	• China • South Korea • Spain (+ 2 others)	• Jamaica • North Korea • Kuwait (+ 3 others)	• China • Spain • North Korea
	General	• India • India • Myanmar (+ Peru)	• Mexico • China • Vietnam	• Israel • Lebanon • United Arab Emirates	• Comoros • India • Yemen
	Overall	• China • Japan • Russia	• China • Taiwan • Indonesia	• United Arab Emirates • Yemen • Kuwait (+ Qatar)	• China • Russia • Yemen

Note: Countries with the same scores in rankings are listed alphabetically. Where more countries than shown in the table have the same score, the number of additional countries is provided in brackets

Steps to reduce the risks of IUU fishing are possible, and many countries are indeed taking such steps. Given that improvements can be made to reduce IUU fishing risk, **the failure to improve Index scores in many countries remains a cause of great concern.**

Of special concern is the continuing high score for China, given its vast domestic and distant-water fishing fleets. Its score remains very high compared to other countries, despite a marginal improvement in 2023.

Examining the full ranking tables (see Annex) suggests that **developing countries remain the most vulnerable to IUU fishing** and may lack sufficient resources to fully respond to the challenges of combating IUU fishing. This indicates that meaningful mechanisms need to be leveraged or developed that support developing countries in their efforts to combat IUU fishing at all levels.

Nations operating distant-water fishing fleets that yield poor scores for both flag/prevalence and flag/response indicators may be considered as particularly problematic. Solving their poor performance would go a long way to eliminate major portions of IUU fishing globally, and there is a pressing need to hold these countries accountable for their actions (or lack thereof), to monitor progress and to take remedial action where and as appropriate.

The IUU Fishing
Risk Index website

9

9. The IUU Fishing Risk Index website

A dedicated website – **www.iuufishingindex.net** – presents the results of the IUU Fishing Risk Index for 2019, 2021 and 2023.

The website has a home page, which introduces the Index and explains the content of the different webpages.

The 'Maps' webpage allows users to visualize IUU fishing risk scores at the global level, either aggregated or filtered for indicators related to state 'responsibilities' (flag, coastal, port and general) or indicator 'types' (vulnerability, prevalence and response). The maps can also be filtered to show countries in specific regions or ocean basins. Dark colours indicate poor performance, and hovering over an individual country brings up summary country data. Indicator scores are provided for 2019, 2021 and 2023.

The website uses 'fish-bone' graphics to present the IUU fishing risk scores. Individual 'fish bones' represent the coastal, flag, port and general state responsibilities, with larger fish bones showing poorer scores.

The 'Country profiles' webpage provides complete data for individual coastal states, showing the scores for each indicator for the country concerned, and how the country's scores compare to the average scores for the region and the ocean basin(s) in which the country is located. Individual country profiles can be downloaded from this webpage. Indicator scores are provided for 2019, 2021 and 2023 and include an indication of whether a country's score and rank have improved.

The 'Ranking' webpage shows scores ranked by country and allows users to view these rankings filtered by the type of indicator. Rankings are also provided for regional scores and ocean basin scores. Again, this webpage allows for a comparison across years.

The database webpage provides all individual country indicator scores for 2019, 2021 and 2023 and allows users to analyze data for and between countries, region and ocean basins.

Annex: Country scores, 2023, 2021 and 2019

The tables below provide a full list of the country scores for 2023, 2021 and 2019 across all state responsibilities, with countries ranked by their overall IUU score.

2023

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
China	4.32	4.30	2.81	**3.69**	1	—
Russia	4.26	2.78	2.82	**3.20**	2	—
Yemen	3.41	1.52	3.86	**2.99**	3	▲ 2
India	2.72	2.95	3.19	**2.97**	4	▲ 48
Iran	3.39	1.96	3.43	**2.93**	5	▲ 6
Indonesia	4.08	3.22	1.81	**2.89**	6	▲ 14
Taiwan	3.28	3.41	2.19	**2.88**	7	▼ 1
Comoros Isl.	3.05	2.19	3.07	**2.81**	8	▲ 25
South Korea	3.88	3.19	1.67	**2.76**	9	▼ 6
Ukraine	3.12	1.48	3.36	**2.72**	10	▼ 3
Mexico	3.52	2.15	2.58	**2.70**	11	▲ 4
North Korea	2.91	1.74	3.70	**2.68**	12	▲ 5
Somalia	3.32	2.19	2.66	**2.68**	13	▼ 9

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Egypt	3.52	1.52	3.11	2.68	14	▼ 5
Venezuela	3.24	1.52	3.11	2.66	15	▼ 1
Congo, R. of	2.91	1.71	3.33	2.64	16	▲ 2
Vietnam	3.41	3.11	1.63	2.57	17	▲ 39
Guyana	3.00	1.44	3.14	2.56	18	▲ 13
Algeria	3.30	1.63	2.85	2.56	19	▲ 11
Libya	3.39	1.52	2.89	2.56	19	▼ 9
Spain	3.52	2.11	2.22	2.56	21	▲ 3
Jamaica	2.59	1.30	3.69	2.55	22	▲ 18
Peru	3.68	1.74	2.33	2.53	23	▲ 63
Equatorial Guinea	3.27	1.41	2.91	2.52	24	▼ 5
Madagascar	3.04	1.74	2.76	2.52	25	▼ 5
Eritrea	2.77	1.41	3.20	2.51	26	▼ 18
Senegal	2.84	2.30	2.44	2.51	27	▲ 33
Georgia	2.43	1.74	3.33	2.51	28	▲ 16
South Africa	3.20	1.67	2.64	2.50	29	▼ 16
Lebanon	2.40	1.30	3.48	2.47	30	▲ 33
United Arab Emirates	2.30	1.30	3.96	2.46	31	▲ 8
Sao Tome & Principe	3.00	1.41	2.97	2.46	32	▲ 9
Ecuador	3.56	2.70	1.50	2.45	33	▲ 15

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Pakistan	2.86	1.41	3.00	2.45	34	▲ 46
Colombia	2.78	1.74	2.83	2.45	35	▲ 38
Mauritania	3.32	1.52	2.60	2.44	36	▲ 7
Tunisia	3.08	1.52	2.67	2.43	37	▲ 34
Liberia	3.44	1.67	2.28	2.42	38	▼ 22
Nigeria	3.09	1.96	2.28	2.40	39	▼ 4
Guinea-Bissau	2.41	1.67	2.87	2.38	40	▼ 8
Israel	2.00	1.30	3.44	2.38	41	▼ 3
Vanuatu	3.68	1.74	1.94	2.38	41	▼ 21
Grenada	2.36	1.30	3.24	2.37	43	▼ 1
Honduras	2.85	1.52	2.88	2.37	44	▼ 8
Sierra Leone	3.09	2.11	2.11	2.37	45	▼ 20
Cote d'Ivoire	2.88	1.85	2.39	2.36	46	▲ 11
El Salvador	2.76	1.30	2.89	2.36	46	▲ 30
France	3.92	1.78	1.72	2.36	46	▲ 46
Japan	4.28	1.63	1.58	2.36	46	▼ 34
Papua New Guinea	3.00	1.59	2.50	2.36	46	▲ 53
Cambodia	2.59	1.90	2.54	2.36	51	▼ 28
Kuwait	2.35	1.30	3.80	2.36	52	▲ 15
Philippines	3.40	2.11	1.81	2.35	53	▼ 33

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Bahamas	2.83	1.44	2.85	**2.35**	54	▲ 21
Cameroon	2.09	2.48	2.48	**2.35**	55	▲ 29
Turkey	2.72	1.67	2.48	**2.34**	56	▲ 47
Kiribati	3.05	1.48	2.56	**2.34**	57	▲ 17
Mauritius	2.76	1.67	2.56	**2.34**	58	▲ 4
Bangladesh	2.59	1.52	2.80	**2.33**	59	▲ 26
Saint Lucia	2.45	1.30	3.31	**2.33**	59	▲ 41
Panama	3.08	2.26	1.86	**2.33**	61	▼ 1
Sudan	2.91	1.30	2.81	**2.33**	62	▲ 7
Solomon Isl.	2.84	1.59	2.50	**2.32**	63	▲ 50
USA	4.12	1.89	1.39	**2.32**	63	▼ 36
Qatar	2.20	1.30	3.80	**2.31**	65	▲ 33
Norway	3.68	1.33	2.08	**2.31**	66	▲ 39
Singapore	1.92	1.44	3.22	**2.31**	66	▼ 40
Tanzania	2.80	1.30	2.72	**2.31**	66	▲ 16
United Kingdom	3.20	1.33	2.42	**2.31**	66	▲ 26
Congo (DRC)	2.05	1.38	3.48	**2.31**	70	▼ 24
Haiti	2.41	1.38	3.10	**2.30**	71	▼ 1
Costa Rica	3.00	1.96	2.06	**2.30**	72	▼ 7

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Angola	3.41	1.74	2.03	**2.29**	73	▼ 36
Marshall Isl.	2.86	1.48	2.56	**2.29**	73	▼ 5
Micronesia (FS of)	3.00	1.37	2.56	**2.29**	73	▲ 10
Samoa	2.89	1.41	2.65	**2.29**	76	▲ 1
Malaysia	2.60	1.41	2.72	**2.28**	77	▼ 30
Sri Lanka	3.04	2.19	1.83	**2.28**	77	▲ 54
Suriname	2.60	1.22	2.86	**2.28**	77	▲ 19
Montenegro	2.52	1.30	2.83	**2.27**	80	▲ 11
Dominican Republic	2.14	1.38	3.29	**2.27**	81	▼ 53
Saint Vincent & the Grenadines	1.91	2.33	2.44	**2.25**	82	▼ 4
Portugal	3.12	1.96	1.86	**2.25**	83	▲ 30
Myanmar	3.59	1.30	2.10	**2.24**	84	▼ 50
Guatemala	2.61	1.41	2.70	**2.24**	85	▼ 30
Kenya	2.80	1.74	2.17	**2.22**	86	▲ 27
Morocco	3.84	1.41	1.69	**2.22**	86	▼ 21
Cuba	2.85	1.30	2.62	**2.19**	88	▼ 25
Iraq	2.05	1.38	3.20	**2.19**	89	▼ 36
Uruguay	2.41	1.85	2.28	**2.18**	90	▲ 36
Saint Kitts & Nevis	2.26	1.44	2.79	**2.17**	91	▲ 15

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Palau	2.68	1.33	2.54	**2.17**	92	▼ 3
Maldives	3.08	1.33	2.17	**2.17**	93	▼ 1
Nicaragua	2.88	1.81	1.85	**2.16**	94	▼ 23
Bosnia & Herzegovina	1.95	1.38	2.96	**2.16**	95	▲ 2
Chile	3.40	1.30	1.94	**2.16**	96	▲ 32
Namibia	2.84	1.44	2.22	**2.16**	96	▲ 24
Syria	2.12	1.38	2.71	**2.16**	98	▼ 69
Timor-Leste	2.64	1.38	2.36	**2.15**	99	▼ 20
Barbados	2.50	1.41	2.62	**2.15**	100	▲ 25
Fiji	2.88	1.78	1.89	**2.14**	101	▲ 6
Gabon	3.14	1.63	1.88	**2.14**	102	▼ 13
Djibouti	2.00	1.52	2.76	**2.13**	103	▲ 32
Tuvalu	2.64	1.22	2.50	**2.13**	104	▲ 7
Ghana	2.64	2.56	1.44	**2.13**	105	▲ 16
Mozambique	2.92	1.41	2.11	**2.13**	105	▲ 12
Thailand	3.00	2.07	1.56	**2.13**	105	▼ 57
Jordan	2.10	1.38	2.90	**2.11**	108	▼ 27
Cyprus	2.84	1.41	2.11	**2.10**	109	▲ 24
Cook Islands	2.59	1.67	2.03	**2.09**	110	▲ 20
Estonia	2.36	1.15	2.61	**2.09**	111	▲ 40

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Brunei Darussalam	1.76	1.38	3.40	**2.08**	112	▼ 67
Dominica	1.80	1.41	3.09	**2.07**	113	▼ 9
Greece	3.08	1.30	1.94	**2.07**	114	▲ 2
Benin	2.68	1.30	2.33	**2.07**	115	▼ 6
Italy	2.84	1.57	1.81	**2.06**	116	▼ 57
Oman	2.48	1.71	1.97	**2.05**	117	▼ 25
Malta	2.56	1.70	1.92	**2.03**	118	▲ 13
Netherlands	2.80	1.00	2.28	**2.03**	118	▲ 3
Albania	2.52	1.30	2.25	**2.03**	120	▲ 7
Croatia	2.72	1.30	2.08	**2.02**	121	▲ 20
Lithuania	2.44	1.30	2.28	**2.02**	121	▼ 2
Trinidad & Tobago	2.32	1.44	2.25	**2.02**	121	▼ 70
Nauru	2.39	1.57	2.10	**2.01**	124	▲ 5
Togo	3.00	1.30	1.93	**2.01**	125	▼ 17
Seychelles	2.72	1.74	1.72	**2.01**	126	▼ 72
Cape Verde	2.72	1.41	1.94	**2.00**	127	▼ 10
Denmark	2.76	1.00	2.22	**2.00**	127	▲ 20
Gambia	2.86	1.63	1.71	**1.99**	129	▼ 42
Belize	1.95	2.10	1.94	**1.99**	130	▲ 18
Bahrain	1.55	1.38	3.40	**1.98**	131	▼ 43

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Germany	2.84	1.00	2.11	**1.98**	132	▲ 6
Guinea	2.68	1.52	1.83	**1.98**	132	▼ 31
New Zealand	2.92	1.41	1.72	**1.97**	134	▲ 15
Antigua & Barbuda	1.89	1.38	2.60	**1.95**	135	▼ 11
Poland	2.40	1.22	2.17	**1.94**	136	▲ 8
Brazil	2.52	1.67	1.65	**1.94**	137	▼ 35
Saudi Arabia	1.77	1.38	2.43	**1.93**	138	▼ 28
Tonga	2.36	1.41	2.00	**1.91**	139	▲ 4
Latvia	2.12	1.22	2.25	**1.90**	140	▲ 1
Ireland	2.64	1.19	1.89	**1.89**	141	▼ 8
Bulgaria	2.43	1.30	1.97	**1.88**	142	▼ 2
Slovenia	1.84	1.30	2.31	**1.86**	143	▼ 6
Canada	3.56	1.11	1.22	**1.85**	144	▼ 8
Monaco	1.33	1.38	2.61	**1.85**	145	▼ 33
Argentina	2.55	1.10	1.86	**1.85**	146	▼ 96
Iceland	2.96	1.11	1.61	**1.84**	147	▼ 26
Australia	3.00	1.33	1.36	**1.82**	148	▼ 10
Sweden	2.48	1.07	1.86	**1.80**	149	▲ 1
Belgium	2.27	1.30	1.78	**1.75**	150	▼ 5

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2021
Finland	1.95	1.29	1.83	**1.72**	151	—
Romania	1.88	1.38	1.58	**1.62**	152	▼ 7

2021

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
China	4.32	4.19	3.31	**3.86**	1	—
Russia	4.09	2.11	3.06	**3.04**	2	▲ 2
South Korea	4.00	3.15	1.97	**2.91**	3	▲ 33
Somalia	3.32	2.19	3.21	**2.90**	4	▲ 7
Yemen	3.36	1.30	3.83	**2.89**	5	▲ 2
Taiwan	3.20	3.11	2.47	**2.88**	6	▼ 4
Ukraine	2.84	1.67	3.42	**2.75**	7	▲ 26
Eritrea	2.64	1.30	3.94	**2.75**	8	▲ 61
Egypt	3.48	1.52	3.22	**2.70**	9	▲ 15
Libya	3.43	1.52	3.22	**2.69**	10	▲ 7
Iran	2.91	1.63	3.43	**2.68**	11	▲ 26
Japan	4.28	1.59	2.36	**2.67**	12	▲ 8
South Africa	3.28	1.89	2.75	**2.64**	13	▲ 32

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
Venezuela	3.13	1.41	3.33	**2.63**	14	▲ 32
Mexico	3.52	1.74	2.70	**2.61**	15	▼ 7
Liberia	3.56	1.78	2.53	**2.59**	16	▼ 6
North Korea	2.91	1.41	3.80	**2.58**	17	▲ 13
Congo, R. of	2.68	1.38	3.50	**2.56**	18	▲ 26
Equatorial Guinea	3.27	1.52	2.91	**2.56**	19	▲ 56
Indonesia	4.08	2.11	1.81	**2.55**	20	▼ 6
Philippines	3.56	1.96	2.28	**2.55**	21	▼ 7
Vanuatu	3.52	1.96	2.31	**2.55**	22	▲ 8
Cambodia	2.68	2.17	2.76	**2.54**	23	▼ 20
Spain	3.40	2.07	2.28	**2.53**	24	▲ 3
Sierra Leone	3.18	2.11	2.44	**2.53**	25	▼ 19
Singapore	2.00	1.52	3.87	**2.52**	26	▲ 14
USA	4.12	2.33	1.53	**2.51**	27	▲ 38
Dominican Republic	2.85	1.30	3.80	**2.51**	28	▲ 36
Syria	2.91	1.30	3.37	**2.51**	29	▼ 4
Algeria	3.35	1.30	2.85	**2.45**	30	▲ 26
Guyana	2.68	1.29	3.06	**2.45**	31	▲ 35
Guinea-Bissau	3.14	1.85	2.49	**2.45**	32	▲ 25

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
Comoros Isl.	2.52	1.76	2.89	**2.45**	33	▼ 4
Myanmar	3.59	1.41	2.53	**2.44**	34	▼ 22
Nigeria	3.09	1.63	2.66	**2.44**	35	▲ 15
Honduras	2.85	1.52	3.04	**2.42**	36	▲ 50
Angola	2.92	1.52	2.75	**2.42**	37	▲ 16
Israel	2.08	1.38	3.29	**2.41**	38	▲ 36
United Arab Emirates	2.35	1.30	3.82	**2.41**	39	▲ 71
Jamaica	2.27	1.38	3.42	**2.40**	40	▼ 21
São Tomé & Príncipe	2.73	1.38	2.90	**2.40**	41	▼ 10
Grenada	2.45	1.30	3.24	**2.40**	42	▼ 10
Mauritania	3.23	1.52	2.56	**2.40**	43	▲ 71
Georgia	2.26	1.30	3.59	**2.39**	44	▲ 26
Brunei Darussalam	2.45	1.30	3.80	**2.39**	45	▲ 49
Congo (DRC)	2.30	1.38	3.48	**2.39**	46	—
Malaysia	2.60	2.07	2.47	**2.39**	47	▼ 13
Ecuador	3.40	2.44	1.61	**2.38**	48	▲ 1
Thailand	3.00	2.74	1.67	**2.38**	49	▲ 7
Argentina	2.85	1.52	2.92	**2.37**	50	▲ 67
Trinidad & Tobago	2.45	1.89	2.67	**2.36**	51	▲ 39

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
India	2.64	1.38	2.81	**2.36**	52	▼ 36
Iraq	2.55	1.38	3.00	**2.36**	53	▼ 10
Seychelles	2.84	2.52	1.86	**2.34**	54	▲ 57
Guatemala	2.96	1.30	2.80	**2.34**	55	▲ 62
Vietnam	3.14	2.48	1.69	**2.33**	56	▼ 51
Côte d'Ivoire	3.00	2.07	2.06	**2.33**	57	▲ 19
Madagascar	3.12	1.30	2.56	**2.33**	58	▲ 11
Italy	3.64	1.44	2.06	**2.32**	59	▼ 36
Panama	3.20	1.85	2.03	**2.31**	60	▼ 34
Senegal	2.84	2.30	1.94	**2.31**	61	▲ 17
Mauritius	2.84	1.63	2.42	**2.30**	62	▲ 39
Cuba	2.75	1.30	2.96	**2.29**	63	▲ 9
Lebanon	2.56	1.38	2.74	**2.29**	64	▼ 11
Costa Rica	2.92	1.30	2.58	**2.28**	65	▲ 69
Morocco	3.72	1.30	2.03	**2.28**	66	▼ 6
Kuwait	2.50	1.30	3.40	**2.28**	67	▲ 35
Marshall Isl.	2.73	1.70	2.42	**2.27**	68	▲ 40
Sudan	2.77	1.38	2.52	**2.27**	69	▼ 60
Haiti	2.32	1.38	3.10	**2.27**	70	▼ 32

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
Nicaragua	3.16	1.30	2.36	**2.26**	71	▲ 29
Tunisia	3.00	1.30	2.47	**2.26**	72	▲ 34
Colombia	2.74	1.30	2.73	**2.25**	73	▼ 13
Kiribati	3.05	1.67	2.19	**2.25**	74	▼ 33
Bahamas	2.65	1.30	2.85	**2.25**	75	▲ 46
El Salvador	2.56	1.30	2.72	**2.24**	76	▲ 40
Samoa	2.89	1.30	2.62	**2.24**	77	▼ 6
Saint Vincent & the Grenadines	1.76	2.19	2.61	**2.23**	78	▲ 21
Timor-Leste	2.68	1.38	2.57	**2.23**	79	▼ 58
Pakistan	2.86	1.30	2.54	**2.23**	80	▼ 8
Jordan	2.50	1.30	3.09	**2.22**	81	▲ 22
Tanzania	2.76	1.85	2.11	**2.22**	82	▼ 64
Micronesia (FS of)	3.05	1.67	2.11	**2.21**	83	▼ 1
Cameroon	2.18	1.52	3.00	**2.21**	84	▼ 69
Bangladesh	2.68	1.30	2.60	**2.20**	85	▼ 37
Peru	3.68	1.63	1.58	**2.19**	86	▼ 1
Gambia	2.86	1.74	2.11	**2.19**	87	▼ 9
Bahrain	2.05	1.30	3.50	**2.18**	88	▲ 32
Gabon	3.18	1.30	2.22	**2.17**	89	▼ 28

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
Palau	2.63	1.78	2.23	2.17	90	▲ 24
Montenegro	2.60	1.38	2.33	2.17	91	▲ 4
France	3.92	1.22	1.67	2.17	92	▼ 25
Maldives	3.16	1.44	2.03	2.17	93	▼ 12
Oman	2.64	1.30	2.50	2.17	94	▲ 40
United Kingdom	3.20	1.22	2.17	2.17	95	—
Suriname	2.68	1.22	2.59	2.16	96	▲ 11
Bosnia & Herzegovina	2.00	1.38	3.00	2.16	97	▼ 9
Qatar	2.05	1.30	3.40	2.15	98	▲ 24
Papua New Guinea	3.00	1.26	2.19	2.14	99	▼ 1
Saint Lucia	2.32	1.30	2.85	2.13	100	▼ 65
Guinea	3.14	1.74	1.80	2.13	101	▼ 79
Brazil	2.91	1.41	2.13	2.11	102	▲ 10
Turkey	2.80	1.52	1.97	2.11	103	▼ 49
Dominica	1.80	1.30	3.50	2.10	104	▼ 25
Norway	3.56	1.22	1.75	2.10	105	▼ 14
Saint Kitts & Nevis	1.89	1.57	2.63	2.09	106	▼ 13
Fiji	2.95	1.67	1.86	2.08	107	▼ 18
Togo	2.59	1.52	2.23	2.08	108	▼ 69

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
Benin	2.32	1.38	2.44	2.07	109	▼ 58
Saudi Arabia	2.00	1.38	2.71	2.06	110	▼ 23
Tuvalu	2.64	1.44	2.11	2.04	111	▼ 5
Monaco	1.67	1.41	2.92	2.03	112	▲ 23
Kenya	2.72	1.63	1.83	2.02	113	▼ 17
Portugal	3.20	1.30	1.75	2.02	114	▼ 71
Solomon Isl.	2.84	1.07	2.17	2.02	115	▼ 4
Greece	2.96	1.41	1.75	1.99	116	▼ 12
Cape Verde	2.60	1.30	2.06	1.98	117	▲ 2
Mozambique	2.88	1.63	1.61	1.98	118	▼ 34
Lithuania	2.28	1.38	2.11	1.98	119	▲ 5
Namibia	2.96	1.22	1.83	1.97	120	▼ 23
Ghana	2.64	2.11	1.36	1.95	121	▼ 6
Iceland	3.08	1.44	1.56	1.95	122	▲ 21
Netherlands	2.76	1.11	2.03	1.95	123	▲ 3
Antigua & Barbuda	2.05	1.38	2.39	1.95	124	▼ 61
Barbados	1.95	1.38	2.42	1.94	125	▲ 16
Uruguay	2.05	2.07	1.75	1.93	126	▲ 13
Albania	2.64	1.30	1.89	1.92	127	▼ 43

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
Chile	3.32	1.30	1.39	**1.91**	128	▼ 1
Nauru	2.39	1.29	2.03	**1.90**	129	—
Cook Islands	2.64	1.38	1.74	**1.90**	130	▼ 69
Malta	2.44	1.41	1.83	**1.88**	131	▼ 5
Sri Lanka	3.00	1.30	1.53	**1.88**	132	▼ 73
Cyprus	2.52	1.30	1.83	**1.86**	133	▼ 5
Ireland	2.76	1.37	1.61	**1.86**	134	▲ 10
Djibouti	1.91	1.38	2.27	**1.86**	135	▼ 54
Canada	3.56	1.11	1.22	**1.85**	136	▼ 3
Slovenia	2.00	1.38	1.94	**1.81**	137	—
Australia	3.00	1.22	1.39	**1.80**	138	▼ 1
Germany	2.84	1.00	1.67	**1.80**	139	▲ 2
Bulgaria	2.74	1.30	1.48	**1.77**	140	▲ 4
Croatia	2.20	1.30	1.75	**1.74**	141	▼ 18
Latvia	2.24	1.15	1.83	**1.74**	142	▲ 10
Tonga	2.36	1.30	1.67	**1.73**	143	▲ 3
Poland	2.40	1.30	1.58	**1.73**	144	▲ 5
Belgium	2.27	1.30	1.70	**1.72**	145	▲ 7
Romania	2.24	1.38	1.56	**1.72**	146	▼ 16

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)	Change in country rank compared to 2019
Denmark	2.48	1.00	1.72	**1.72**	147	▼ 11
Belize	2.05	1.38	1.65	**1.69**	148	▼ 3
New Zealand	2.76	1.07	1.39	**1.68**	149	▼ 18
Sweden	2.36	1.07	1.61	**1.66**	150	▼ 2
Estonia	1.80	1.29	1.69	**1.62**	151	▼ 1
Finland	1.95	1.22	1.73	**1.62**	152	▼ 4

2019

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
China	4.44	4.19	3.37	**3.93**	1
Taiwan	3.56	3.56	3.03	**3.34**	2
Cambodia	3.32	2.37	4.00	**3.23**	3
Russia	4.22	2.44	3.00	**3.16**	4
Vietnam	3.75	3.11	2.68	**3.16**	5
Sierra Leone	3.14	2.33	3.46	**3.01**	6
Yemen	3.41	1.30	4.00	**2.96**	7
Sudan	3.14	1.30	3.71	**2.77**	8
Liberia	3.72	1.89	2.74	**2.76**	9

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
Somalia	3.36	2.19	2.82	**2.75**	10
Myanmar	3.59	1.30	3.40	**2.73**	11
Libya	3.43	1.52	3.43	**2.73**	12
Philippines	3.92	2.19	2.26	**2.71**	13
Mexico	3.48	1.93	2.83	**2.71**	14
Indonesia	3.92	2.30	2.14	**2.70**	15
Cameroon	3.09	1.30	3.71	**2.69**	16
India	3.39	2.07	2.70	**2.68**	17
Tanzania	3.00	1.74	3.11	**2.65**	18
Japan	4.28	1.63	2.22	**2.63**	19
Comoros	3.09	1.81	2.97	**2.61**	20
Timor-Leste	3.14	1.41	3.36	**2.61**	21
Syria	3.00	1.30	3.71	**2.61**	22
Guinea	3.09	1.74	3.00	**2.60**	23
North Korea	2.77	1.74	3.75	**2.58**	24
Egypt	3.22	1.52	3.17	**2.58**	25
Jamaica	2.68	1.30	3.71	**2.57**	26
Panama	3.24	2.48	2.14	**2.56**	27
Spain	3.91	2.22	1.94	**2.56**	28
Vanuatu	3.64	1.96	2.23	**2.55**	29

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
Grenada	2.37	1.30	3.71	**2.53**	30
Ukraine	3.13	1.74	2.79	**2.53**	31
Malaysia	3.09	1.52	3.13	**2.52**	32
São Tomé & Príncipe	2.95	1.30	3.26	**2.51**	33
Congo, R. of	3.05	1.52	3.50	**2.51**	34
Italy	3.76	1.70	2.17	**2.50**	35
Saint Lucia	2.36	1.30	3.81	**2.50**	36
South Korea	3.91	2.30	1.67	**2.49**	37
Iran	3.22	1.41	3.04	**2.49**	38
Haiti	2.30	1.38	3.80	**2.48**	39
Togo	2.64	1.63	3.24	**2.47**	40
Singapore	2.09	1.63	4.29	**2.46**	41
Kiribati	3.50	1.81	2.29	**2.45**	42
Portugal	3.36	1.74	2.33	**2.45**	43
Iraq	2.55	1.30	3.73	**2.44**	44
South Africa	3.52	1.78	2.17	**2.43**	45
Congo (DRC)	2.50	1.30	3.56	**2.42**	46
Bangladesh	2.73	1.30	3.09	**2.41**	47
Ecuador	2.96	2.30	2.06	**2.39**	48
Nigeria	3.05	2.19	2.12	**2.39**	49

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
Benin	3.00	1.30	3.22	**2.37**	50
Lebanon	2.44	1.30	3.31	**2.37**	51
Angola	3.12	1.41	2.63	**2.37**	52
Venezuela	2.83	1.41	2.92	**2.36**	53
Turkey	3.13	1.74	2.28	**2.34**	54
Thailand	2.92	2.67	1.66	**2.33**	55
Algeria	3.35	1.30	2.52	**2.33**	56
Guinea-Bissau	2.91	1.52	2.61	**2.33**	57
Sri Lanka	3.00	1.96	2.11	**2.32**	58
Morocco	3.84	1.30	2.03	**2.32**	59
Colombia	2.74	1.52	2.90	**2.31**	60
Eritrea	2.50	1.38	3.24	**2.31**	61
Cook Islands	3.15	1.30	2.58	**2.30**	62
Gabon	3.00	1.74	2.29	**2.30**	63
Antigua and Barbuda	2.89	1.30	2.86	**2.30**	64
Dominican Republic	2.85	1.30	3.24	**2.30**	65
USA	3.96	1.85	1.56	**2.29**	66
Guyana	3.14	1.30	2.53	**2.29**	67
France	3.92	1.22	1.94	**2.28**	68
Madagascar	3.08	1.63	2.19	**2.27**	69

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
Honduras	2.85	1.52	2.65	**2.27**	70
Georgia	2.35	1.30	3.29	**2.27**	71
Samoa	2.89	1.30	2.68	**2.26**	72
Cuba	2.43	1.30	3.22	**2.26**	73
Pakistan	2.78	1.30	2.87	**2.26**	74
Israel	2.05	1.30	3.57	**2.25**	75
Equatorial Guinea	3.10	1.30	2.64	**2.25**	76
Cote d'Ivoire	2.92	1.52	2.31	**2.24**	77
Senegal	3.04	1.74	2.06	**2.24**	78
Gambia	2.82	1.41	2.57	**2.23**	79
Dominica	2.00	1.38	3.42	**2.23**	80
Maldives	3.16	1.22	2.34	**2.23**	81
Papua New Guinea	3.00	1.67	2.11	**2.23**	82
Djibouti	2.41	1.30	3.08	**2.23**	83
Micronesia (FS of)	3.05	1.56	2.23	**2.23**	84
Brunei Darussalam	2.35	1.30	3.63	**2.22**	85
Mozambique	3.04	1.52	2.17	**2.22**	86
Albania	2.72	1.30	2.56	**2.22**	87
Peru	3.52	1.52	1.83	**2.21**	88
Saudi Arabia	2.60	1.30	3.25	**2.21**	89

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
Bosnia and Herzegovina	2.32	1.30	3.08	2.20	90
Fiji	3.09	1.56	2.14	2.20	91
Trinidad & Tobago	2.28	1.44	3.00	2.20	92
Norway	3.68	1.00	2.06	2.19	93
United Kingdom	3.13	1.44	2.15	2.19	94
Montenegro	2.48	1.30	2.85	2.18	95
Kenya	2.72	1.41	2.40	2.18	96
Namibia	3.04	1.30	2.25	2.18	97
Saint Vincent & the Grenadines	2.36	1.81	2.35	2.18	98
Jordan	2.50	1.30	3.25	2.17	99
United Arab Emirates	2.35	1.30	3.38	2.16	100
Mauritius	2.84	1.74	1.97	2.15	101
Kuwait	2.50	1.30	3.13	2.14	102
Greece	2.92	1.41	2.13	2.13	103
Brazil	2.91	1.41	2.19	2.13	104
Argentina	3.05	1.30	2.29	2.13	105
Tunisia	2.96	1.30	2.17	2.13	106
Seychelles	3.12	1.85	1.64	2.13	107
Tuvalu	2.64	1.56	2.23	2.12	108
Suriname	2.65	1.30	2.64	2.12	109

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
Marshall Islands	2.91	1.44	2.11	2.11	110
Solomon Islands	3.08	1.26	2.06	2.10	111
Bahamas	2.52	1.30	2.58	2.09	112
Nicaragua	2.96	1.30	2.09	2.09	113
Bahrain	2.20	1.30	3.25	2.08	114
Palau	2.95	1.33	2.18	2.08	115
Mauritania	3.23	1.41	1.85	2.07	116
El Salvador	2.68	1.30	2.23	2.07	117
Guatemala	2.83	1.30	2.22	2.07	118
Cape Verde	2.64	1.52	2.06	2.06	119
Nauru	2.76	1.22	2.35	2.05	120
Saint Kitts and Nevis	2.09	1.56	2.47	2.05	121
Qatar	2.05	1.30	3.25	2.03	122
Croatia	2.91	1.30	2.00	2.03	123
Lithuania	2.44	1.41	2.19	2.02	124
Netherlands	2.64	1.22	2.19	2.02	125
Malta	2.83	1.30	2.03	2.01	126
Chile	3.35	1.30	1.69	2.01	127
Cyprus	2.52	1.30	2.19	2.01	128
Romania	2.43	1.74	1.90	2.00	129

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
New Zealand	3.36	1.00	1.78	**1.99**	130
Oman	2.48	1.30	2.26	**1.99**	131
Monaco	1.56	1.30	3.04	**1.99**	132
Ghana	2.96	1.63	1.56	**1.98**	133
Canada	3.48	1.00	1.64	**1.97**	134
Costa Rica	2.80	1.48	1.74	**1.97**	135
Denmark	2.84	1.00	2.03	**1.94**	136
Barbados	1.95	1.38	2.48	**1.94**	137
Australia	3.00	1.33	1.58	**1.91**	138
Slovenia	1.80	1.30	2.44	**1.91**	139
Uruguay	1.87	1.74	2.08	**1.89**	140
Germany	2.40	1.22	2.03	**1.89**	141
Iceland	3.08	1.00	1.62	**1.86**	142
Ireland	2.65	1.07	1.93	**1.85**	143
Tonga	2.68	1.30	1.69	**1.82**	144
Belize	2.09	1.74	1.61	**1.78**	145
Bulgaria	2.52	1.30	1.53	**1.74**	146
Sweden	2.55	1.00	1.78	**1.73**	147
Poland	2.32	1.30	1.50	**1.68**	148
Finland	2.05	1.22	1.80	**1.67**	149

Country	Vulnerability	Prevalence	Response	Overall IUU Score (worst to best)	Overall rank (worst to best)
Estonia	2.00	1.15	1.83	**1.67**	150
Latvia	2.00	1.22	1.53	**1.57**	151
Belgium	1.80	1.30	1.28	**1.43**	152