



World Justice  
Project

# Environmental Governance Indicators for Latin America & the Caribbean

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A cross-country assessment of environmental  
governance in practice in Argentina, Bolivia, Brazil,  
Colombia, Costa Rica, the Dominican Republic,  
El Salvador, Jamaica, Peru & Uruguay

2020

## Abstract

A healthy environment is critical to public health, ecosystem vitality, and the sustainability of societies. A majority of countries have endorsed this view and adopted environmental framework laws or included the right to a healthy environment in their constitutions. However, implementation often lags behind environmental laws, and to date, there have been very little data to help understand and address this implementation gap. *The Environmental Governance Indicators for Latin America and the Caribbean*© (EGI) represent the first-ever effort to address this challenge by measuring how environmental governance functions in practice in ten countries in the region: Argentina, Bolivia, Brazil, Colombia, Costa Rica, the Dominican Republic, El Salvador, Jamaica, Peru, and Uruguay. The EGI provides new data organized around 11 primary indicators of environmental governance for each country: 1) Regulation and Enforcement; 2) Civic Engagement; 3) Fundamental Environmental and Social Rights; 4) Access to and Quality of Justice; 5) Air Quality and Climate; 6) Water Quality and Resources; 7) Biodiversity; 8) Forestry; 9) Oceans, Seas, and Marine Resources; 10) Waste Management; and 11) Extraction and Mining. In addition, this report presents key third-party data on each country's governance context, institutional capacity, laws and regulations, and environmental performance in order to provide a more complete picture of contextual issues impacting or resulting from the state of environmental governance.

## Key words

Environmental Governance  
Environmental Indicator  
Pollution  
Environmental Rule of Law  
Biodiversity  
Institutional Capacity  
Environmental Impact  
Water Quality  
Air Quality  
Health

## JEL Codes

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# 1 About the Environmental Governance Indicators

## Introduction

**A healthy environment is critical to public health**, ecosystem vitality, and the sustainability of societies. A majority of countries have endorsed this view, with 176 countries adopting environmental framework laws and 150 countries including environmental protections or the right to a healthy environment in their constitutions.<sup>1</sup> However, the persistent and ever-growing challenges of climate change, water and air pollution, and biodiversity loss illuminate a gap between environmental laws and environmental outcomes. Implementation often lags behind environmental laws, and to date there have been very little data to help policymakers, researchers, and advocates understand and address this implementation gap. The *Environmental Governance Indicators for Latin America and the Caribbean*<sup>®</sup> represent the first-ever effort to address this challenge by measuring how environmental governance functions in practice across several countries.

The *Environmental Governance Indicators for Latin America and the Caribbean* (EGI) is a quantitative assessment tool designed to measure environmental governance in practice in ten countries in the region: Argentina, Bolivia, Brazil, Colombia, Costa Rica, the Dominican Republic, El Salvador, Jamaica, Peru, and Uruguay. The EGI provides new data organized around 11 primary indicators of environmental governance for each country: 1) Regulation and Enforcement; 2) Civic Engagement; 3) Fundamental Environmental and Social Rights; 4) Access to and Quality of Justice; 5) Air Quality and Climate; 6) Water Quality and Resources; 7) Biodiversity; 8) Forestry; 9) Oceans, Seas, and Marine Resources; 10) Waste Management; and 11) Extraction and Mining.

The *Environmental Governance Indicators for Latin America and the Caribbean* (EGI) is a quantitative assessment tool designed to measure environmental governance in practice in ten countries in the region: Argentina, Bolivia, Brazil, Colombia, Costa Rica, the Dominican Republic, El Salvador, Jamaica, Peru, and Uruguay.

These data are derived from an Environmental Qualified Respondents' Questionnaire (EQRQ) consisting of close-ended questions and completed by more than 500 in-country lawyers, academics, non-governmental organizations, and management consultants with expertise in environmental issues. The questionnaire gathers timely input from practitioners who frequently interact with environmental laws and institutions in their country, providing current and original information on topics such as the strength of regulatory enforcement, transparency in environmental decision-making, and the institutional capacity of environmental authorities. An average of 52 respondents completed the EQRQ in each country, with results being largely consistent across the four disciplines surveyed.<sup>2</sup>

In addition, this report presents key third party data on each country's governance context, institutional capacity, laws and regulations, and environmental performance in order to provide a more complete picture of contextual issues impacting or resulting from the state of environmental governance.

In total, this study presents more than 100 indicators intended for policymakers, researchers, civil society, and the general public. It is our hope that these data will guide policy choices, program development, and research efforts aimed at strengthening environmental governance, ultimately ensuring the health of societies and the planet.

1. UNEP, *Environmental Rule of Law: First Global Report* (Nairobi: United Nations Environment Program, 2019), viii.

2. Please see the "Methodology" section for a breakdown of the number of experts surveyed in each country and by discipline.

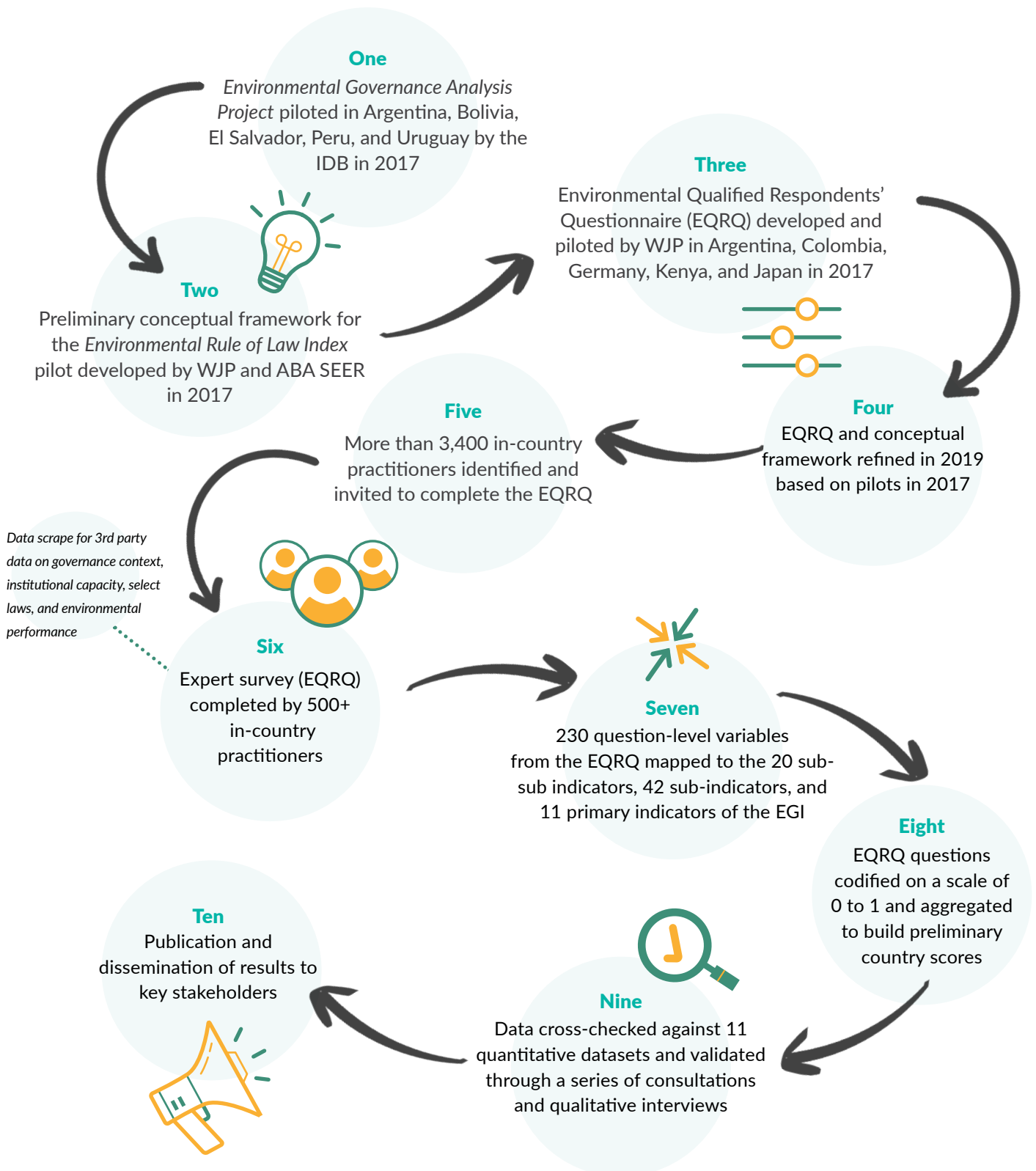
## Features of the Environmental Governance Indicators

The *Environmental Governance Indicators for Latin America and the Caribbean* study includes several features that set it apart from other datasets and make it a useful diagnostic tool:

- **Environmental Governance in Practice.** The EGI measures environmental governance by looking at implementation and approaches to environmental decision-making, such as whether environmental ministries coordinate with other relevant national and sub-national agencies, or whether environmental authorities implement measures to reduce air and water pollution. This stands in contrast to efforts that focus on the written legal code or environmental outcomes.
- **Comprehensive and Multi-Dimensional.** While other datasets cover specific environmental issues, such as the quality of certain environmental laws or countries' environmental performance, they do not yield a full picture of the state of environmental governance. The EGI is the only cross-country instrument that measures environmental governance comprehensively.
- **New Data from Practitioners.** The EGI provides a comprehensive set of indicators based on primary data. The EGI examines practical, everyday situations, such as whether environmental disputes can be resolved effectively and timely through courts and administrative bodies, or whether mining and extraction companies engage in competitive bidding and contracting processes prior to commencing work. This approach ensures that findings reflect the views of practitioners – including environmental lawyers, academics, consultants, and representatives of civil society – who navigate their countries' environmental regulations on a regular basis.
- **Culturally Competent.** The EGI was designed to be applied in countries with vastly different social, cultural, economic, and political systems. The data show that every country faces challenges when it comes to strengthening institutions, norms, and practices that support strong environmental governance.

# Creating the Environmental Governance Indicators for Latin America & the Caribbean

The *Environmental Governance Indicators for Latin America and the Caribbean*® (EGI) is a joint research effort by the Inter-American Development Bank (IDB) and the World Justice Project (WJP). The study builds upon previous pilots conducted by both organizations, aimed at measuring environmental governance in a manner that is comparable across countries. The process to produce the data presented in this report is summarized in the ten steps below.



## Summary of Data Insights

Analysis of the primary data on environmental governance collected for this study reveal 19 key insights summarized below. Please see the “Data Insights” section of this report for a more detailed discussion of these findings.

### Overview of Environmental Governance

1. While most countries have environmental laws, there are gaps between the laws and implementation in practice.
2. This study reveals great variation across countries and dimensions of environmental governance, with no country receiving a maximum score.

### Insights on Environmental Rule of Law

3. Regulatory agencies face enforcement challenges, driven in part by constraints on human and financial capacity.
4. While laws define authority, responsibility and mandates, coordination is a challenge.
5. While the region shows progress on environmental impact assessments, there is still progress to be made towards producing comprehensive explanations of agency decisions.
6. Within civic engagement, the region has made progress on access to information but public participation remains a challenge.
7. While countries perform well when it comes to the general population’s rights to expression and association, the rights of environmental defenders are a concern.
8. Poor accessibility of dispute resolution, due in part to complex procedures, is a justice barrier in the region.


### Insights on Practices by Environmental Theme & Industry

9. Practitioners view water pollution and deforestation as the most serious environmental issues.
10. Practitioners view agricultural practices and extraction and mining as having the most serious impact on the environment.
11. Pollution control is a challenge for air quality, water quality, and waste management.
12. Countries struggle to manage oceans, seas, and marine resources.
13. Strong performance on biodiversity overall masks certain conservation challenges in the underlying data and in other thematic areas.
14. Greater transparency is needed in the mining and extractive sector.

### Interlinkages & Broader Insights

15. Enhancing institutional capacity and transparency is essential for good environmental governance.
16. Environmental governance correlates with level of economic development, with important exceptions for specific environmental practices.
17. Countries’ broader governance context impacts their environmental governance.
18. Environmental governance matters for achieving a healthy environment.
19. More data are needed to assess other issues impacting environmental governance.



A photograph of a large, conical volcano, likely Mount Pinatubo, with a forested base and a cloudy sky. The volcano's peak is partially obscured by a thick layer of white ash or smoke. The foreground is filled with dense green trees and vegetation. The entire image is framed by a white border.

# 2 Conceptual and Measurement Framework

## Defining Environmental Governance

Despite its profound importance for ensuring a healthy environment and sustainable societies, the concept of environmental governance can be difficult to define. Environmental governance comprises a broad set of objectives and approaches for making and implementing decisions related to the environment.<sup>3</sup> It is the system and processes by which environmental inputs – such as environmental budget allocations and inspectors – are translated into environmental outcomes, such as clean air and water. This includes mechanisms that ensure compliance with and enforcement of environmental laws, as well as practices aimed at improving specific environmental outcomes. The Environmental Governance Indicators for Latin America and the Caribbean<sup>®</sup> study aims to capture good environmental governance through a comprehensive and multi-dimensional set of output indicators. The theoretical framework linking these indicators draws upon two key concepts.

The first key concept is that of environmental rule of law. The World Justice Project defines the rule of law as having four universal principles: accountability under the law, just laws, open government, and accessible and impartial dispute resolution. Environmental rule of law applies these principles to the environmental context, holding all entities equally accountable for respecting environmental laws; developing quality environmental laws and regulations that protect fundamental rights; including affected communities in environmental decision-making; and independently adjudicating environmental disputes. Environmental rule of law integrates environmental needs with principles of the rule of law, creating a foundation for environmental governance.<sup>4</sup> This concept is captured in Pillar I of the EGI, which draws upon the four substantive chapters of United Nations Environment Programme's Environmental Rule of Law: First Global Report for its framework.

The second key concept focuses on specific practices aimed at improving environmental outcomes. Whereas environmental rule of law focuses on creating an enabling environment for strong environmental governance and compliance broadly, environmental practices encompass more focused approaches to ensuring a healthy environment. Practices can be thought of in terms of the extent to which they target specific environmental outcomes – such as biodiversity and clean oceans – and by the extent to which they target specific industries that have a significant impact on the environment. As such, the concept of “practices” is captured in Pillars II and III, which focus on practices by theme and practices by industry, respectively. The conceptual and measurement framework for Pillars II and III is based primarily upon International Environmental Law: The Practitioner's Guide to the Laws of the Planet, produced by the American Bar Association's Section of Environment, Energy, and Resources (ABA SEER).

Recognizing that any framework for assessing environmental governance in practice would not be complete without contextual information on each country, the measurement framework described in the sections that follow and presented in the country profiles also include a number of contextual indicators touching on governance context, institutional capacity, the quality of select laws, and environmental performance, organized by indicator type and data source.

3. UNEP, Environmental Rule of Law: First Global Report (Nairobi: United Nations Environment Program, 2019),

4. Ibid., 8

## Types of Environmental Indicators

The primary objective of the Environmental Governance Indicators study is to assess the activities and practices of environmental authorities and the regulated community that are vital to protecting the environment. Fully assessing the effectiveness of these activities and practices, however, requires additional information on countries' governance context, resources, laws, and environmental quality. The primary data on environmental governance collected for this study can therefore be understood as part of a broader spectrum of data and indicators on environmental enforcement and compliance. This spectrum includes three types of indicators:

- **Input indicators:** Measure the quantity of resources provided for a particular policy, program, or project. In the context of environmental enforcement and compliance, this could include the budget allocated for an environmental authority or the number of compliance investigators employed by a regulator.
- **Output indicators:** Measure the actual activities and practices of environmental authorities and other relevant actors. Examples could include inspection activities, money paid as liability for damage, or changes in behavior of the regulated community.
- **Outcome indicators:** Measure the results or effects of output activities and practices. In the context of the environment, outcome indicators measure environmental quality – such as air or water or pollution – or changes in environmental quality, such as habitats restored following damage.

The core of this study entailed collecting new, primary data via the Environmental Qualified Respondents' Questionnaire (EQRQ) in order to produce output indicators on environmental governance. Table 1 below provides framework outlining the spectrum of indicators on environmental enforcement and compliance, and corresponding data sources for each.

**Table 1. Types of Environmental Governance Indicators**

Indicator Type	Input	Output	Outcome
<i>Relevance to the Environment</i>	<i>Context &amp; Resources</i>	<b>Environmental Governance</b>	<i>Environmental Performance</i>
<i>Examples</i>	Country's governance context Budget allocation for environmental authorities Number of compliance investigators	<b>Sufficient training and budgeting for environmental authorities</b> <b>Inspection activities</b> <b>Money paid as a liability for damage</b> <b>Changes in behavior of the regulated community, such as compliance with emissions limits</b>	Levels of PM2.5 or NOX in the air Water quality Tree cover loss Fish stocks status
<i>Data Sources</i>	WJP Rule of Law Index Economic Commission on Latin America & the Caribbean Official government sources United Nations Environment Programme Inter-American Development Bank	<b>Environmental Governance Indicators derived from the Environmental Qualified Respondents Questionnaire (EQRQ)</b>	<i>Yale Environmental Performance Index</i>

# Overview of the Environmental Governance Indicators

Profiles for the ten countries included in this study include more than 100 indicators for each country. These data are organized into five sections on: 1) Governance Context; 2) Institutional Capacity Data; 3) Existence of Select Laws & Regulation; 4) Environmental Governance; and 5) Environmental Performance Indicators. The core of this study is aimed at measuring Part 4 on Environmental Governance. The concept of Environmental Governance is broken into three pillars on: I) Environmental Rule of Law; II) Practices by Environmental Theme; and III) Practices by Sector. In total, these three pillars are comprised of 11 primary indicators, disaggregated 42 sub-indicators and 20 sub-sub indicators.

## Part One Governance Context

### Rule of Law

- Constraints on Government Powers
- Absence of Corruption
- Open Government
- Fundamental Rights
- Order & Security
- Regulatory Enforcement
- Civil Justice
- Criminal Justice

## Part Two Institutional Capacity Data

- Environmental public spending per capita
- Environmental public spending/public spending
- Environmental public spending/GDP
- Number of annual inspections
- Complaints investigated
- Requested environmental impact assessments

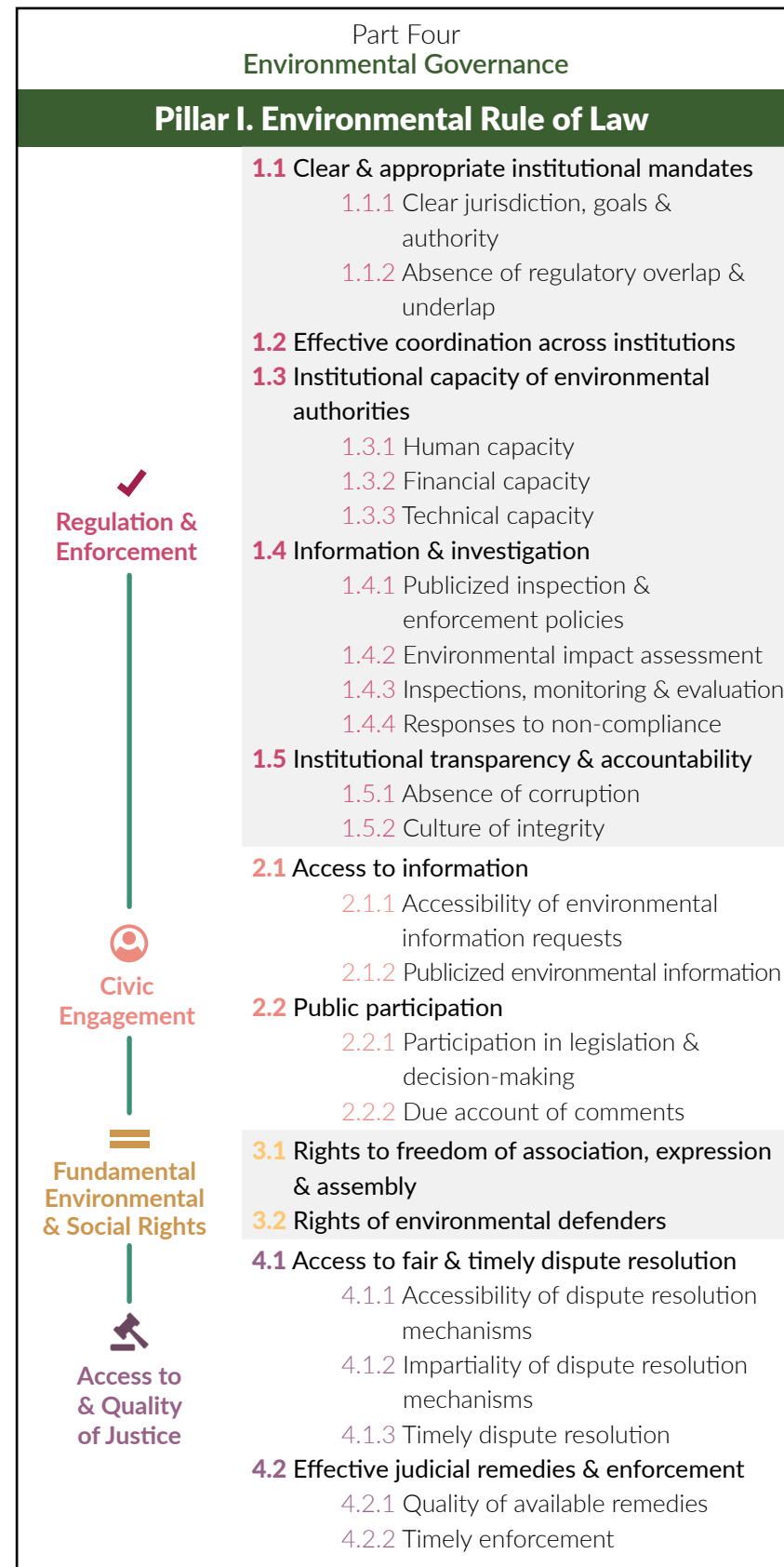
## Part Three Select Laws & Regulation

### Environmental Rights

- Constitutional right to or provision for a healthy environment
- Right to protection of vulnerable populations
- Right to nondiscrimination of indigenous peoples

### Environmental Quality Standards

- Minimum air protection standards
- Air emission limits that comply with WHO standards
- National water protection standards
- Water quality regulations determined by use



## Part Five Environmental Performance Indicators

- Air Quality
- Air Pollution
- Climate & Energy
- Heavy Metals
- Water & Sanitation
- Water Resources
- Agriculture
- Biodiversity & Habitat
- Forests
- Fisheries

## Data Sources Behind the Indicators

While the core of this study entails producing measures of environmental governance in practice, it also features third party data that provide a more complete picture of each country's context, resources, and environmental performance.

### Part One

#### Governance Context

Data on broad rule of law themes provide important context on the environment in which environmental authorities and the regulated community operate. These contextual data come from the World Justice Project Rule of Law Index® 2020 and provide data on eight primary rule of law factors, as well as an aggregate Rule of Law score for each country.

### Part Two

#### Institutional Capacity Data

Data on public spending on the environment, inspections and investigations, and publication of environmental impact reports provide an indication of environmental authorities' capacity to carry out their mandate. This study features six indicators from data published on the Economic Commission for Latin America and the Caribbean (ECLAC) CEPALSTAT website and official government sources for each country.

### Part Three

#### Select Laws & Regulation

Assessing the quality of countries' environmental laws and regulations is a complex task that certainly merits a study of its own, and would require a detailed assessment of many dimensions of countries' environmental laws and regulatory frameworks. This study therefore features seven select indicators on this topic: one on constitutional right to or provision for a healthy environment published in the United Nations Environment Programme's (UNEP) Environmental Rule of Law: First Global Report; two indicators on the right to nondiscrimination and rights of indigenous peoples, published in the Inter-American Development Bank's (IDB) Technical Document: Alternatives for Addressing Gaps Based on Results of the Benchmarking Study and Survey; and four indicators on air and water quality standards produced by the IDB for its Analysis of Environmental Governance in Latin America and the Caribbean

### Part Four

#### Environmental Governance Indicators

This study generated more than 70 new indicators to measure environmental governance in practice, coming from new, primary data collected through the Environmental Qualified Respondents' Questionnaire (EQRQ). Survey data from more than 230 question-level variables from the EQRQ were codified and mapped to the three pillars and 11 primary indicators outlined in the previous section. The framework for Pillar I on Environmental Rule of Law is based on the four substantive chapters of UNEP's Environmental Rule of Law: First Global Report. Pillar II on Practices by Environmental Theme is based primarily upon International Environmental Law: The Practitioner's Guide to the Laws of the Planet, produced by the American Bar Association's Section of Environment, Energy, and Resources (ABA SEER). Drawn from the same ABA SEER resource, Pillar III on Practices by Sector is a first attempt to measure practices for particular sectors that heavily impact the environment and will be expanded beyond extraction and mining to include other sectors in future editions of the Environmental Governance Indicators.

### Part Five

#### Environmental Performance Indicators

While good environmental governance is a laudable goal in and of itself, the ultimate objective of strong environmental governance is to deliver better environmental outcomes that ensure both human and ecosystem health. In order to gauge the extent to which these outcomes are realized, country profiles feature nine performance indicators from Yale's 2018 Environmental Performance Index.



# 3 Data Insights

# Overview of Environmental Governance

## 1 While most countries have environmental laws, there are gaps between the laws and implementation in practice.

As shown in Figure 1a below, every country included in this study has a framework for environmental laws that addresses cross-sectoral environmental issues and environmental decision-making more broadly. Nonetheless, there are gaps between the laws in place and implementation in practice. This can be seen in countries' widely varying environmental performance. As illustrated in Figure 1b, this view is also held by practitioners surveyed for this study. When asked a series of parallel questions about the laws and practices relating to access to environmental information and judicial remedies, across the board, practitioners' views were more positive about the existence and substance of the law as compared to its implementation in practice. This trend was consistent for lawyers, academics, consultants, and NGOs surveyed for the study. Despite a wide range of responses across countries (as illustrated by the grey bar in figure 1b), this trend was the same within each country. See figure 1c for a country-by-country summary of the gap in practitioners' responses to questions on the laws versus practice in their country.

Figure 1a: Countries with Environmental Framework Laws in 2017



Source: Environmental Law Institute, as shown in the United Nations Environment Programme's "Environmental Rule of Law: First Global Report."

Figure 1b: Gap in Practitioner Views on Laws vs. Practice

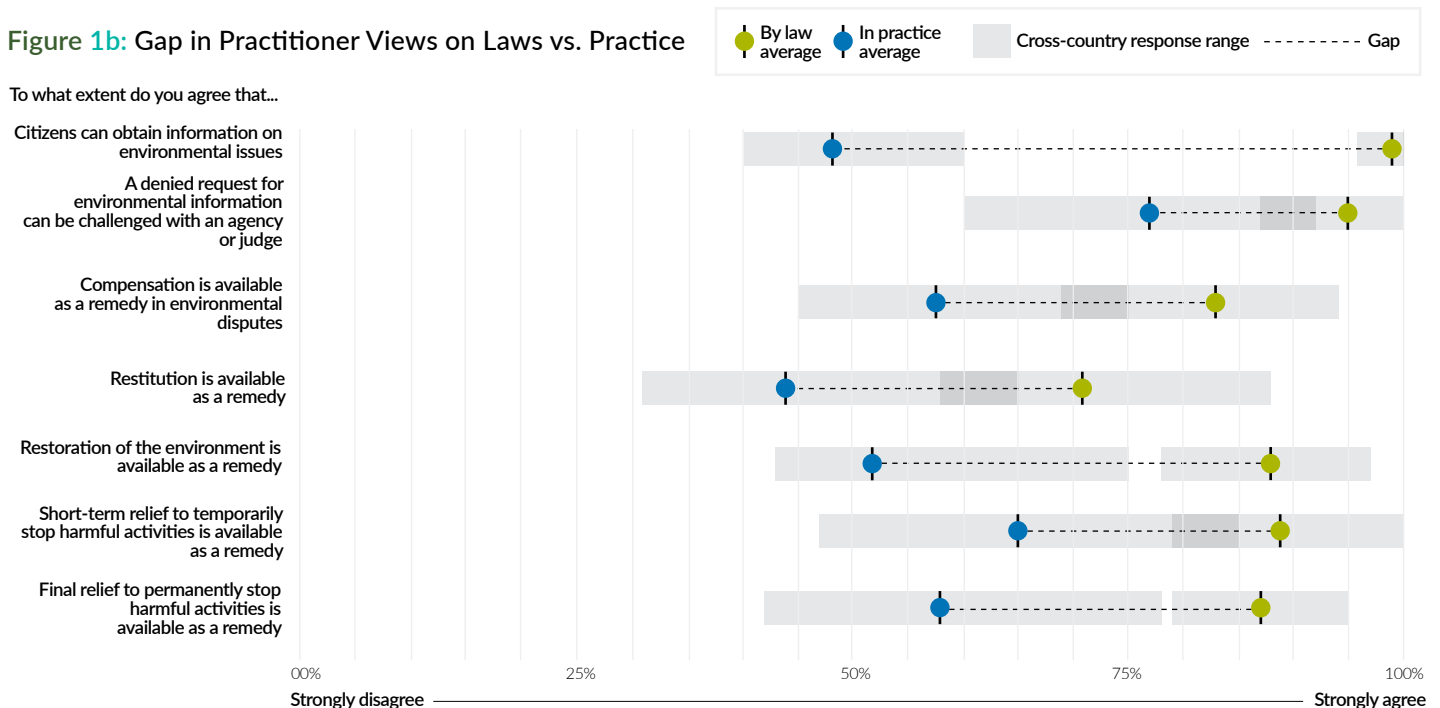
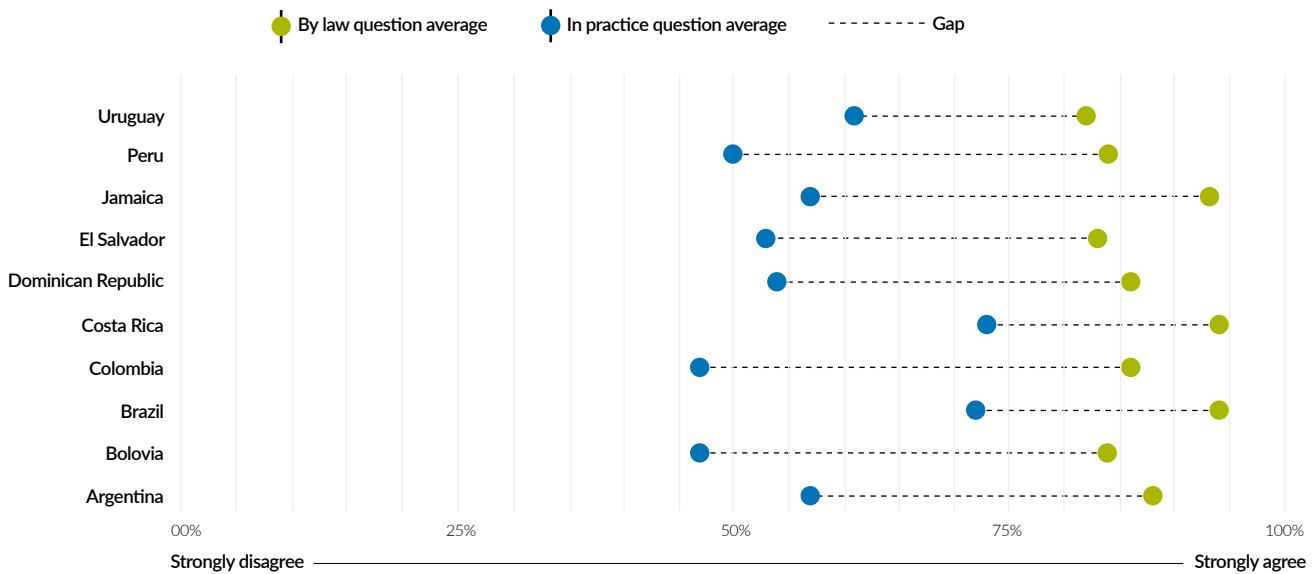


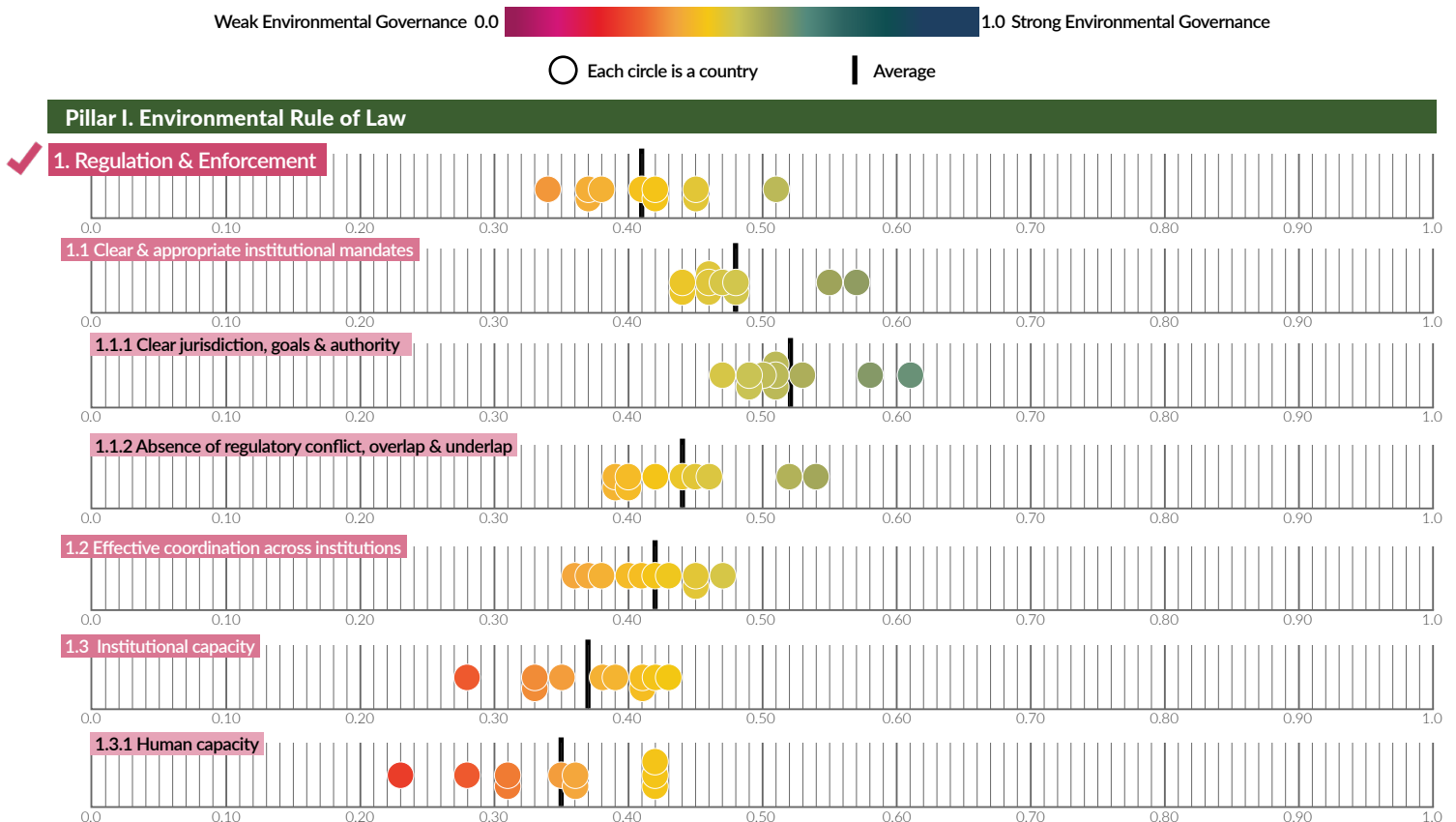
Figure 1c: Gap in Practitioner Responses to “By Law” and “In Practice” Questions by Country



## 2 This study reveals great variation across countries and dimensions of environmental governance, with no country receiving a maximum score of 1.

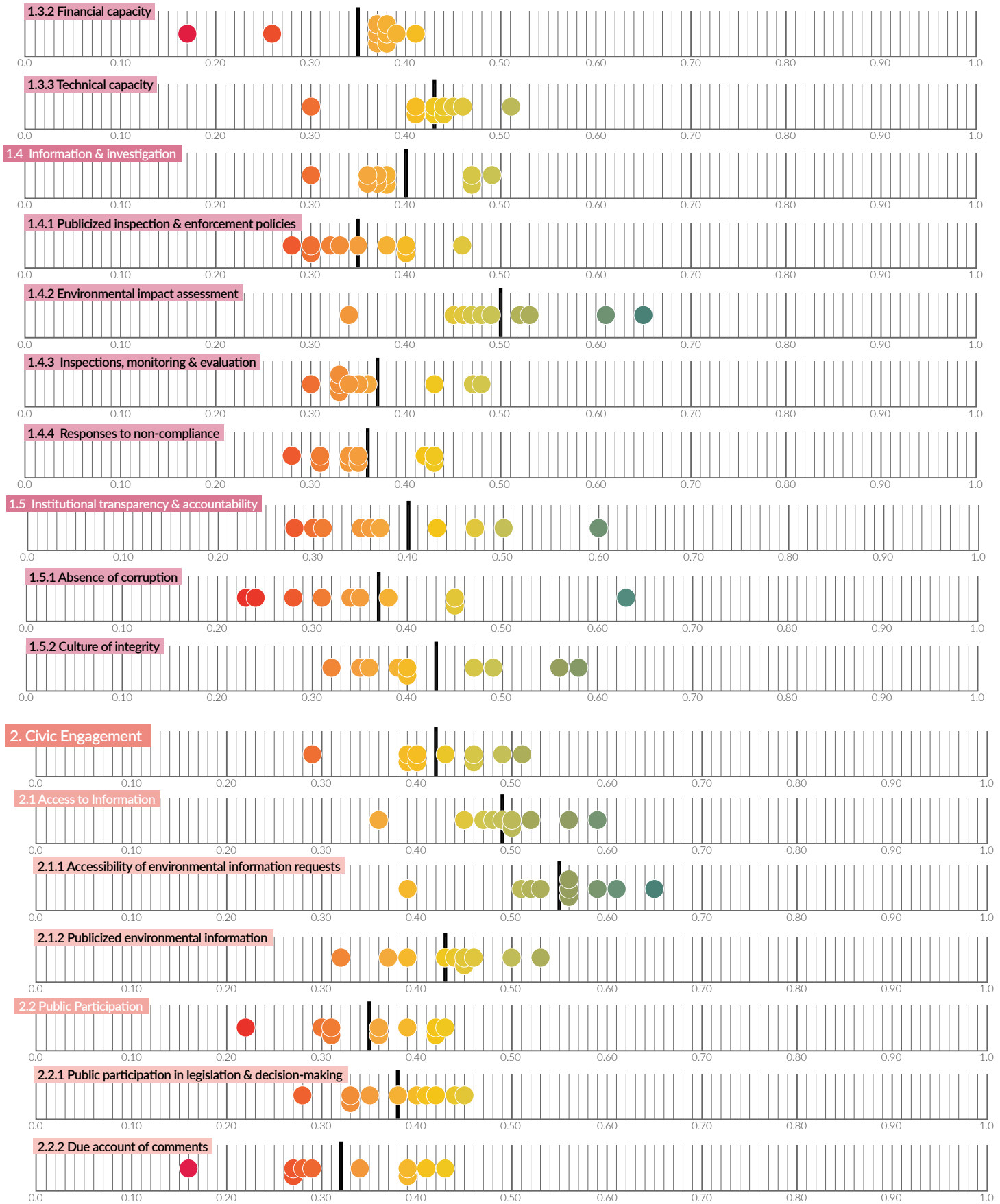
Across the entire Environmental Governance Indicators (EGI) dataset, scores range from 0.84 for **sub-indicator 3.1 on procedural rights to freedom of expression and assembly** in Costa Rica, to 0.10 for **sub-indicator 11.1 on disclosure of information on operations, revenues, and financial interests in mining and extraction** in El Salvador. Despite this positive indicator for Costa Rica, it is also worth noting that Costa Rica also sees the greatest variation across EGI indicators with scores as low as 0.23, also for **sub-indicator 11.1**. This is an important reminder that even countries with stronger performance in the EGI face challenges. In addition to variations across and within countries, there are also variations in how each indicator of the EGI performs on average, as discussed in the findings that follow. See Figure 2 for an overview of countries' performance across all indicators, sub-indicators, and sub-sub indicators of the EGI.

Figure 2: Overview of Environmental Governance Scores

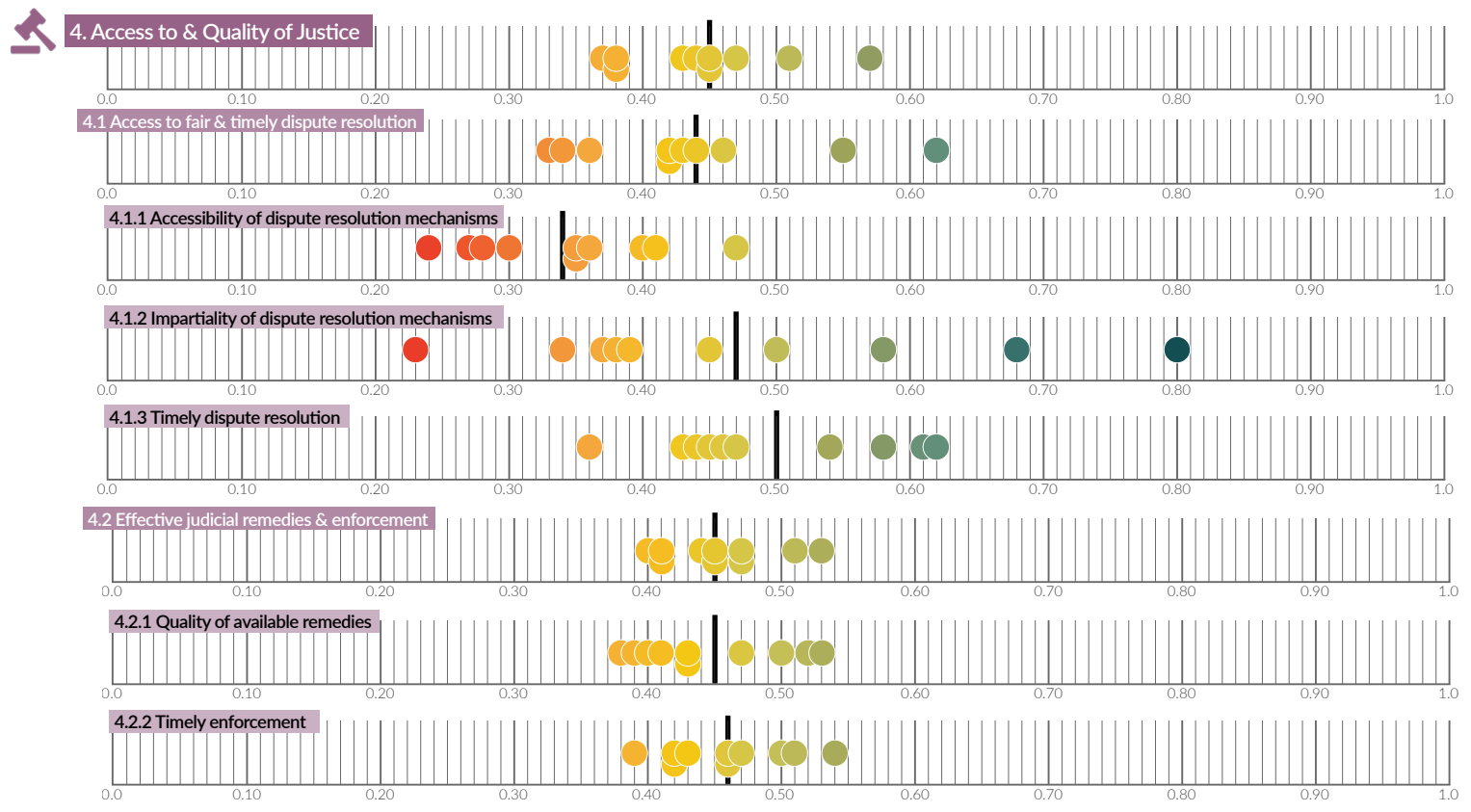
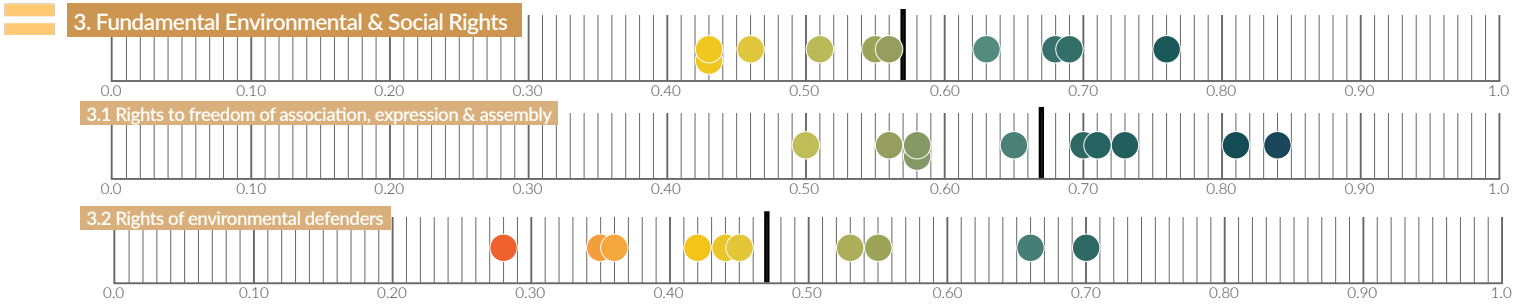




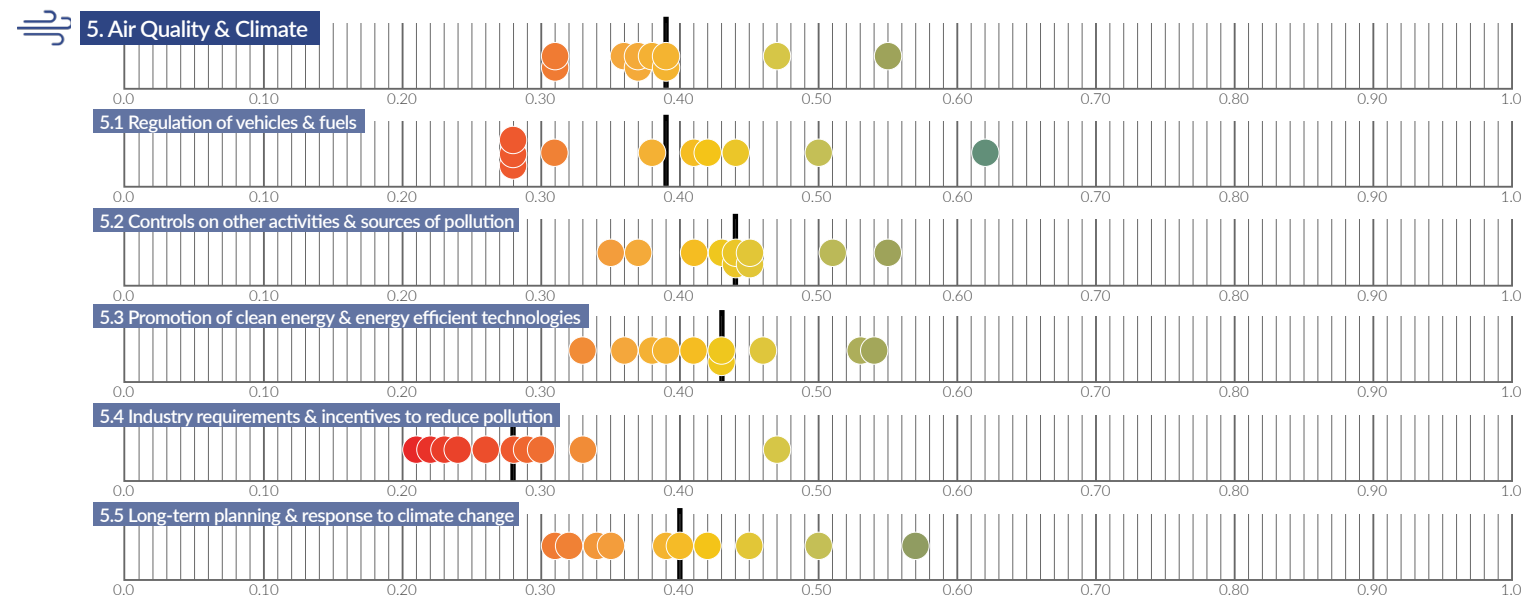
○ Each circle is a country | Average



○ Each circle is a country | Average



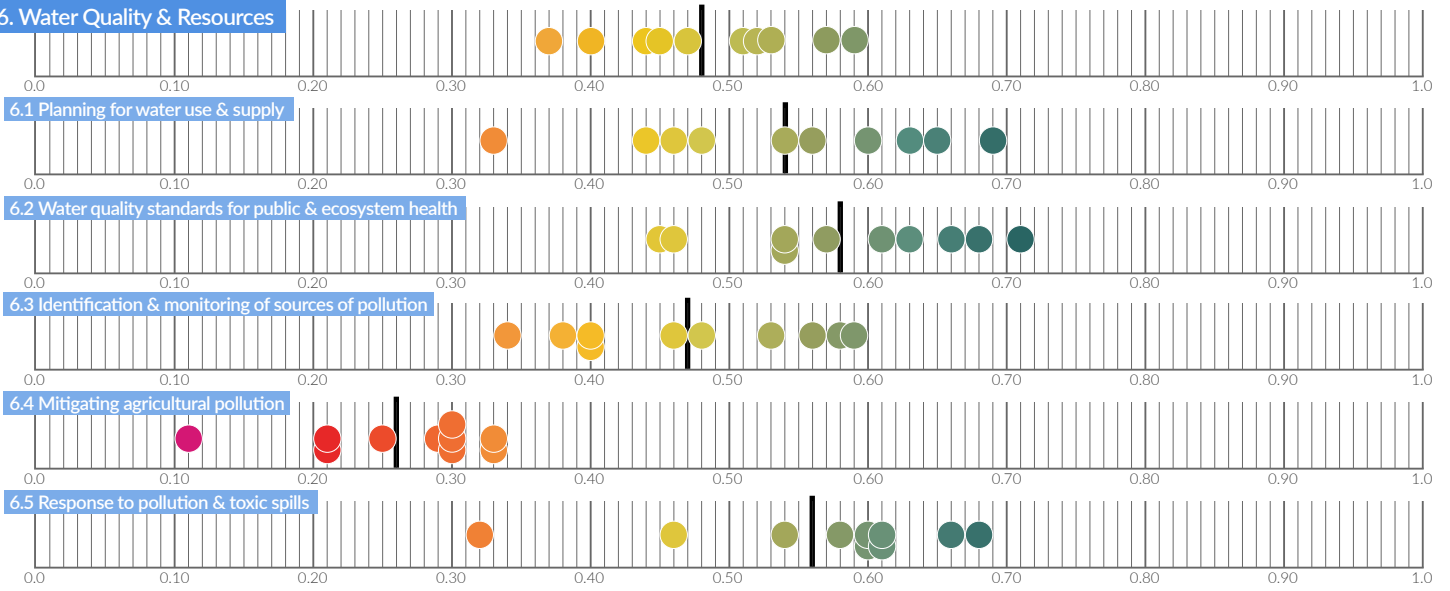
## Pillar II. Practices by Environmental Theme



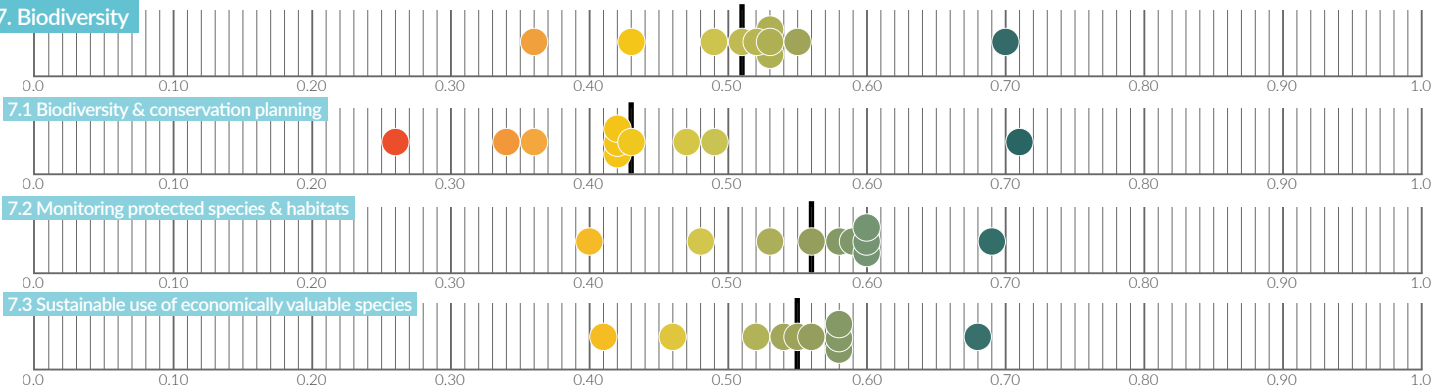
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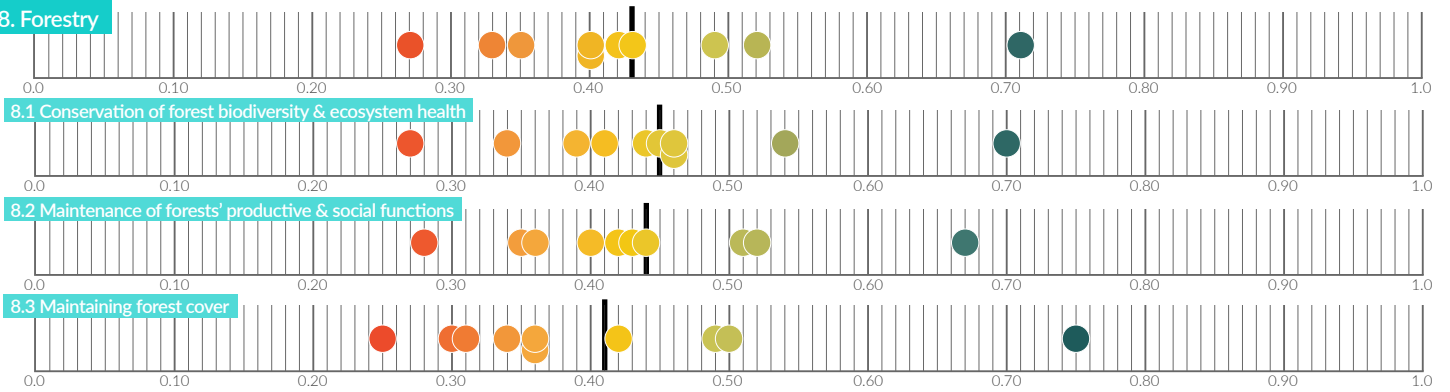
## 6. Water Quality & Resources



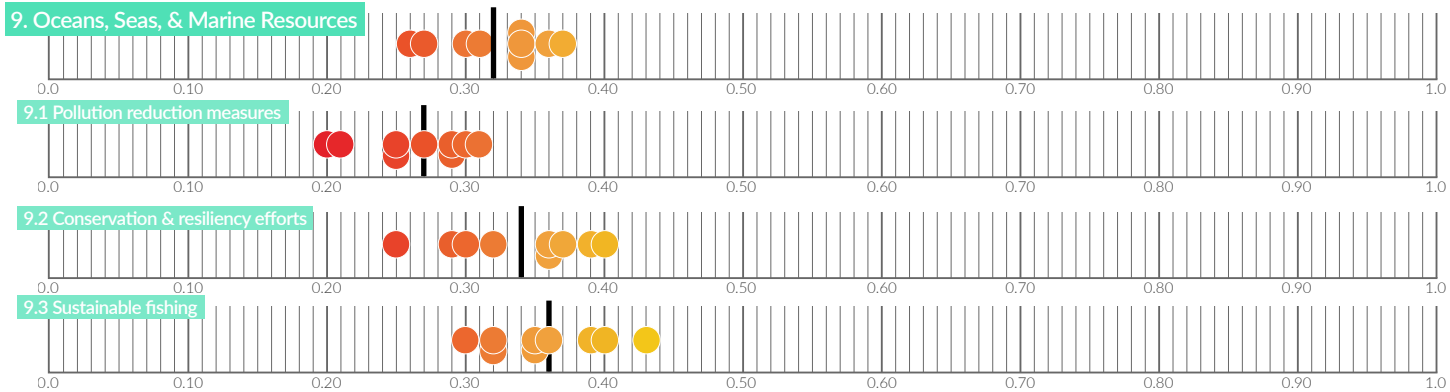
## 7. Biodiversity



## 8. Forestry



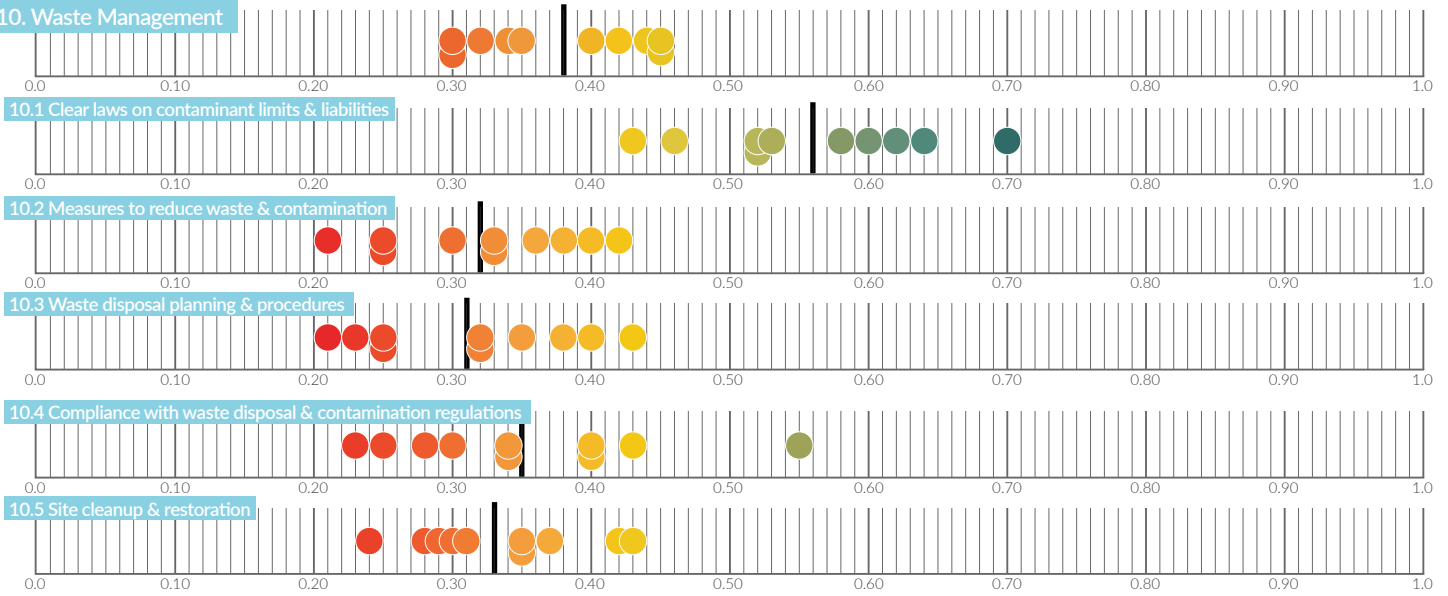
## 9. Oceans, Seas, & Marine Resources



○ Each circle is a country | Average



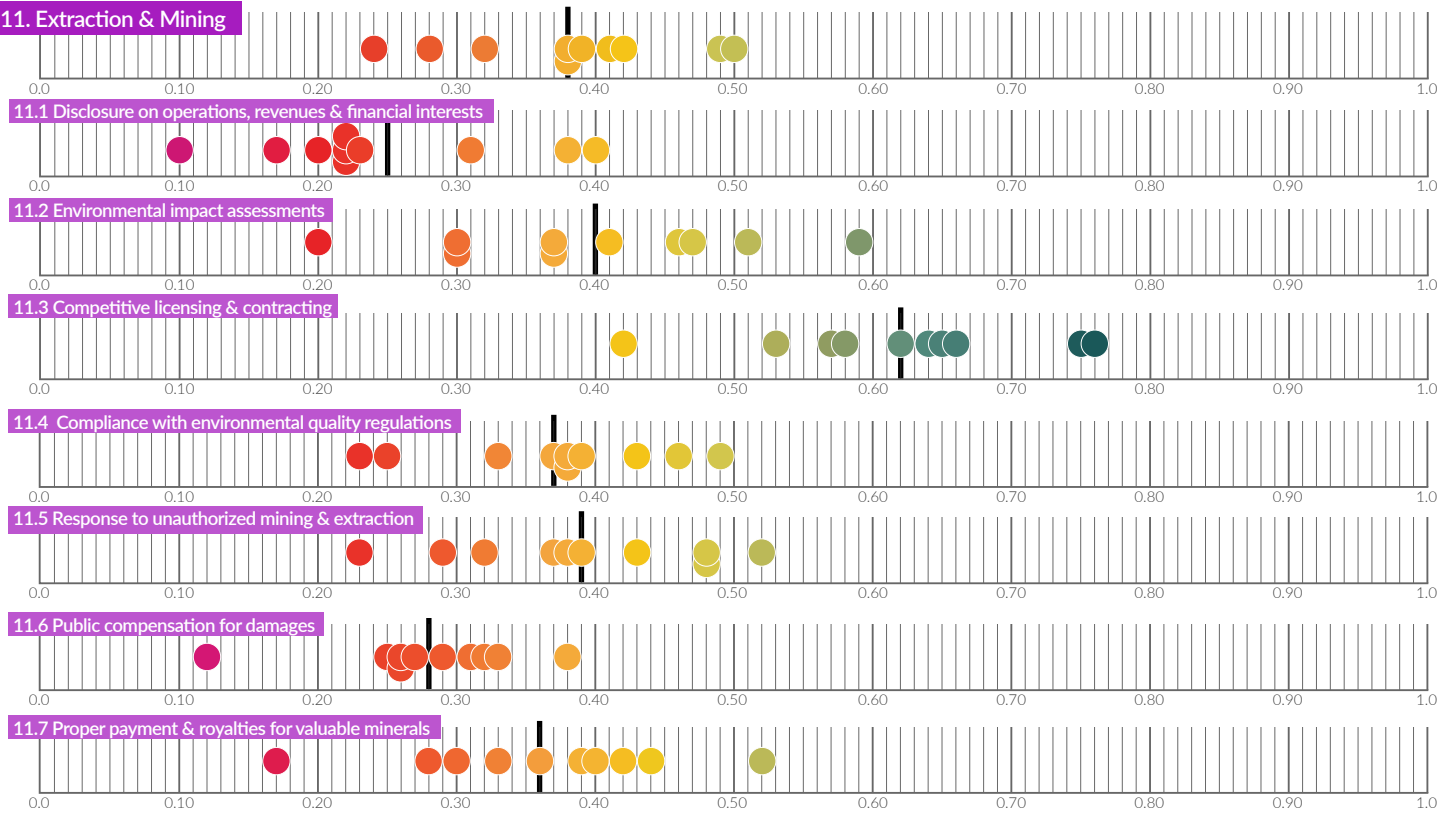
### 10. Waste Management



### Pillar III. Practices by Sector



### 11. Extraction & Mining



# Insights on Environmental Rule of Law

## 3 Regulatory agencies face enforcement challenges, driven in part by constraints on human and financial capacity.

While performance varies by country and sub-indicator, on average, **Indicator 1 on Regulation and Enforcement** sees the weakest scores under Pillar I of the EGI (see Figure 3a). Of particular concern are **sub-sub indicators 1.4.1 on publicized inspection and enforcement policies; 1.4.3 on inspections, monitoring, and evaluation; and 1.4.4 on responses to non-compliance**. This poor performance on indicators relating to enforcement may be driven in large part by weaker performance in the areas of **human capacity** and **financial capacity** of environmental authorities (**sub-sub indicators 1.3.1 and 1.3.2**), where the median performance across all 10 countries is 0.35 for both indicators. The performance for **indicator 1.3.3 on technical capacity** is only slightly stronger, with a median cross-country score of 0.43. Taking a closer look at the question-level data underlying these scores, Figure 3b reveals that practitioners in most countries have negative views about the financial resources, staff capacity, and staff training and incentives within environmental authorities.

Figure 3a: Aggregate Scores on Regulation & Enforcement

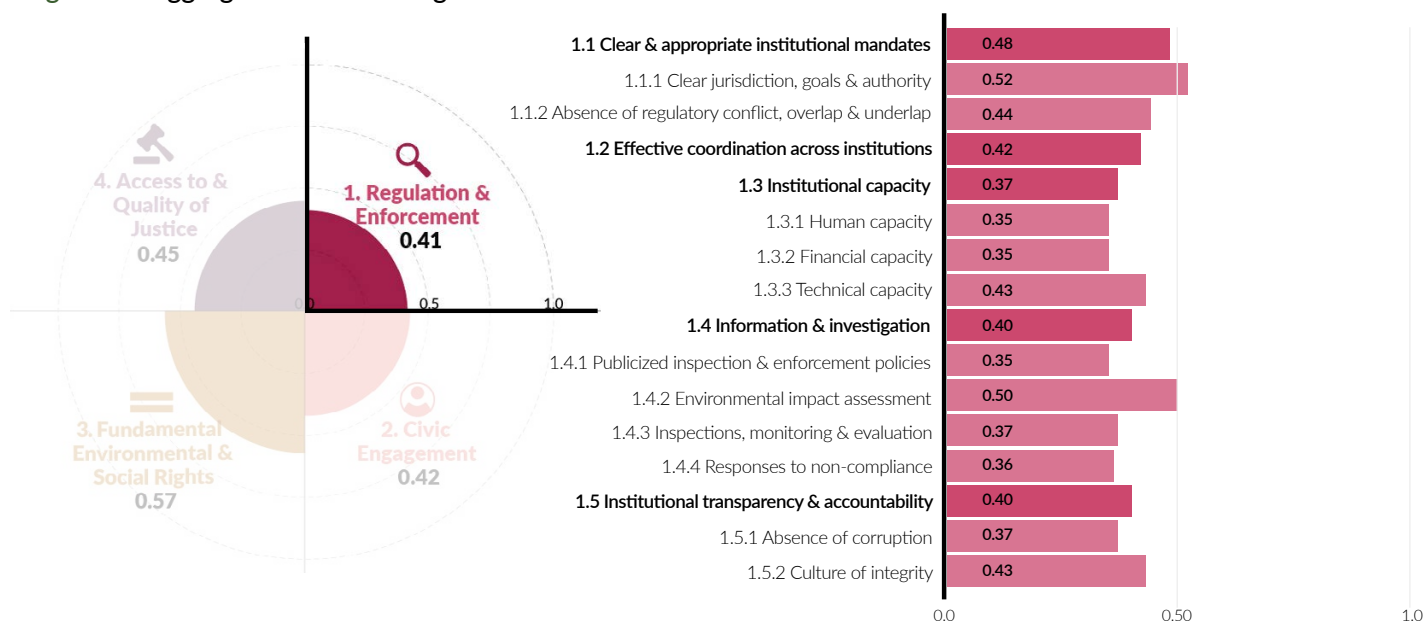
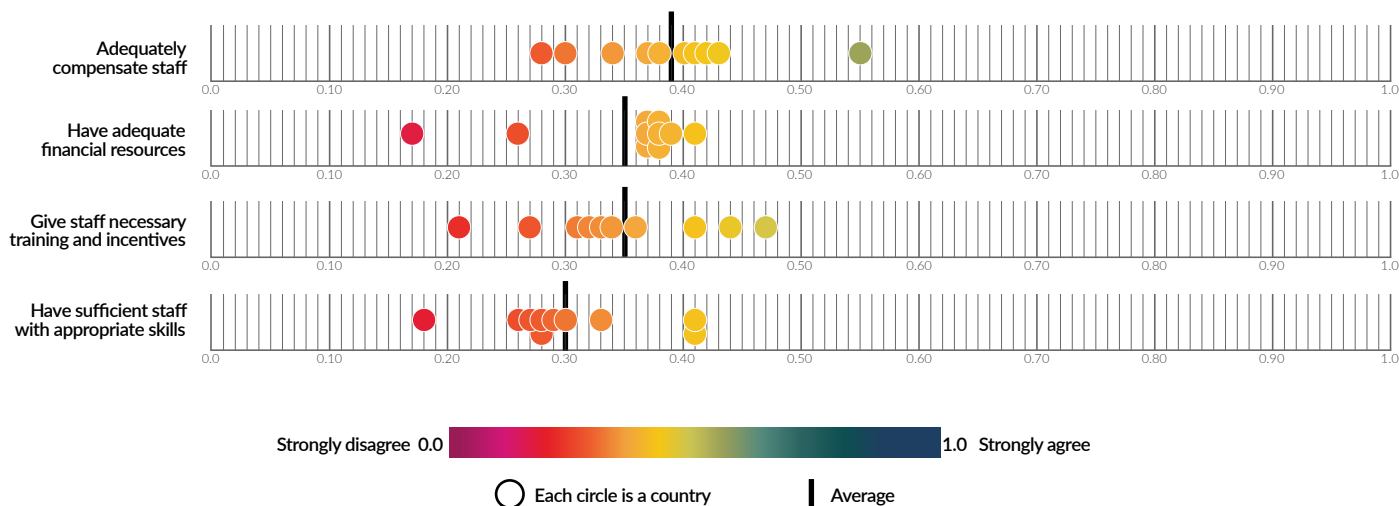


Figure 3b. Practitioner Views on Human & Financial Capacity

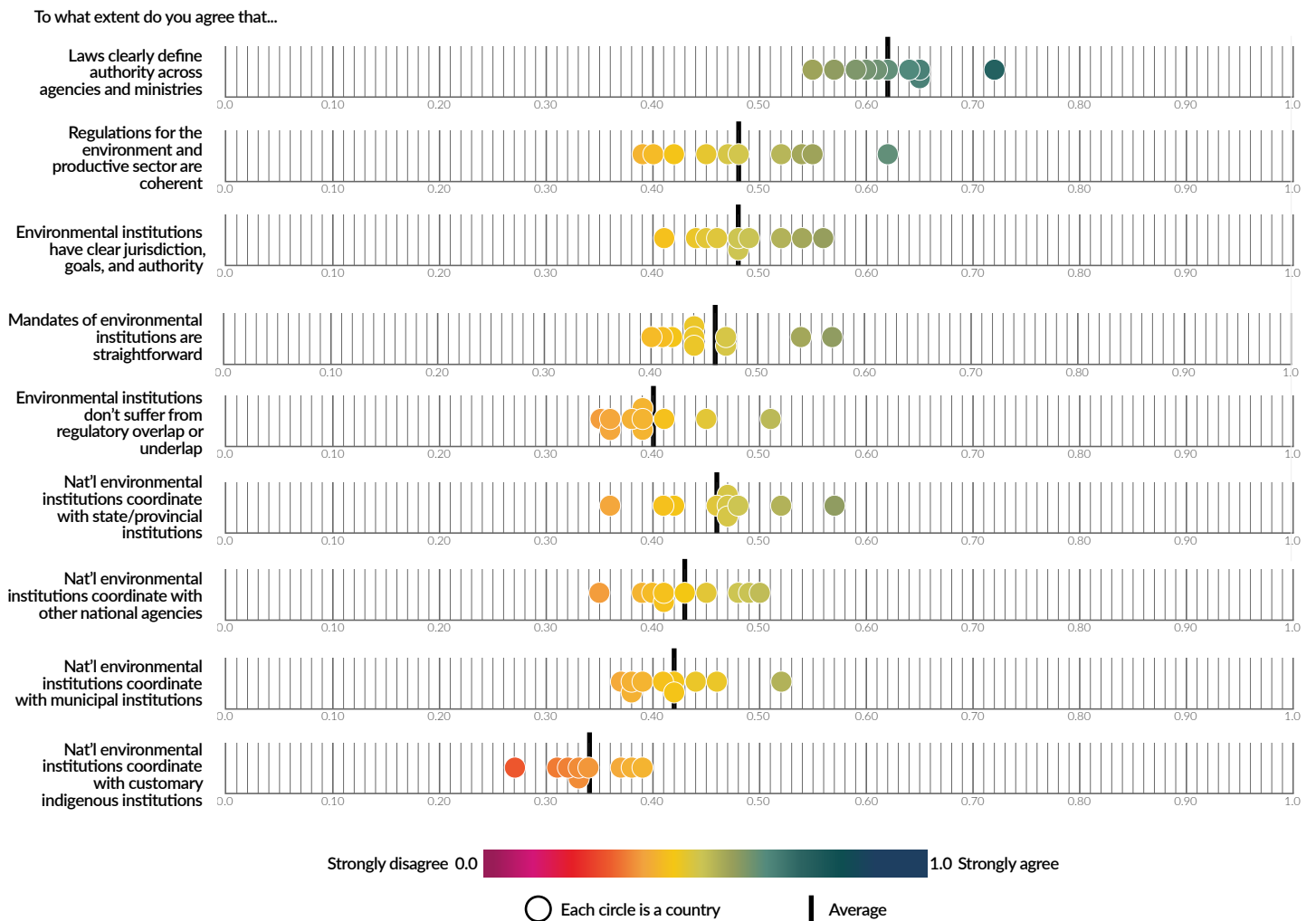
To what extent do you agree that environmental institutions in your country...



## 4 While laws define authority, responsibility, and mandates, coordination is a challenge.

The average score of 0.52 for **sub-sub indicator 1.1.1 on clear jurisdiction, goals, and authority** suggests that the law defines authority and responsibility somewhat well. This stands in contrast to an average score of 0.44 for **sub-sub indicator 1.1.2 on regulatory underlap and overlap**, and 0.42 for **sub-indicator 1.2 on effective coordination** (see Figure 3a). Indeed, a closer look at the views of practitioners shows moderate to positive views on the clarity of the law in this regard, but more negative views on regulatory underlap and overlap and on coordination. Views are particularly negative when it comes to coordination with municipal-level institutions, and customary or indigenous institutions (see Figure 4).

Figure 4. Practitioner Views on Institutional Mandates

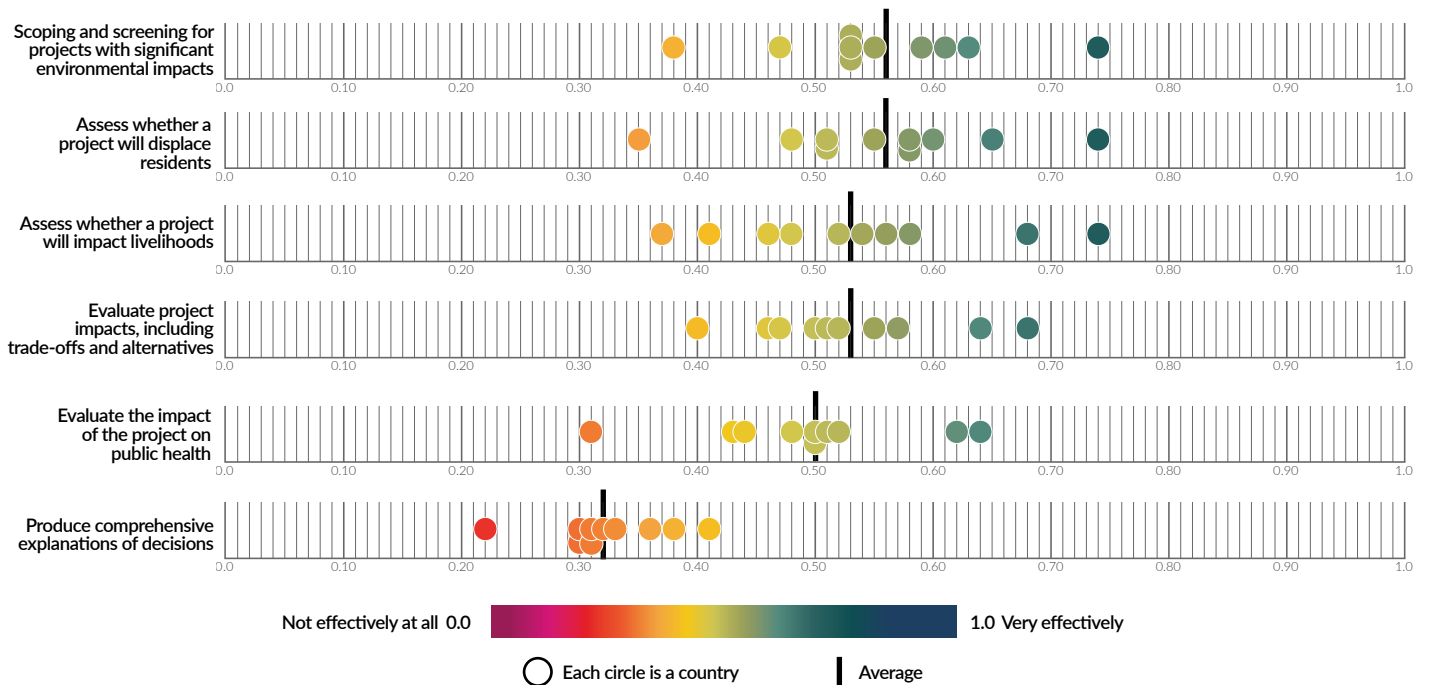


## 5 While the region shows progress on environmental impact assessments, there is still progress to be made towards producing comprehensive explanations of agency decisions.

On average, **sub-sub indicator 1.4.2 on environmental impact assessments** outperforms many other indicators under **Indicator 1 on Regulation and Enforcement** (see Figure 3a), with an average score of 0.50 across all ten countries. A closer look at the question-level data driving countries' stronger performance on environmental impact assessments shows practitioners' moderate to positive views on general screening, scoping, and assessments of prospective projects, as well as assessments of their impact on livelihoods and displacement. It is worth noting that views on the extent to which environmental authorities produce comprehensive explanations of agency decisions are significantly more negative across all ten countries (see Figure 5).

**Figure 5. Practitioner Views on Environmental Impact Assessments**

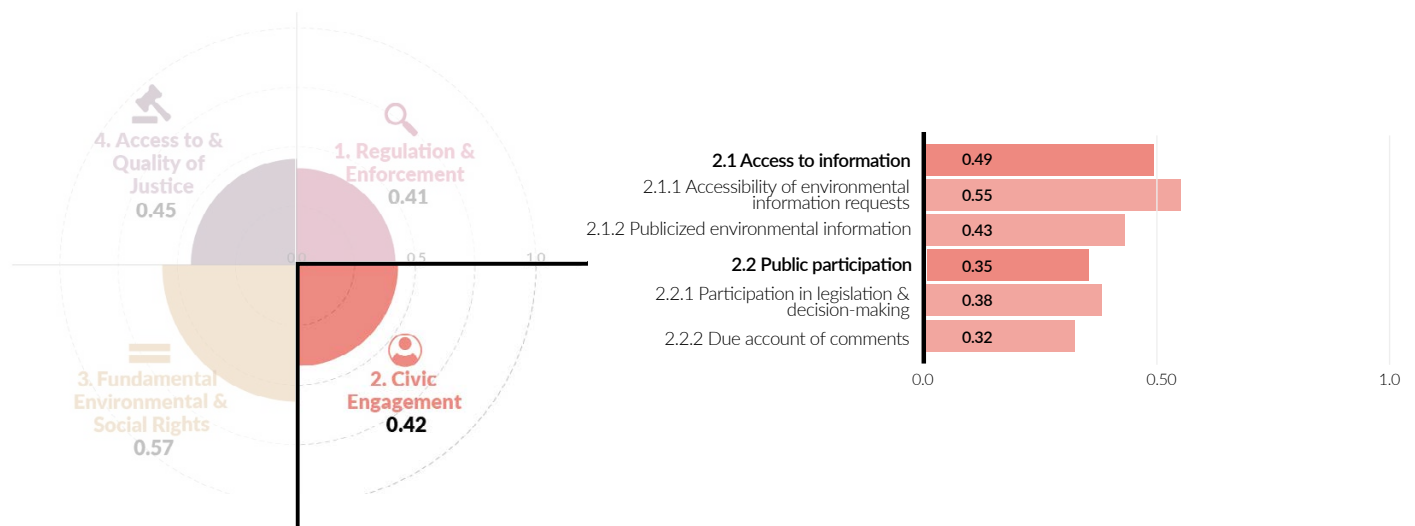
How effectively does the national environmental authority carry out the following functions:



## 6 Within civic engagement, the region has made progress on access to information but public participation remains a challenge.

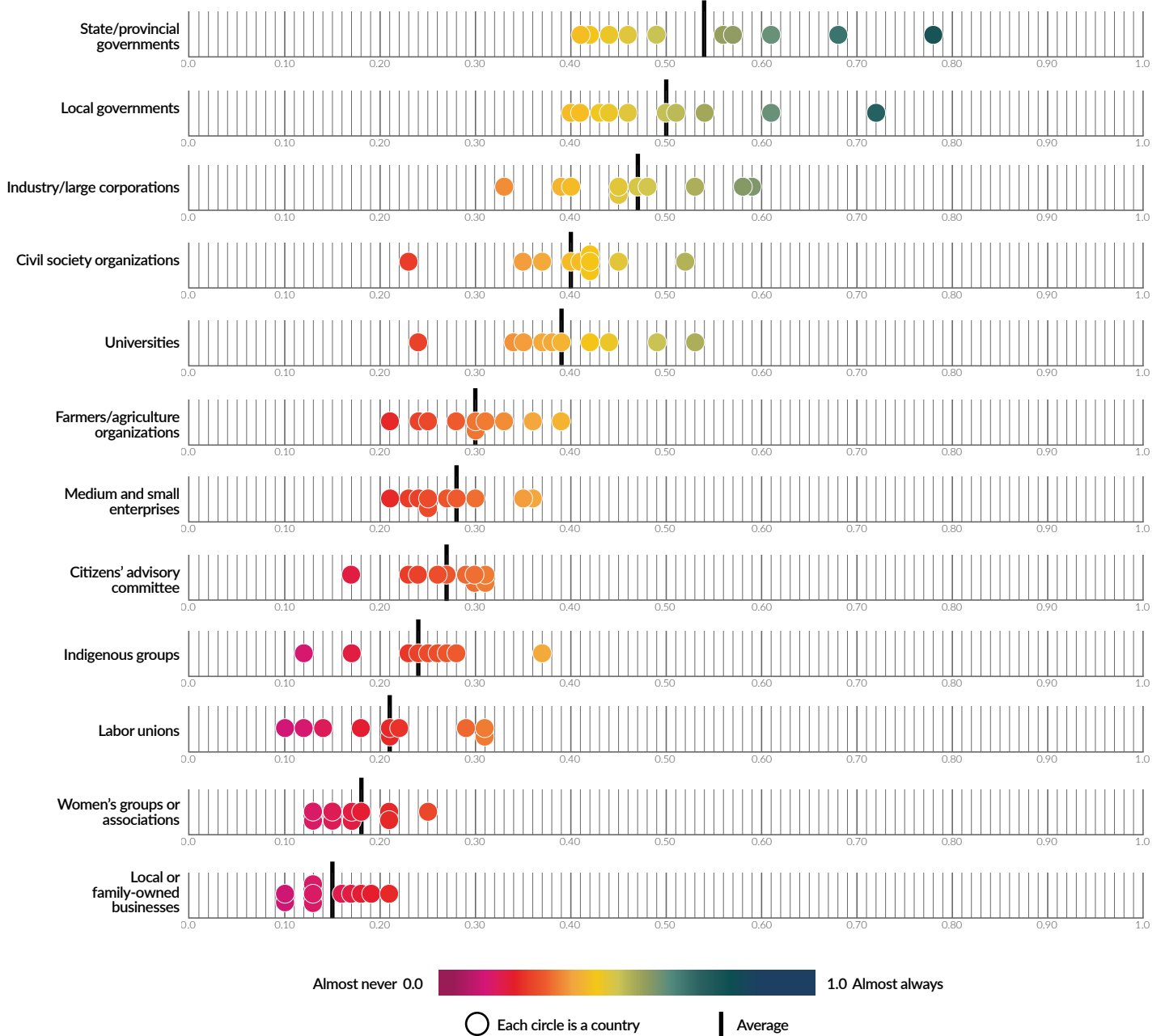
Performance on EGI indicators pertaining to the accessibility of environmental information is stronger in most countries than on indicators pertaining to public participation in environmental decision-making. This gap is most striking when we look at the disparity being between **sub-sub indicator 2.1.1 on the accessibility of environmental information requests** and **sub-sub indicator 2.2.2 on due account of comments** (i.e., taking into account and responding to public comments and concerns raised during the consultation process), where the mean scores are 0.55 and 0.32, respectively (see Figure 6a). This finding may also be related to practitioners' negative views on comprehensive explanations of agency discussions, discussed in the previous finding. What's more, a closer look at practitioners' views on who is being consulted as part of environmental decision-making reveals that some groups remain excluded from consultations. In general, state and provincial governments, local governments, and large corporations are consulted much more often than local businesses, women's interest groups, labor unions, and indigenous or customary groups (see Figure 6b).

**Figure 6a. Aggregate Scores on Civic Engagement**



**Figure 6b. Practitioner Views on Consultations**

How often does your national environmental authority consult the following groups in the development of programs and policies relating to the environment:





## 7 While countries perform well when it comes to the general population’s rights to expression and association, the rights of environmental defenders are a concern.

At first glance, **Indicator 3 on Fundamental Environmental and Social Rights** appears to be the strongest dimension of environmental rule of law on average, but this aggregate score masks a disparity between countries’ performance for **sub indicator 3.1** – where most countries see a moderate to strong performance on **freedom of opinion, expression, assembly, and association** – and **sub-indicator 3.2** – where countries have a much weaker performance when it comes to **protecting environmental defenders** (see Figure 7a). In many countries, practitioners think it is fairly likely for environmental defenders to be threatened, attacked, or punished. Even in countries like Jamaica and Uruguay where practitioners believe that violence against environmental defenders is unlikely, practitioners are more skeptical about the likelihood that violence against environmental defenders will be investigated and that the perpetrators would be prosecuted and punished (see Figure 7b).

Figure 7a. Aggregate Scores on Fundamental Environmental & Social Rights

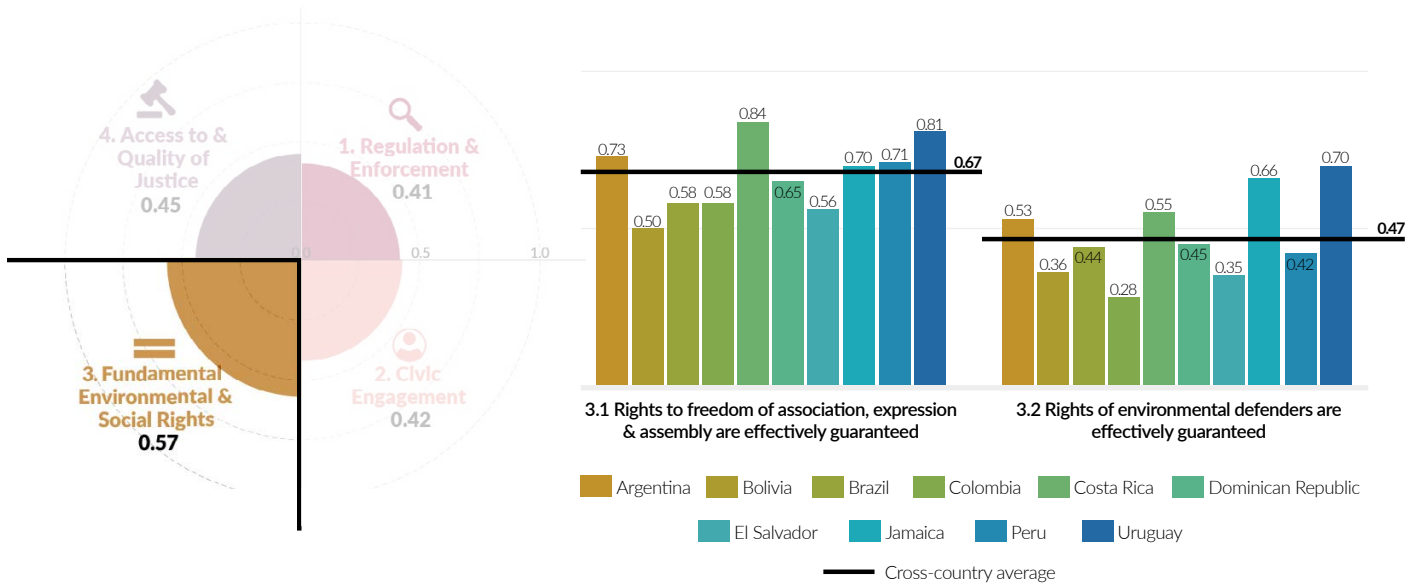


Figure 7b. Practitioner Views on Violence against Environmental Defenders

Scores for likelihood of...	Argentina	Bolivia	Brazil	Colombia	Costa Rica	Dominican Republic	El Salvador	Jamaica	Peru	Uruguay
Environmental defenders facing violence/retaliation from public officers	0.53	0.22	0.47	0.28	0.63	0.38	0.36	0.74	0.53	0.80
Environmental defenders facing violence/retaliation from private companies	0.49	0.38	0.42	0.22	0.44	0.33	0.25	0.67	0.41	0.70
Environmental defenders facing violence/retaliation from gangs or criminal organizations	0.67	0.50	0.29	0.09	0.51	0.58	0.21	0.68	0.35	0.88
Environmental defenders facing violence/retaliation from members of the community	0.49	0.35	0.46	0.32	0.52	0.46	0.37	0.65	0.43	0.66
Public, non-violent demonstrations resulting in violence or retaliation	0.58	0.34	0.47	0.31	0.60	0.49	0.35	0.78	0.30	0.72
Violence against environmental defenders going uninvestigated by law enforcement	0.49	0.35	0.51	0.39	0.58	0.43	0.49	0.56	0.47	0.56
Violence against environmental defenders going unprosecuted and unpunished	0.43	0.43	0.43	0.35	0.55	0.45	0.46	0.52	0.43	0.61

High likelihood of violence/impunity 0.0 1.0 Low likelihood of violence/impunity

## 8 Poor accessibility of dispute resolution, due in part to complex procedures, is a justice barrier in the region.

With an average score of 0.45 across all ten countries, most countries see moderate scores for **Indicator 4 on Access to and Quality of Justice**. However, **sub-sub indicator 4.1.1 on the accessibility of dispute resolution mechanisms** stands out as a particularly weak dimension of justice (see Figure 8a). The question-level data underlying this indicator show that the most important access barriers for the general public relate to the complexity of procedures, poor public awareness, and lack of access to information (see Figure 8b). These are considered important barriers in all countries, even in those with a stronger overall performance in **Indicator 4**, such as Uruguay and Jamaica.

Figure 8a. Aggregate Scores on Access to & Quality of Justice

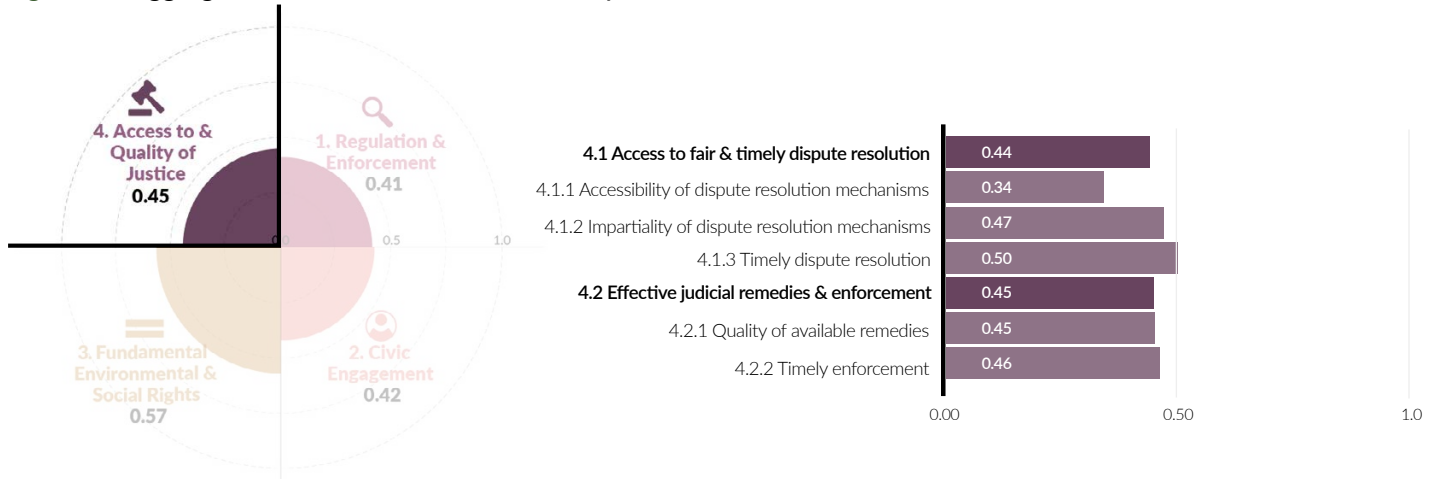


Figure 8b. Practitioner Views on Barriers to Accessing Dispute Resolution Mechanisms

How important are the following factors for whether people go to court to resolve environmental disputes:

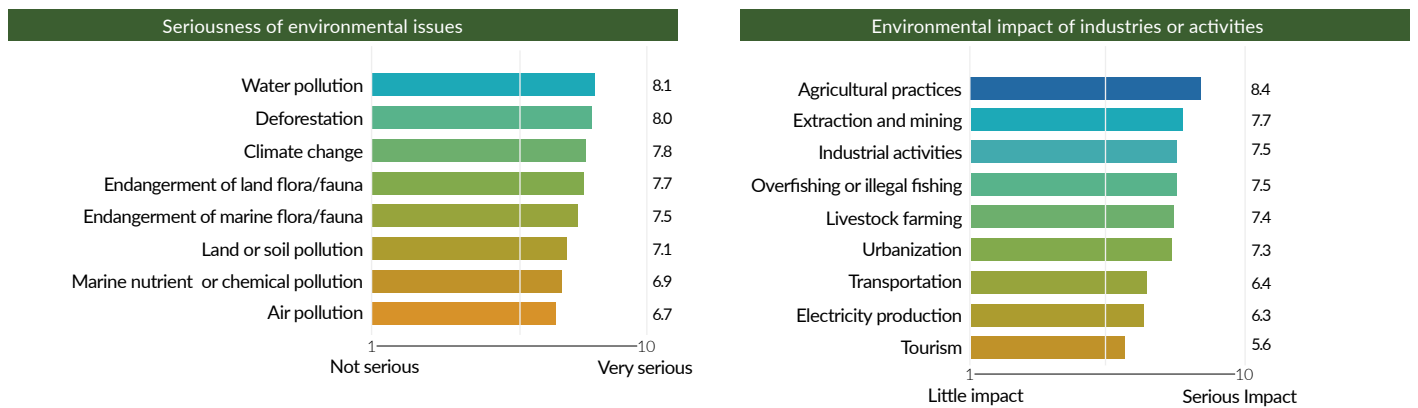


# Insights on Practices by Environmental Theme & Industry

## 9 Practitioners view water pollution and deforestation as the most serious environmental issues.

When asked to rate the seriousness of a number of environmental issues in their country on a scale of 1 to 10, with 10 being the most serious problem, practitioners gave water pollution a severity of 8.1, on average, and deforestation a severity of 8.0, though the severity of various environmental issues varies by country (see Figures 9, 10a, 10b, and 10c).

Figure 9. Average Practitioner Views on the Severity of Environmental Issues and Activities



## 10 Practitioners view agricultural practices and extraction and mining as having the most serious impact on the environment.

Similarly, practitioners were also asked to rate the impact of various activities and industries on the environment, with a rating of 10 indicating a serious impact on the environment. On average, practitioners gave agricultural practices and extraction and mining the most serious ratings of 8.4 and 7.7, respectively, though the perceived impact of various activities and industries varies by country (see Figures 9, 10a, 10b, and 10c).

Figure 10a. Top Two Issues and Activities by Country

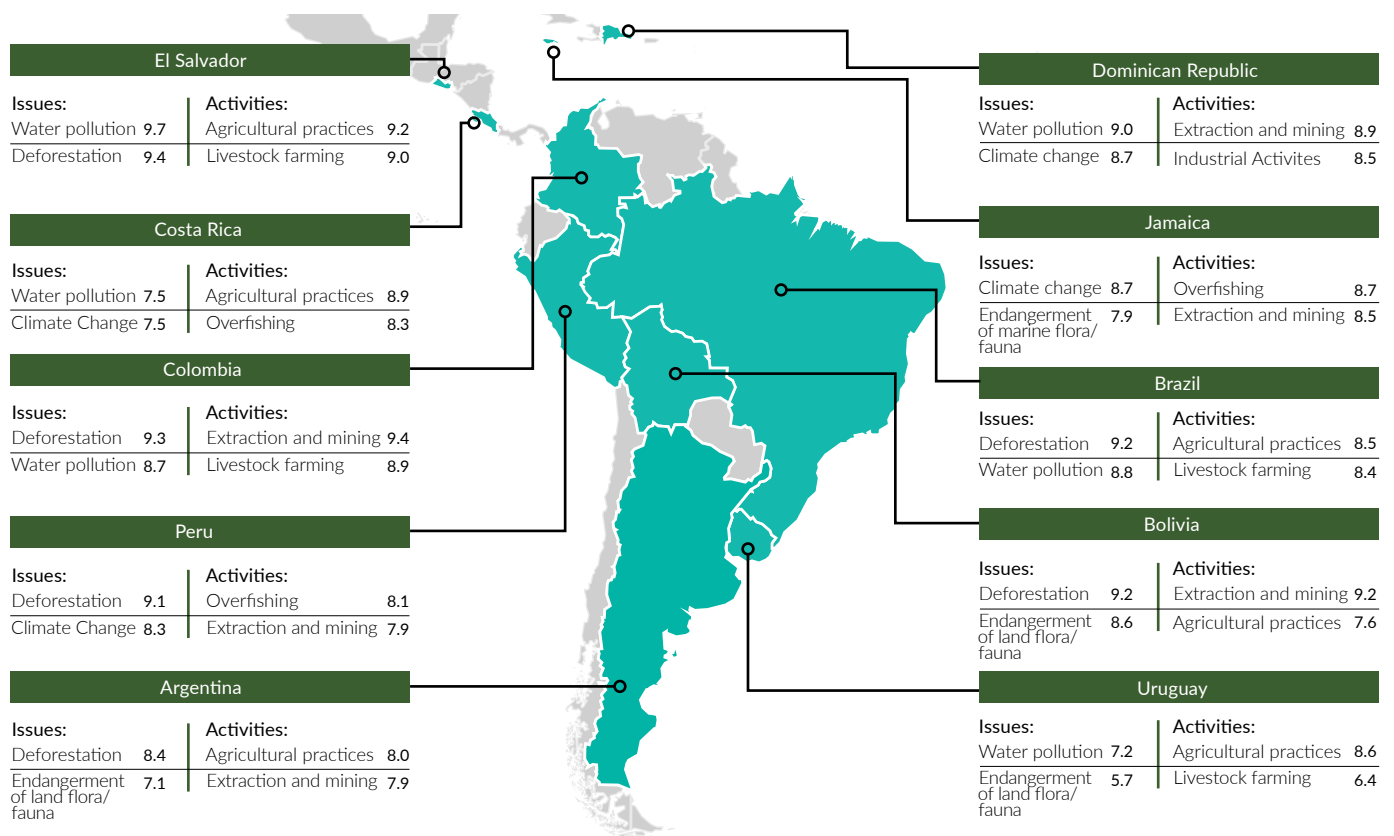


Figure 10b. Practitioner Views on the Severity of Environmental Issues by Country

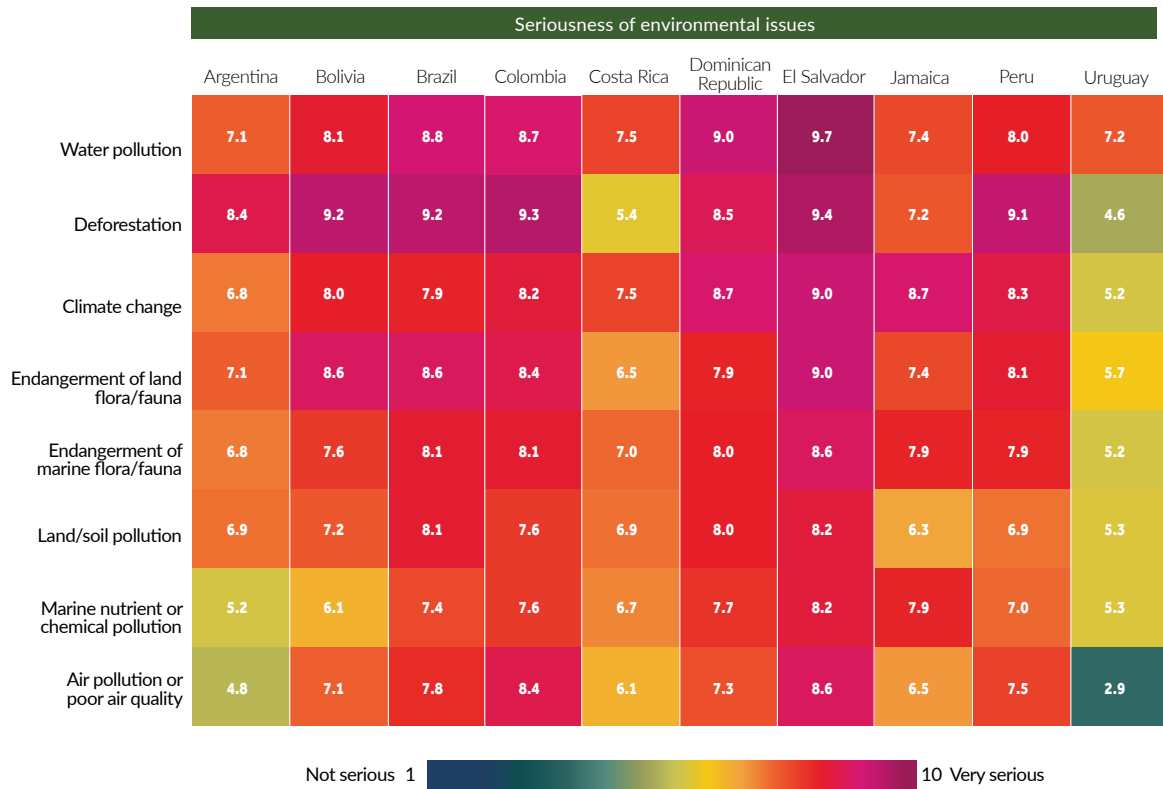
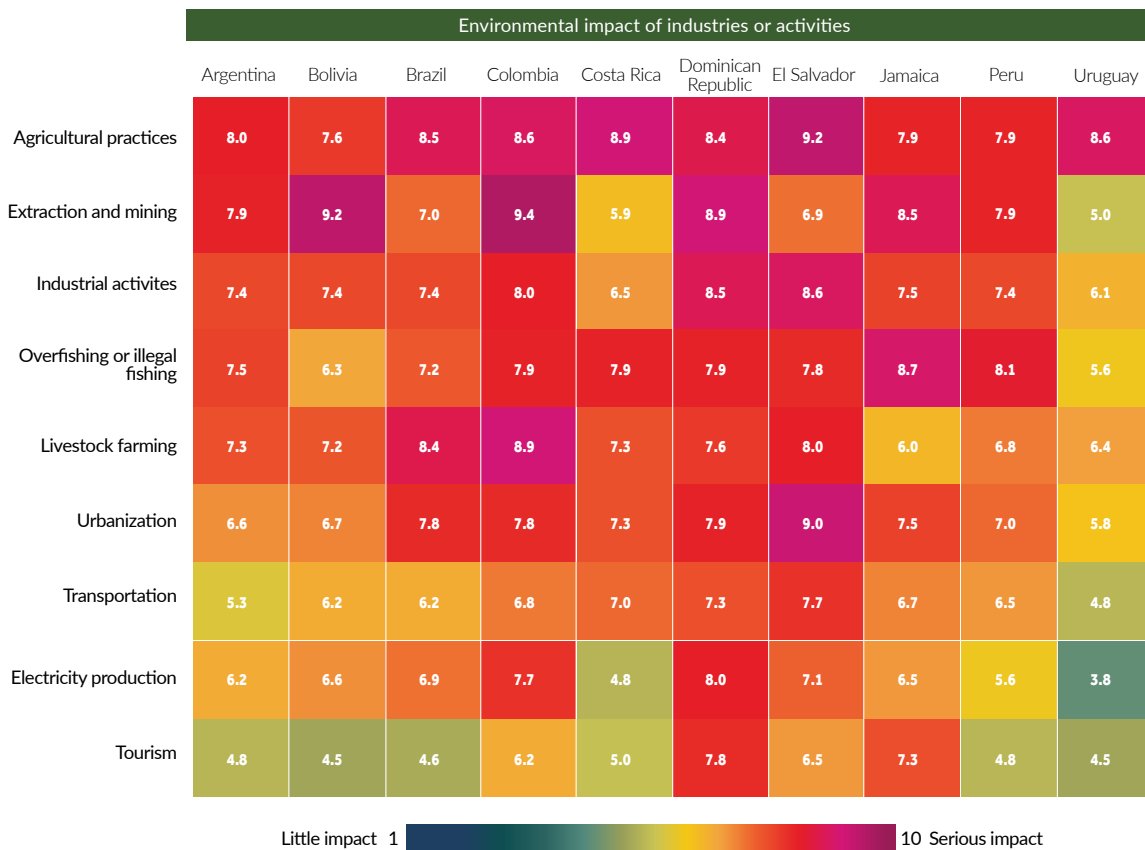


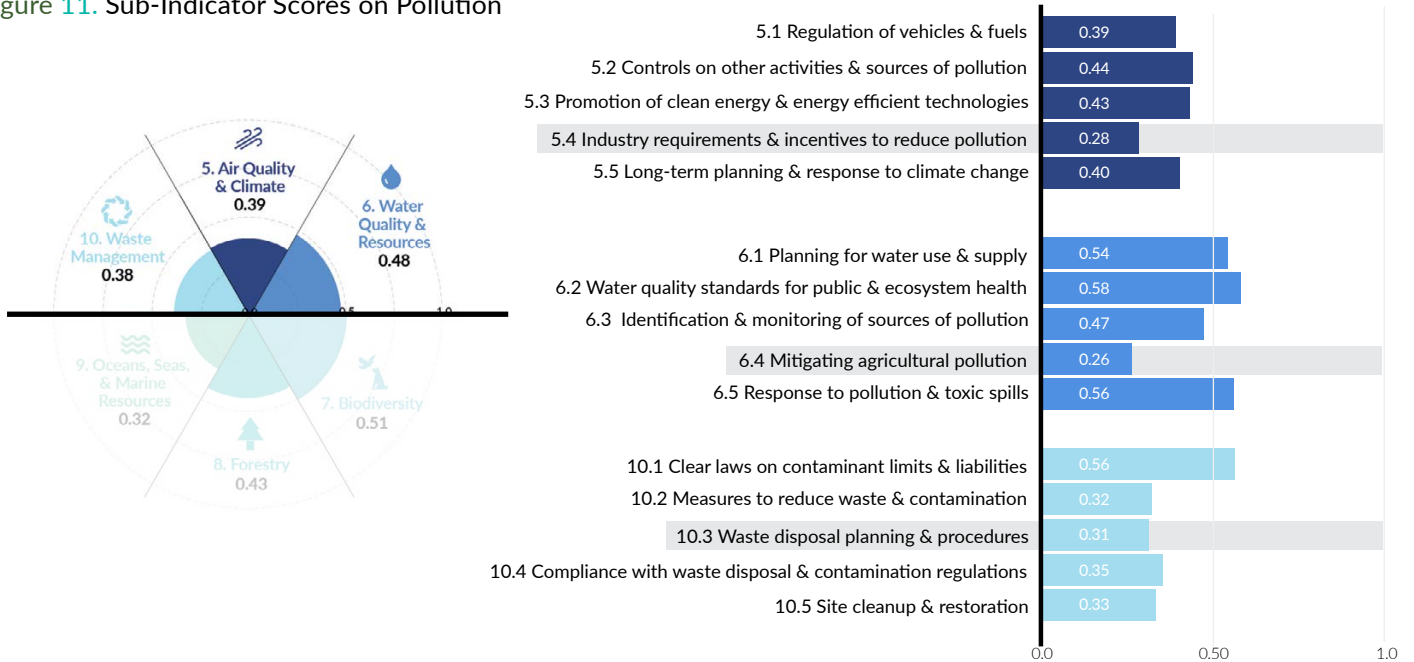
Figure 10c. Practitioner Views on the Impact of Activities and Industries by Country



## 11 Pollution control is a challenge for air quality, water quality, and waste management.

Across the various thematic indicators of Pillar II, sub-indicators that touch on reducing pollution and pollution prevention receive among the lowest scores across entire the pillar, on average. These include **sub-indicator 5.4 on effective industry requirements and incentives to reduce pollution**; **sub-indicator 6.4 on mitigating agricultural pollution**; and **sub-indicator 10.3 on planning and procedures for waste disposal**, where countries have an average performance of 0.28, 0.26, and 0.31 respectively (see Figure 11). This may again reflect the fact that these issues depend on strong enforcement and responses to non-compliance, highlighted as one of the greatest challenges to environmental rule of law in finding #3.

Figure 11. Sub-Indicator Scores on Pollution



## 12 Countries struggle to manage oceans, seas, and marine resources.

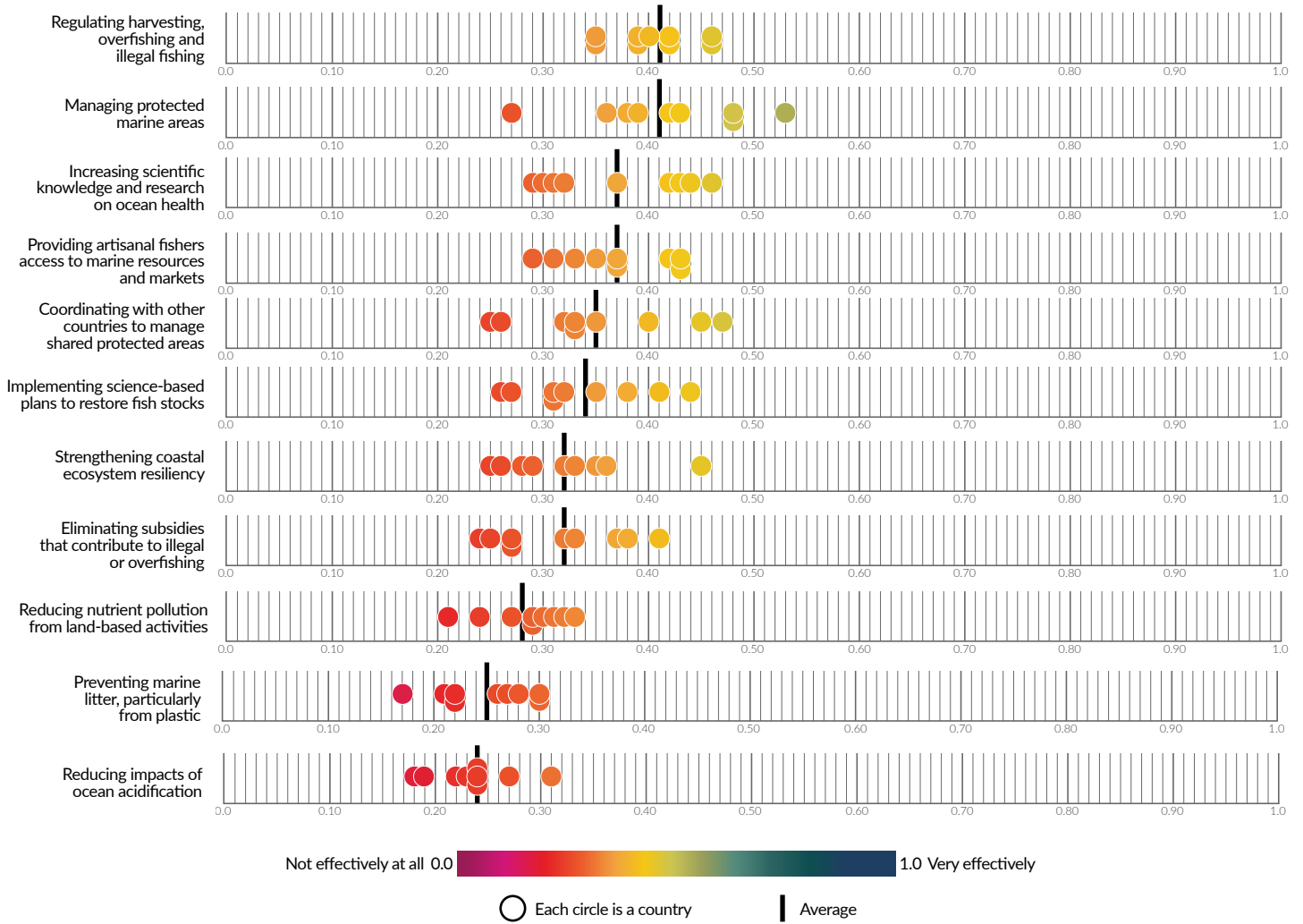
Countries perform worse on average for **Indicator 9 on Oceans, Seas, and Marine Resources** than all other primary indicators within Pillar II, with an average score of 0.32 across all ten countries in the study (see Figure 12a). Even the best performing country for this indicator, Peru, has an aggregate score of 0.37. Average performance is equally weak across all sub-indicators touching on pollution, conservation and resiliency, and sustainable fishing. The question-level data underlying this indicator show that reducing nutrient pollution, preventing marine litter, and minimizing the impacts of ocean acidification are the most serious problems according to practitioners.

Figure 12a. Aggregate Scores on Oceans, Seas, & Marine Resources



Figure 12b. Practitioner Views on Management of Oceans, Seas, & Marine Resources

How effectively are the following measures implemented:



# 13 Strong performance on biodiversity overall masks certain conservation challenges in the underlying data and in other thematic areas.

Within Pillar II, countries see the strongest performance in **Indicator 7 on Biodiversity**, with an average score of 0.51 across all countries in the study. While this is a positive sign given the region’s diversity of fauna and flora, we still see a range in countries’ performance across the three sub-indicators on biodiversity, with **sub-indicator 7.1 on biodiversity and conservation planning** performing considerably worse than **sub-indicators 7.2** and **7.3** (see Figure 13a). This can be explained in large part by the underlying question-level data, where practitioners in most countries have very negative views on whether economic incentives are used to protect biodiversity, and on the integration of biodiversity into other areas of national policy (see Figure 13b).

It is also important to interpret the results for **Indicator 7** in light of countries’ performance in **Forestry (Indicator 8)** and **Oceans, Seas, and Marine Resources (Indicator 9)**, as forests, oceans, seas, and lakes serve as important ecosystems for the region’s diverse fauna and flora. With this in mind, it is worth noting that countries perform more modestly when it comes to **Indicator 8 on Forestry** – with an average score of 0.43 across all ten countries – and perform very poorly across all dimensions of **Indicator 9 on Oceans, Seas, and Marine Resources**, with an average score of 0.32. This may indicate that it is not sufficient to address biodiversity separately from other environmental issues and areas of national policy, as flagged by expert practitioners surveyed for this study in Figure 13b below.

Figure 13a. Aggregate Scores on Biodiversity, Forestry, and Marine Resources

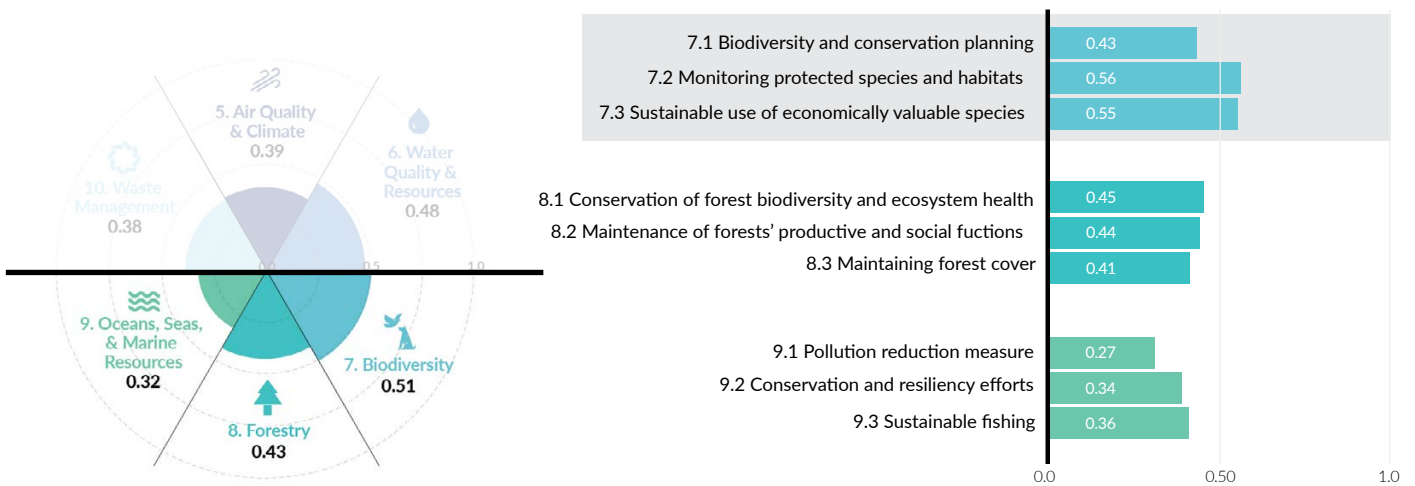
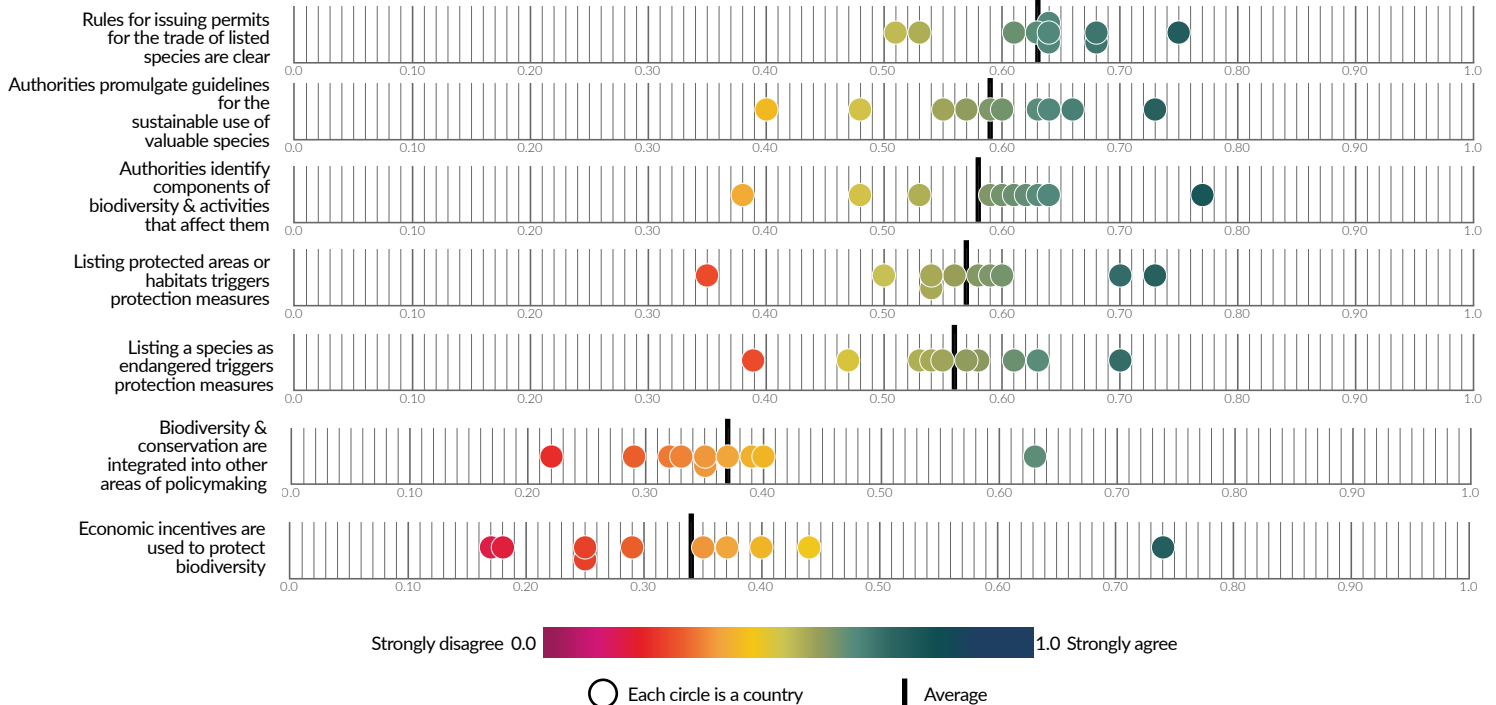


Figure 13b. Practitioner Views on Biodiversity

To what extent do you agree that...



## 14 Greater transparency is needed in the mining and extractive sector.

While scores are generally weak across the various dimensions of **Indicator 11 on Extraction and Mining**, **sub-indicator 11.1 on disclosure on operations, revenues and financial interests** is particularly weak (see Figure 14a). With an average score of 0.25 across the ten countries, **sub-indicator 11.1** is the weakest indicator on average across all three Pillars of the EGI. The underlying question-level data from expert practitioners show that officials failing to disclose interests in the oil, gas, or mining sector is the most severe challenge when it comes to transparency in the extractive sector. Furthermore, beyond the issue of extraction and mining, transparency is vital to good environmental governance more broadly, as illustrated in finding #15.

Figure 14a. Aggregate Scores on Extraction & Mining

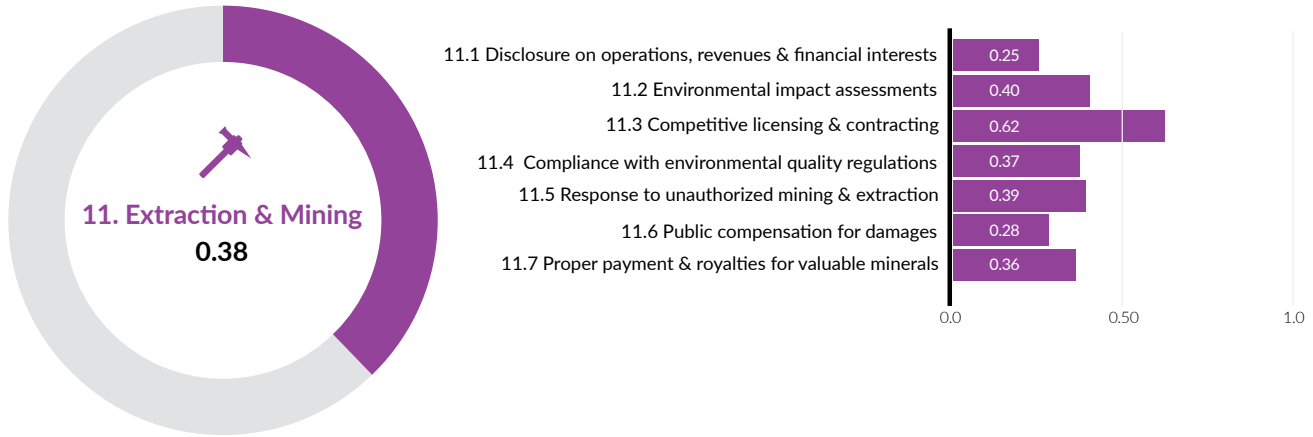
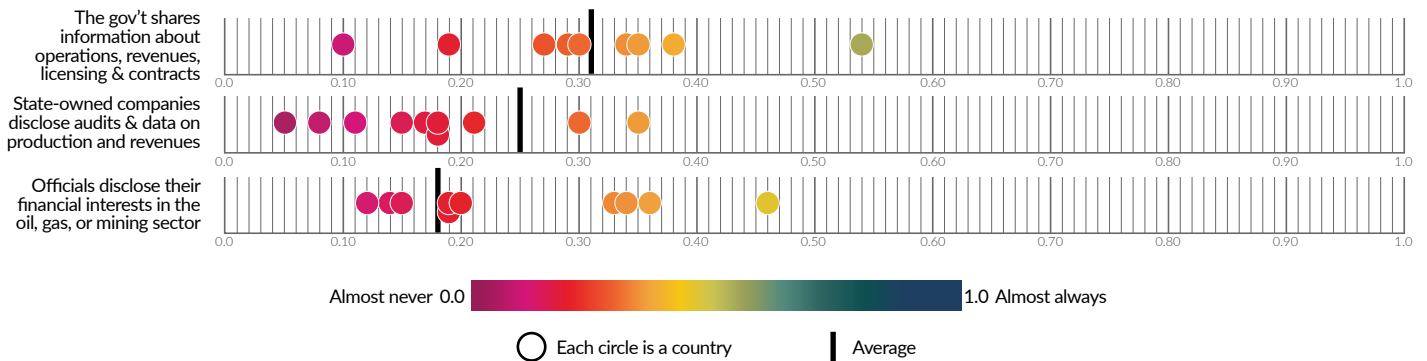


Figure 14b. Practitioner Views on Disclosure on Operations, Revenues & Financial Interests

In practice, how frequently would you say that...





## Interlinkages & Broader Insights

### 15 Enhancing institutional capacity and transparency is essential for good environmental governance.

Good environmental governance is not simply pre-determined by a country's level of economic development or broader governance context. The data show that environmental authorities have a vital role to play, with **sub-indicator 1.3 on institutional capacity** and **sub-sub indicator 1.5.1 on absence of corruption** seeing a positive correlation with every primary indicator of the EGI. This is illustrated in Figure 15a, showing a positive correlation between **sub-indicator 1.3 on institutional capacity** and **Indicator 9 on Oceans, Seas, and Marine Resources**. Similarly, we see a very strong correlation between countries' performance on **sub-sub indicator 1.5.1 on absence of corruption** and their performance on **Indicator 11 on Extraction and Mining** in Figure 15b. This is particularly noteworthy in light of finding #14, which highlights the need for better transparency in the extractive sector.

Figure 15a. Institutional Capacity and Oceans, Seas, & Marine Resource

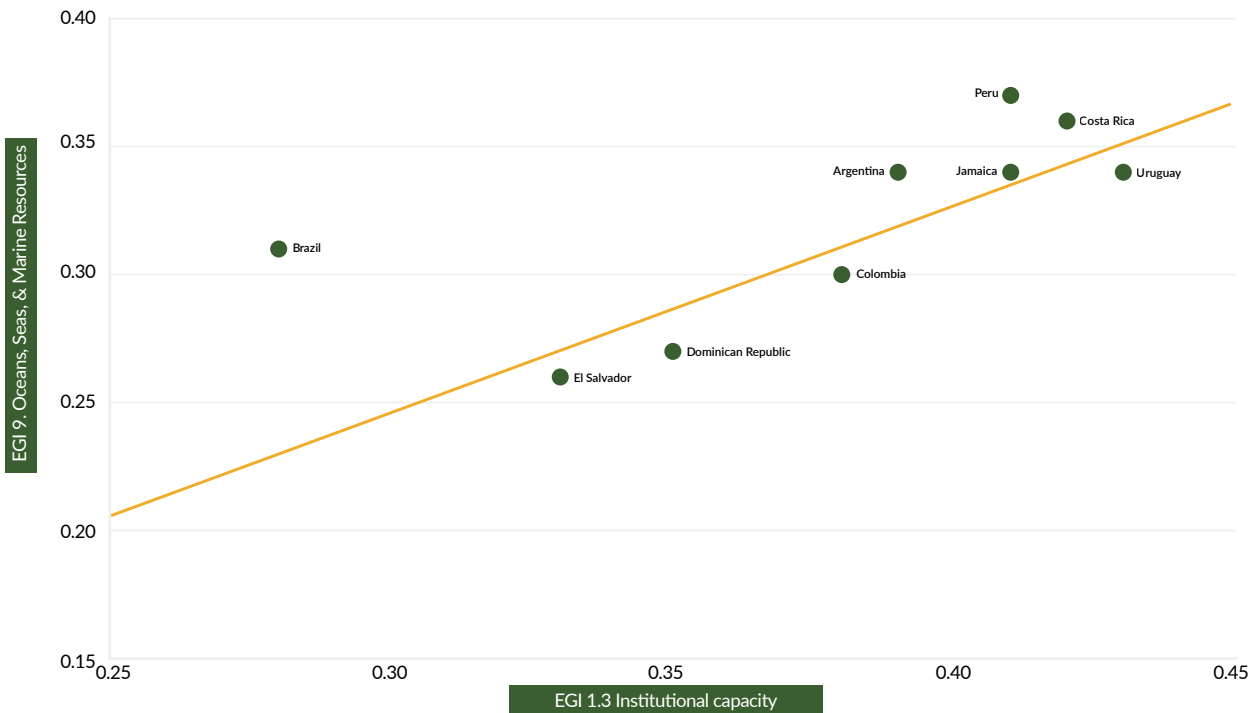
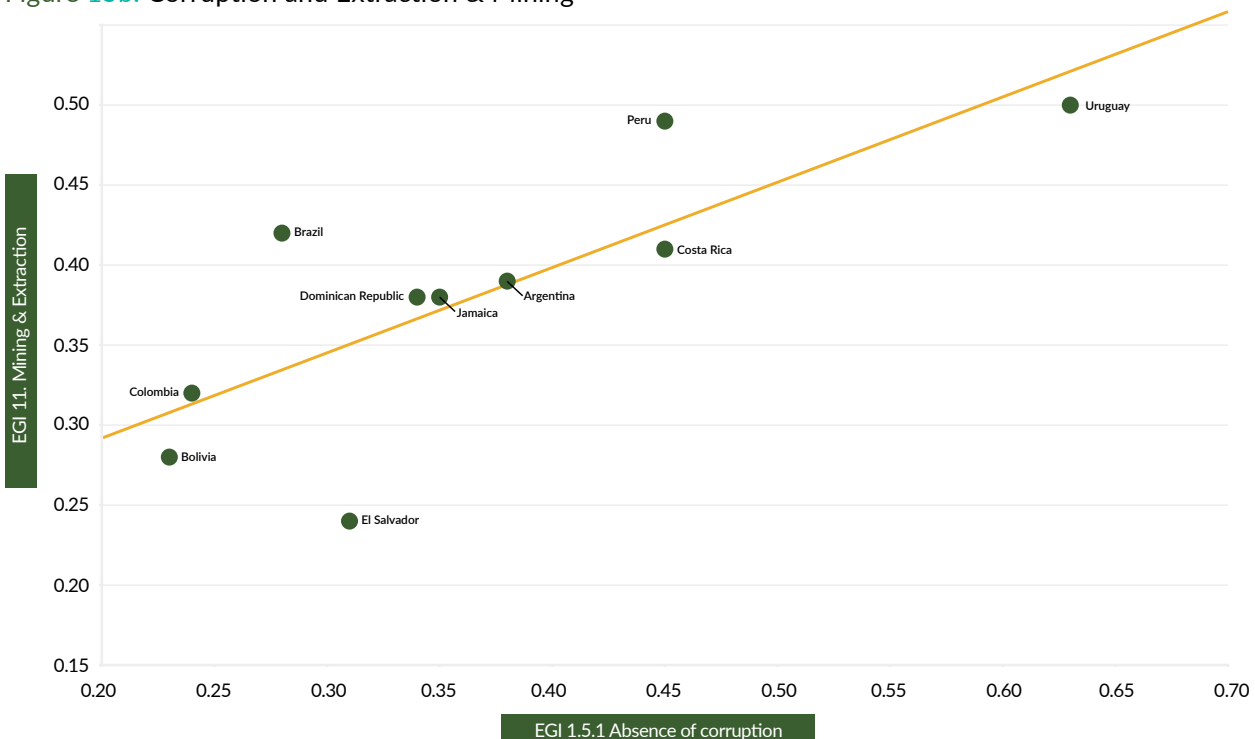


Figure 15b. Corruption and Extraction & Mining



## 16 Environmental governance correlates with level of economic development, with important exceptions for specific environmental practices.

All 11 primary indicators of the EGI show a positive correlation with GDP per capita. This is evident in Figure 16a below, illustrating that countries' performance on **Indicator 1 on Regulation and Enforcement** correlates positively with their GDP per capita. Nonetheless, there are important exceptions at the primary indicator level, where countries perform above or below their GDP per capita. These exceptions are particularly noticeable within Pillars II and III. For example, Costa Rica outperforms in most indicators, as illustrated in Figure 16b on GDP per capita and **Indicator 7 on Biodiversity**.

These trends point to two possible takeaways. The first is that countries' level of economic development is more likely to impact the functioning of institutions – such as environmental authorities or the judiciary – captured in Pillar I, and may explain why scores under this pillar track more closely with GDP per capita. The second takeaway is that countries' environmental governance is not necessarily pre-determined by their level of economic development, and that there may still be opportunities to make progress on particular practices outlined in Pillars II and III despite their level of economic development and institutional constraints.

Figure 16a. GDP Per Capita and Regulation & Enforcement

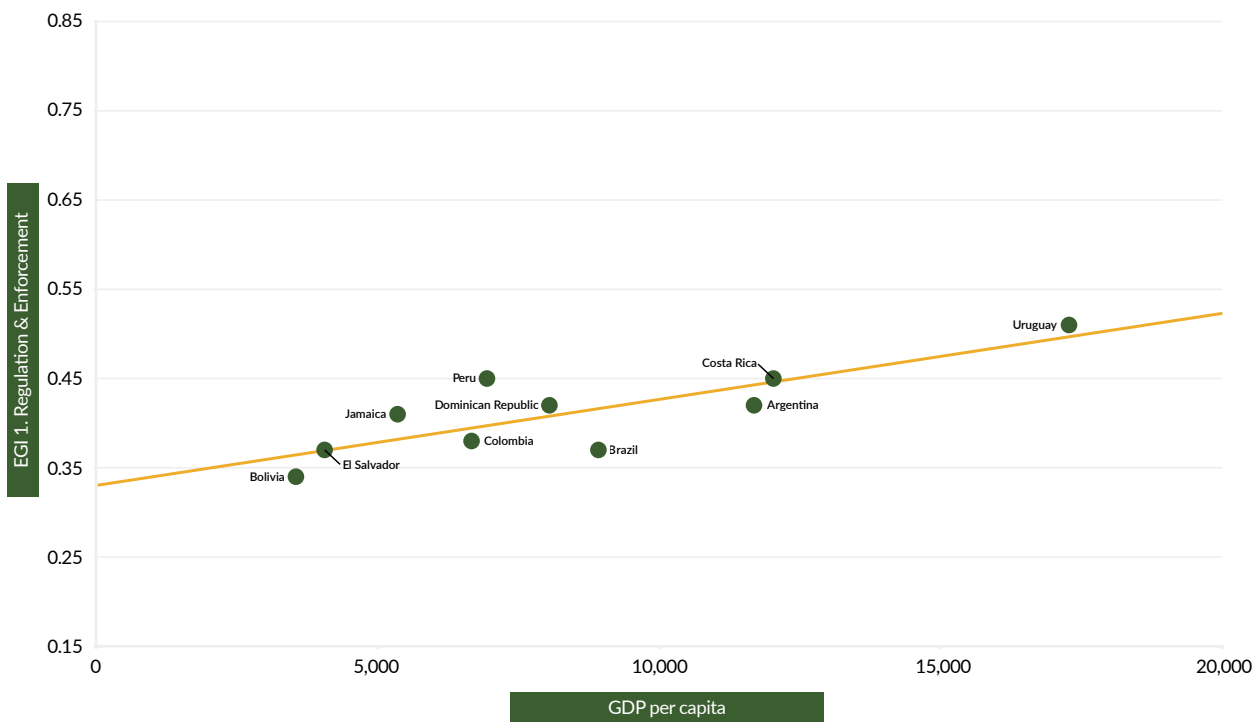
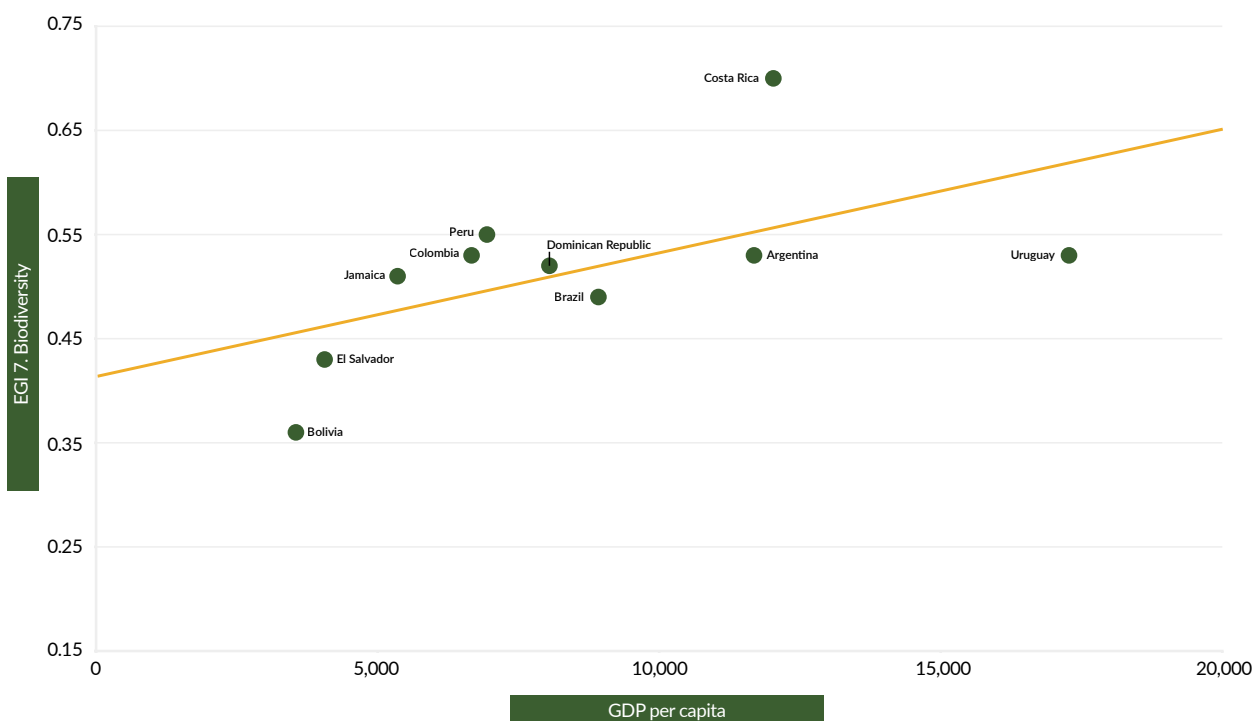


Figure 16b. GDP per Capita and Biodiversity



## 17 Countries' broader governance context impacts their environmental governance.

For all ten countries in the study, the Environmental Governance Indicators have a positive correlation with the *WJP Rule of Law Index*<sup>®</sup> scores (presented in Part One of each country profile). This is illustrated in Figure 17a below, showing a positive correlation between countries' performance in the *WJP Rule of Law Index* and their performance on EGI **Indicator 4 on Access to and Quality of Justice**. This suggests that countries' broader governance context – including the pervasiveness of corruption, the strength of regulatory enforcement generally, and the openness of government, among other issues – is an important factor for determining the extent to which a given country's environmental laws and regulations are translated into practices by both environmental authorities and the regulated community. As with GDP, we also see important exceptions where countries over- or underperform their *WJP Rule of Law Index* scores in the primary indicators for particular environmental practices outlined in Pillar II. This is illustrated in Figure 17b, where Peru outperforms its *WJP Rule of Law Index* score for **Indicator 9 on Oceans, Seas, and Marine Resources**.

This trend may point to a similar takeaway discussed in finding #16, which is that rule of law, institutional performance, and environmental governance are very interrelated, and may explain why scores under Pillar I track more closely with countries' *WJP Rule of Law Index* scores. However, the under- and over-performers in Pillar II suggest that it is worth countries' effort to focus on improving particular environmental practices, as there may be opportunities for success in specific environmental issues where countries are not as constrained by their overall governance context or level institutional development.

Figure 17a. Rule of Law and Justice

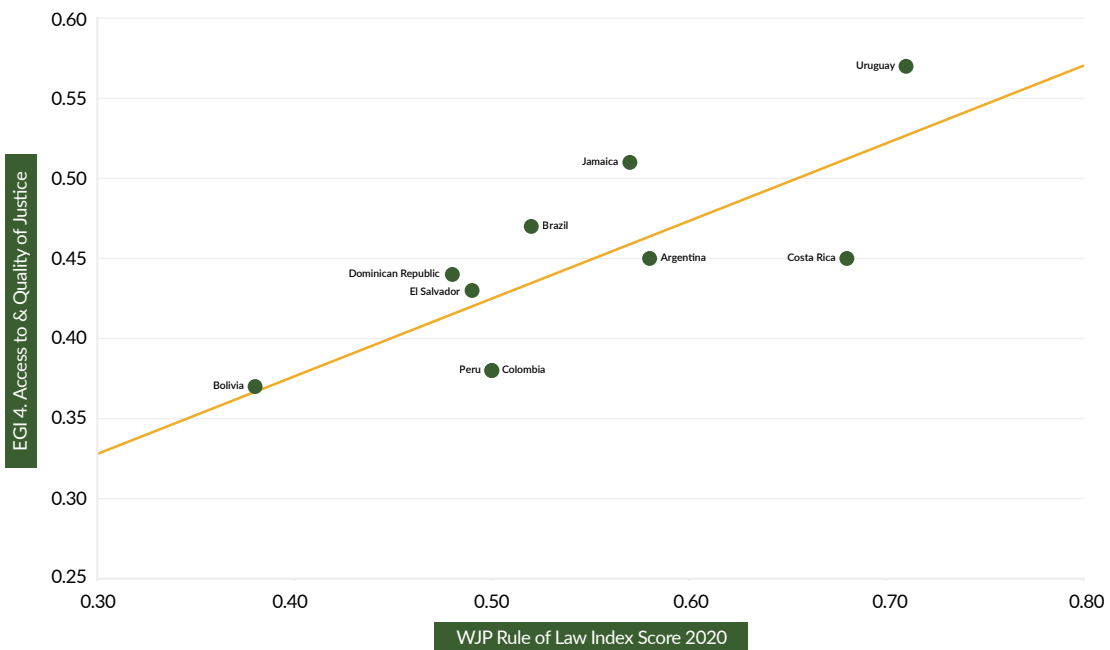
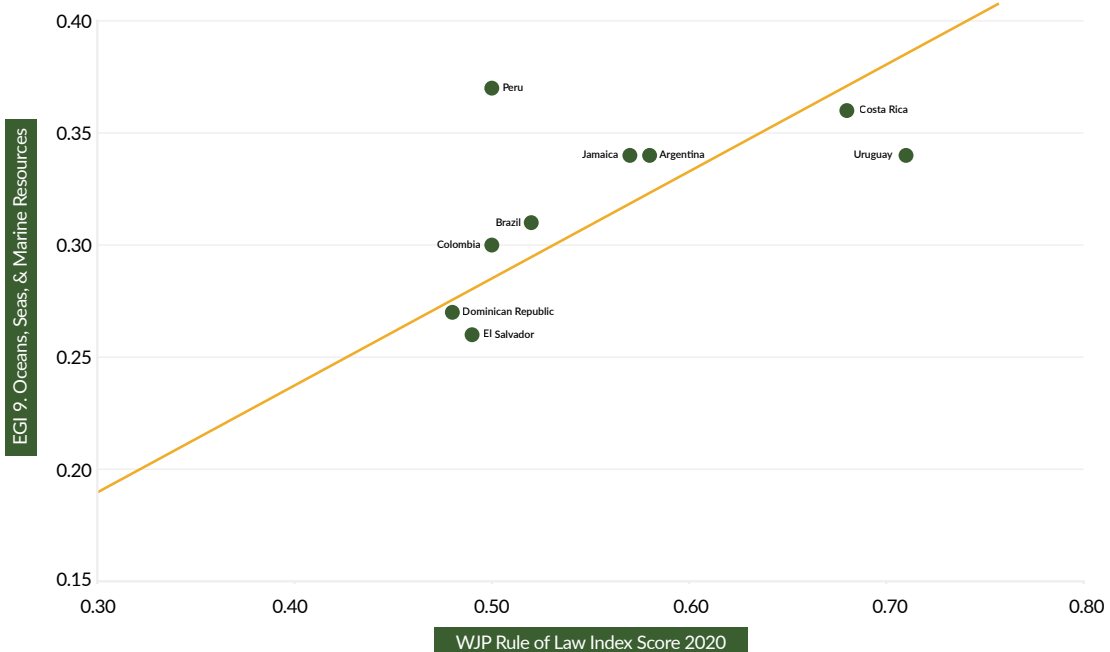


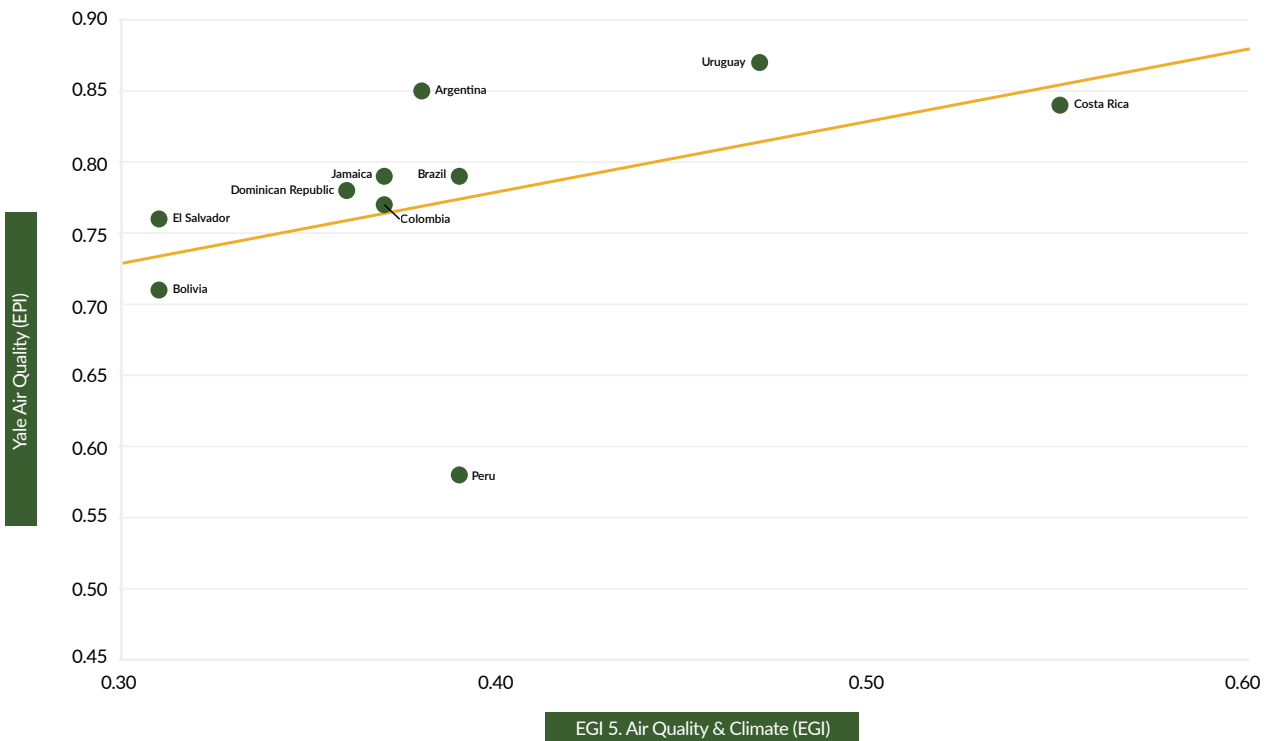
Figure 17b. Rule of Law and Oceans, Seas, & Marine Resources



## 18 Environmental governance matters for achieving a healthy environment.

Good environmental governance is a laudable goal in and of itself and has the potential to yield positive outcomes for society more broadly, such as the development of institutional capacity, a more informed and engaged public, a better realization of fundamental social rights, and reduced public spending on the negative health impacts of pollution, among many others. A country's environmental governance must also be measured by the extent to which it effectively delivers a healthy environment to its citizens, and we do indeed see an overall positive relationship between countries' performance in the EGI and Yale's *Environmental Performance Index* (EPI). This is most clearly illustrated in Figure 18, which shows a positive correlation between countries' performance on **Indicator 5 on Air Quality and Climate** in the EGI, and the Air Quality Performance Indicator in Yale's EPI. However, more analysis is needed to understand the relationship between particular governance indicators and measures of environmental performance.

Figure 18. EGI vs. EPI on Air Quality



## 19 More data are needed to assess other issues impacting environmental governance.

The findings discussed here provide important insights on the greatest challenges and opportunities that countries face when it comes to environmental governance. While this is an important first step in better measuring and understanding the drivers of environmental governance, more data are needed. For one, this iteration of the EGI focuses on governance of the extractive sector and its potential impact on the environment, but further iterations of the EGI can and should be expanded to cover other key industries, such as agriculture and the “blue economy.” Furthermore, better administrative data, comparative analyses of the law, and data on contextual issues – such as changes in administration or changes over time – can provide a more complete picture of the state of countries' environmental governance.

An underwater photograph of a vibrant coral reef. A large sea turtle is swimming in the lower center, facing right. The reef is covered in various types of coral, including branching and table corals. Numerous small fish are scattered throughout the water column, and a few larger fish are visible near the surface. The water is clear and blue-green. A white border frames the entire image.

# 4 Country Profiles

## How to Read the Country Profiles

This section presents profiles for the 10 countries included in the *Environmental Governance Indicators for Latin America and the Caribbean* (EGI) study. Each profile presents more than 100 indicators on environmental governance for the featured country. Most indicators are presented as scores ranging from 0 to 1, where 1 signifies the highest possible score (strong environmental governance) and 0 signifies the lowest possible score (weak environmental governance). The country profiles consist of five parts, outlined below.

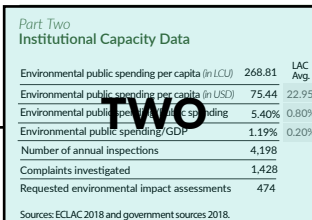
### Part One Governance Context

Displays data on the country's governance context, including its aggregate rule of law score and factor-level scores for the eight primary dimensions of the rule of law. Performance is scored on a scale of 0 to 1, where 1 represents strong adherence to the rule of law. These data are drawn from the *WJP Rule of Law Index*® 2020.



### Part Two Institutional Capacity Data

Displays select institutional capacity data for the featured country. This includes environmental public spending per capita in local currency and US dollars, environmental spending as a percentage of total public spending, and environmental spending as a percentage of GDP. As a reference point, averages for all of Latin America and the Caribbean are displayed in grey in the right-hand column. These data come from the Economic Commission for Latin America and the Caribbean (ECLAC) CEPALSTAT platform.



Figures on the number of annual inspections, complaints investigated, and requested environmental impact assessments data come from government sources published online. Detailed information on the government sources used are available in the methodology section. Data that are not publicly available for the featured country are noted with "N/A." All figures presented in Part Two are annual figures.



### Part Three Select Laws & Regulation

Displays data on select laws and regulations. The first section displays information on environmental rights. Information on whether the country's constitution includes a constitutional right to or provision for a healthy environment is presented with a red "X" symbol or a green check mark, representing a binary "no" or a "yes" respectively. This information comes from the United Nations Environment Programme's (UNEP) 2019 *Environmental Rule of Law: First Global Report*.

Data on the quality of the right to protection of vulnerable populations and the right to nondiscrimination of indigenous peoples are scored on a scale of 0 to 1, where 1 represents the strongest possible protections or rights by law. A score of 0 is symbolized in the right-hand column with a red "X" symbol, a score of 1 is symbolized with a green check mark, and scores that fall between these two

values are symbolized with a yellow dash. These ratings come from analysis conducted by the Social Capital Group for the Inter-American Development Bank's *Technical Document: Alternatives for Addressing Gaps Based on Results of the Benchmarking Study and Survey*.

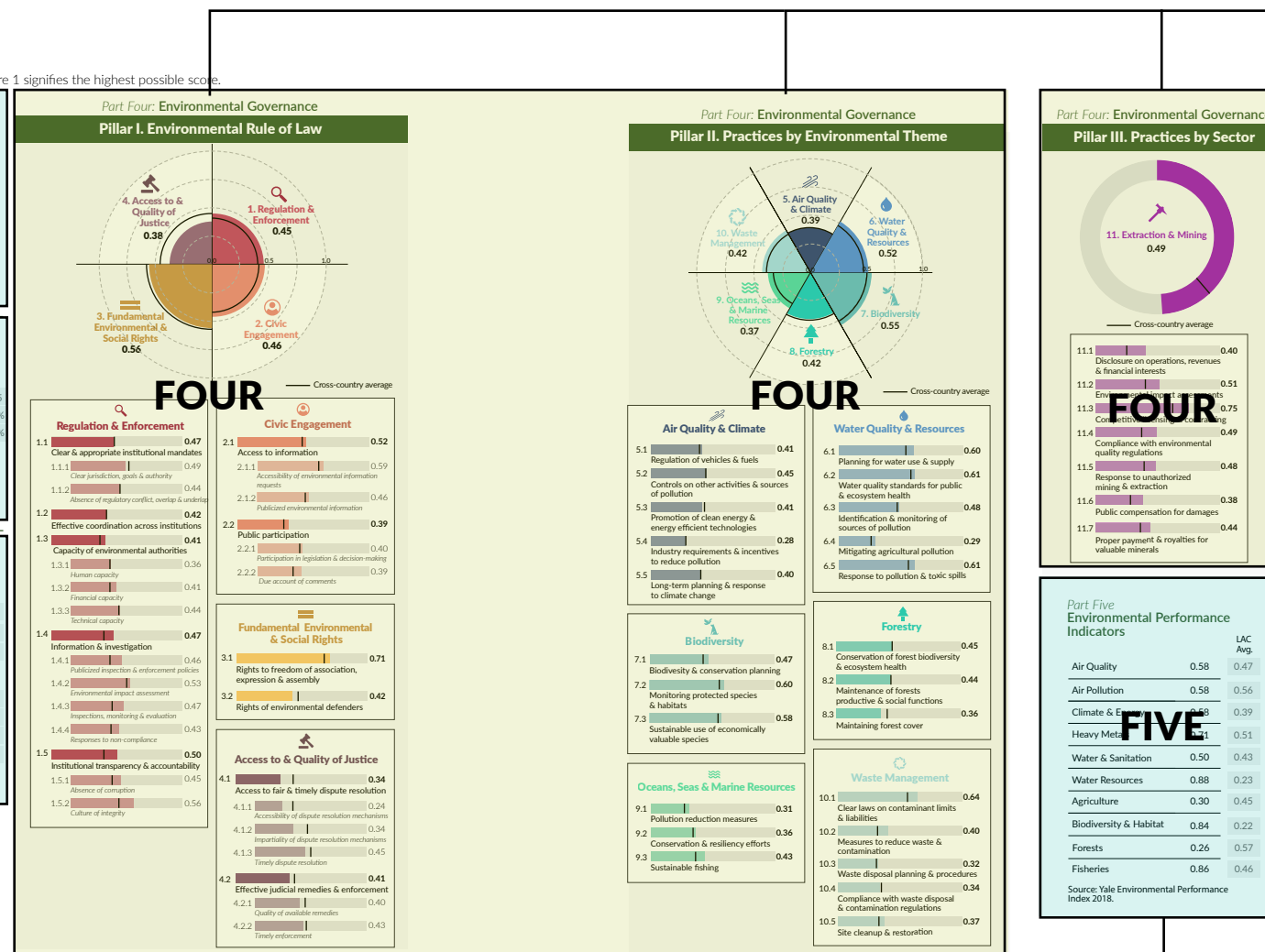
The second section of Part 3 displays information on the quality of air and water standards and regulations. These data are presented on a scale of 0 to 1, where 1 represents the highest quality standards and regulations. A score of 0 is symbolized in the right-hand column with a red "X" symbol, a score of 1 is symbolized with a green check mark, and scores that fall between these two values are symbolized with a yellow dash. These data come from the Inter-American Development Bank's *Analysis of Environmental Governance in Latin America and the Caribbean*.

### Part Four Environmental Governance Indicators

Displays data on environmental governance in practice. The first 10 primary indicators of environmental governance are summarized in the form of a rose chart for Pillars I and II. Primary Indicators 1 through 4 on environmental rule of law issues are summarized in the rose chart on the left-hand page. Primary Indicators 5 through 10 on practices for specific environmental issue areas are summarized in the rose chart on the right-hand page. The center of the rose chart corresponds with the worst possible score for each primary indicator (0), and the outer edge of the circle marks the best possible score for each primary indicator (1).

The 11th primary indicator of environmental governance under Pillar III, Extraction & Mining, is summarized as a donut chart, where an empty circle represents the worst possible score (0) and a completely filled circle represents the best possible score (1). Future editions of the study may expand Pillar III to include additional industries as requested by countries.

The country's disaggregated scores for the sub-indicators and sub-sub indicators that comprise the 11 primary indicators of Pillars I, II, and III are displayed underneath the summary rose charts or donut chart. Sub-indicator and sub-sub indicator scores are represented by a bar, and values are labeled at the end of each bar. A completely filled bar represents the best possible score for each sub-indicator or sub-sub indicator (1). The average score of the 10 countries included in the study is represented by the black line. All data in Part 4 come from the Environmental Qualified Respondents' Questionnaire (EQRQ) designed to collect new, primary data from in-country practitioners with expertise in environmental governance issues in each country.



### Part Five Environmental Performance Indicators

Displays data on environmental performance for the ten issue categories that comprise Yale's 2018 *Environmental Performance Index* (EPI). As a reference point, average scores for all of Latin America and the Caribbean are displayed in grey in the right-hand column. For consistency with the rest of the profile, EPI scores have been re-scaled to a scale of 0 to 1, where 1 signifies the highest possible score.

# Argentina

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.58
Constraints on Government Powers	0.61
Absence of Corruption	0.52
Open Government	0.64
Fundamental Rights	0.70
Order & Security	0.62
Regulatory Enforcement	0.53
Civil Justice	0.59
Criminal Justice	0.44

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	183.39	LAC Avg.
Environmental public spending per capita (in USD)	5.66	22.95
Environmental public spending/Public spending	0.25%	0.80%
Environmental public spending/GDP	0.06%	0.20%
Number of annual inspections	N/A	
Complaints investigated	84	
Requested environmental impact assessments	N/A	

Sources: ECLAC 2018 and government sources 2016.

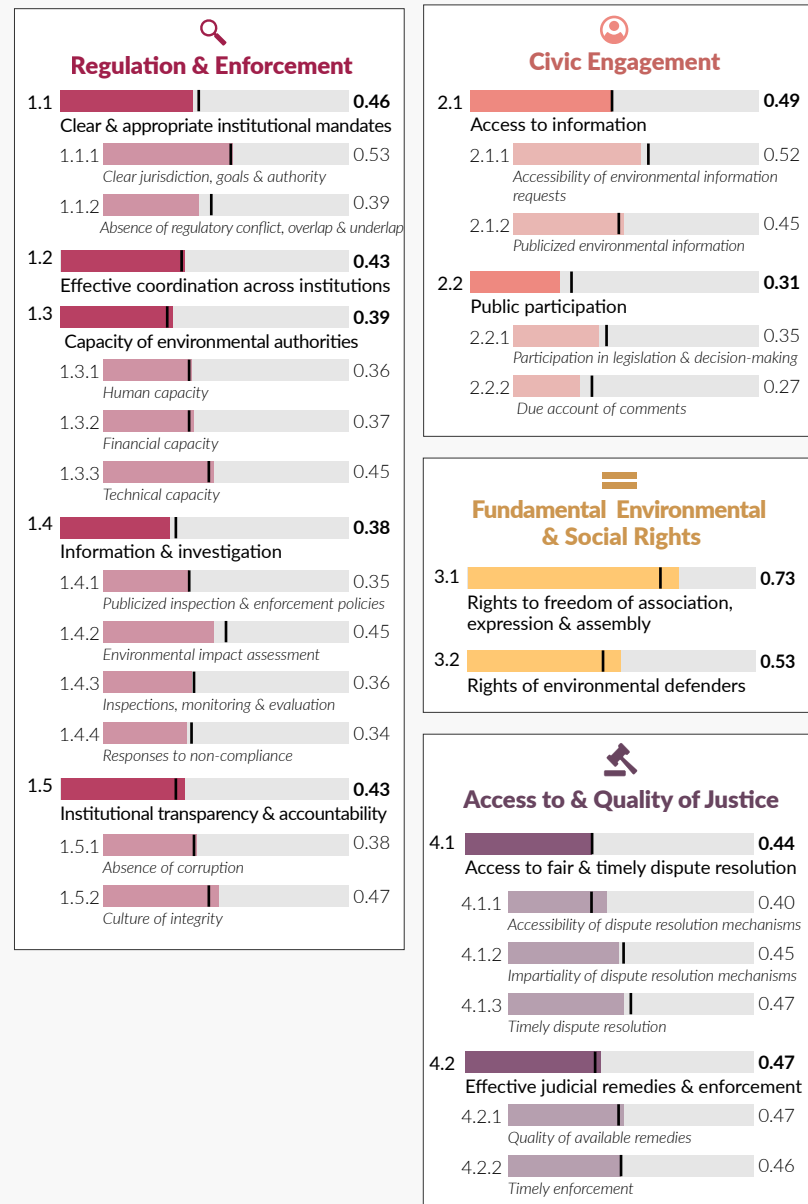
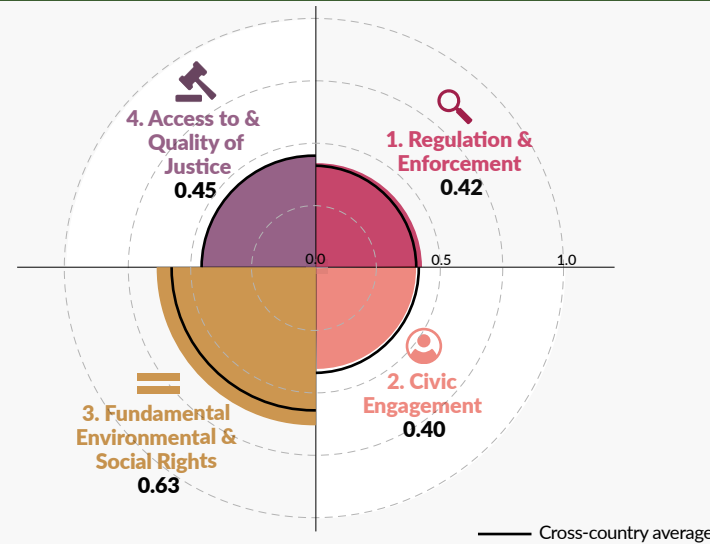
## Part Three Select Laws & Regulation

Environmental Rights		
Constitutional right to or provision for a healthy environment		✓
Right to protection of vulnerable populations	1.0	✓
Right to nondiscrimination of indigenous peoples	0.50	—
Environmental Quality Standards		
Minimum air protection standards	1.0	✓
Air emission limits that comply with WHO standards	1.0	✓
National water protection norms	1.0	✓
Water quality regulations determined by use	0.25	—

Sources: UN Environment Programme Inter-American Development Bank

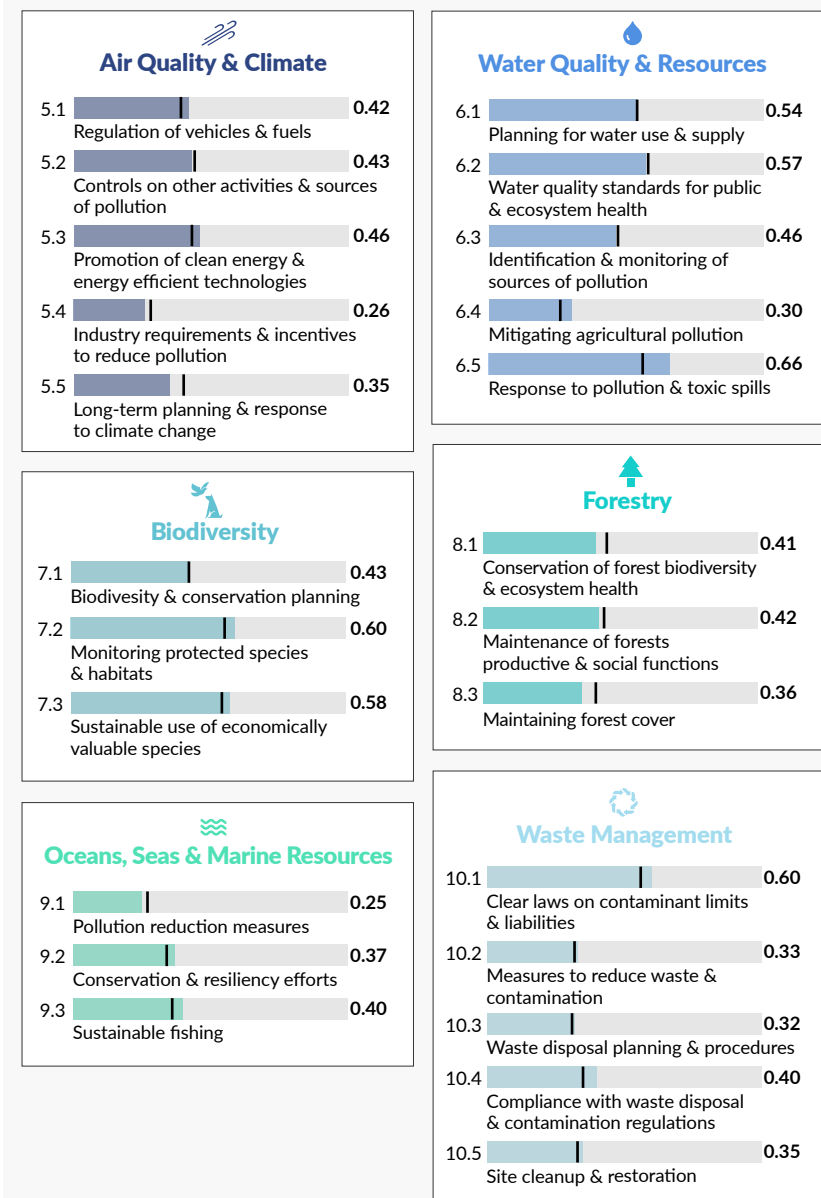
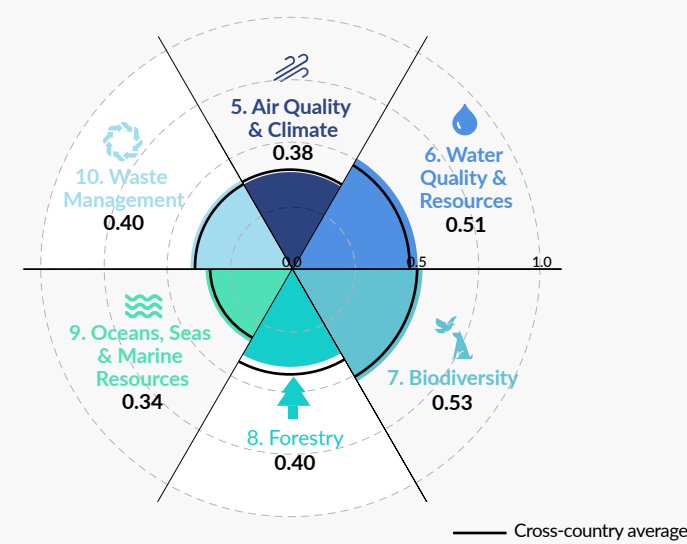
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



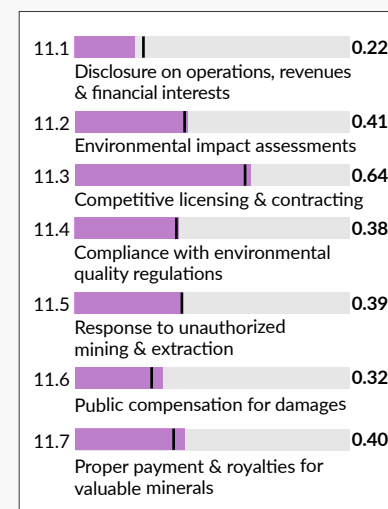
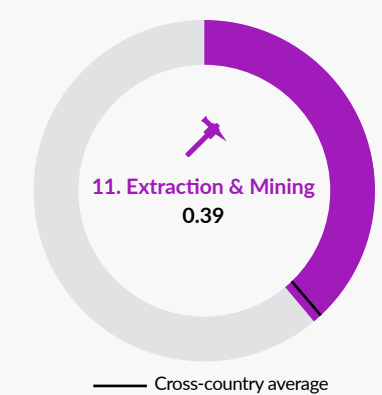
## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Air Quality	0.85	LAC Avg. 0.47
Air Pollution	0.20	0.56
Climate & Energy	0.47	0.39
Heavy Metals	0.60	0.51
Water & Sanitation	0.73	0.43
Water Resources	0.72	0.23
Agriculture	0.71	0.45
Biodiversity & Habitat	0.56	0.22
Forests	0.08	0.57
Fisheries	0.42	0.46

Source: Yale Environmental Performance Index 2018.



# Bolivia

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.38
Constraints on Government Powers	0.36
Absence of Corruption	0.27
Open Government	0.43
Fundamental Rights	0.46
Order & Security	0.59
Regulatory Enforcement	0.40
Civil Justice	0.33
Criminal Justice	0.22

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	191.99	LAC Avg.
Environmental public spending per capita (in USD)	22.16	22.95
Environmental public spending/Public spending	1.80%	0.80%
Environmental public spending/GDP	0.90%	0.20%
Number of annual inspections	N/A	
Complaints investigated	231	
Requested environmental impact assessments	N/A	

Sources: ECLAC 2016 and government sources 2016.

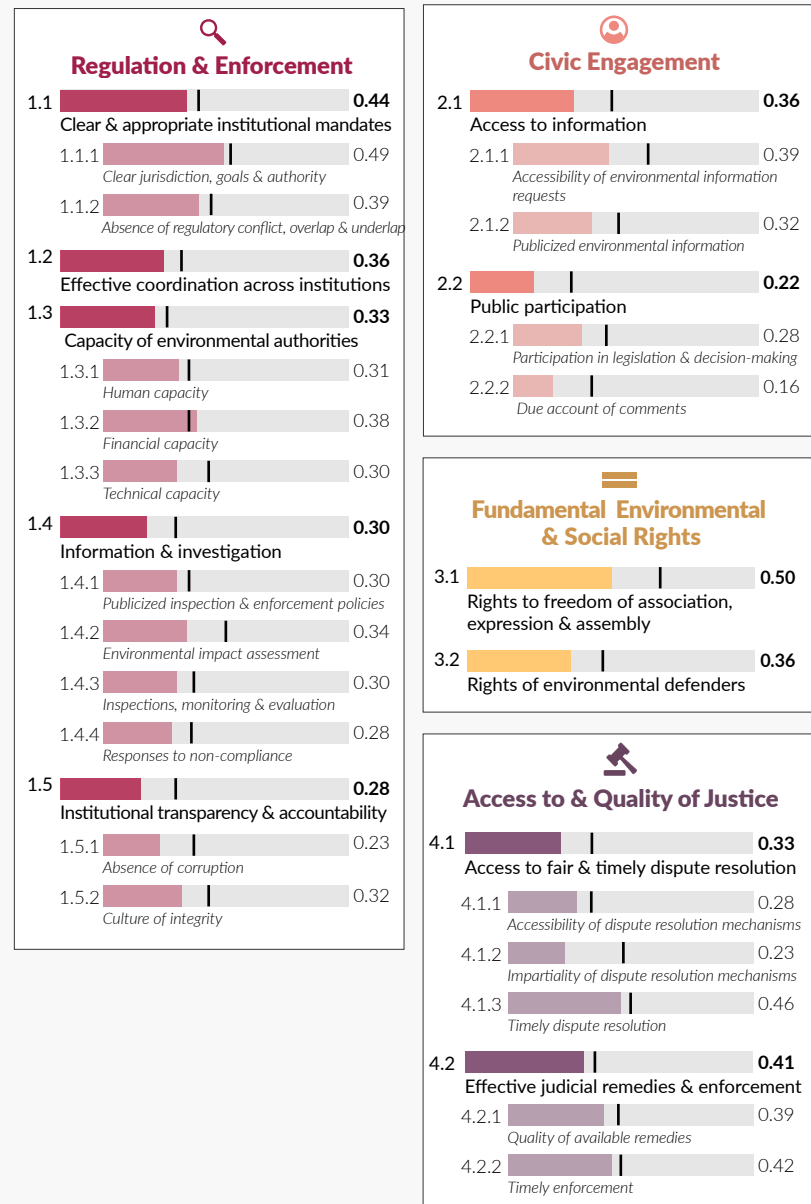
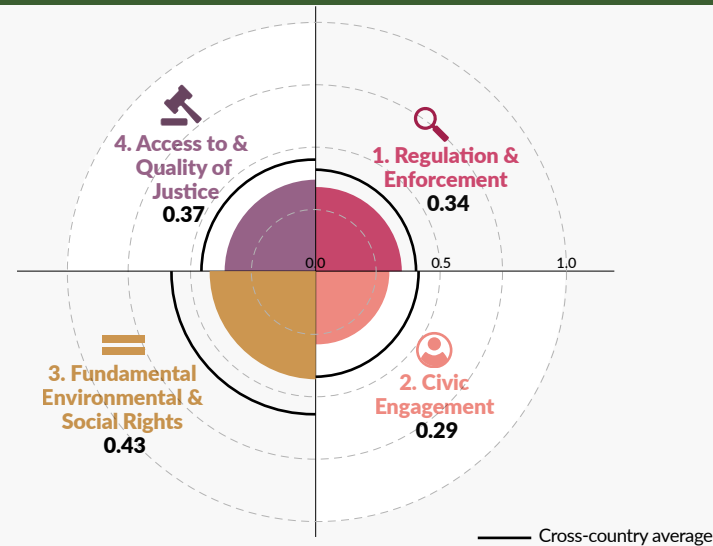
## Part Three Select Laws & Regulation

Environmental Rights	
Constitutional right to or provision for a healthy environment	✓
Right to protection of vulnerable populations	✓
Right to nondiscrimination of indigenous peoples	—
Environmental Quality Standards	
Minimum air protection standards	✓
Air emission limits that comply with WHO standards	—
National water protection norms	✓
Water quality regulations determined by use	—

Sources: UN Environment Programme Inter-American Development Bank

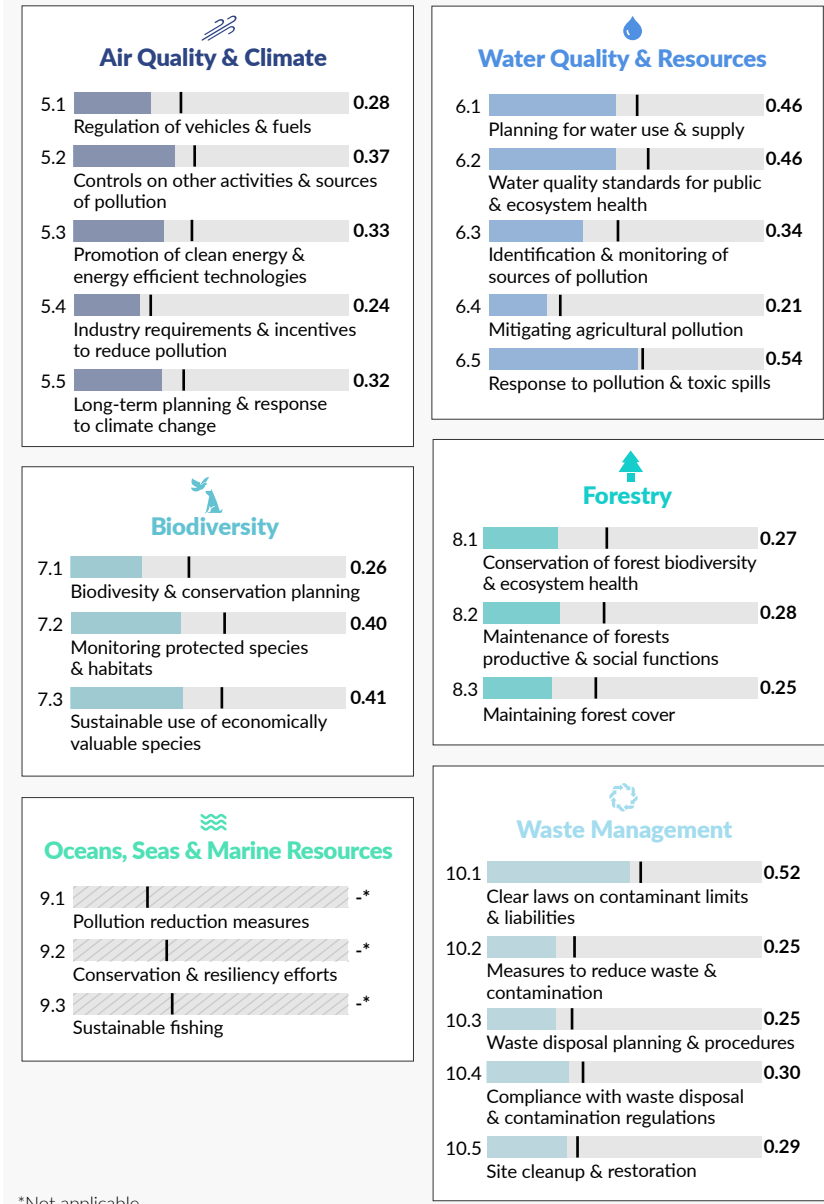
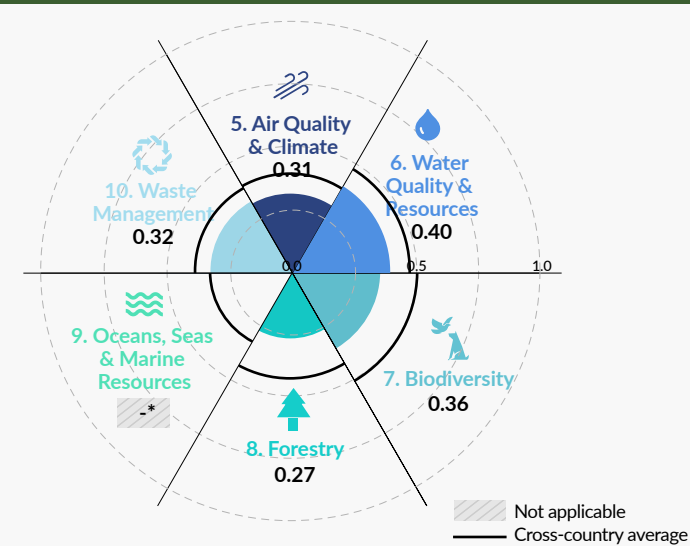
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



## Part Four: Environmental Governance

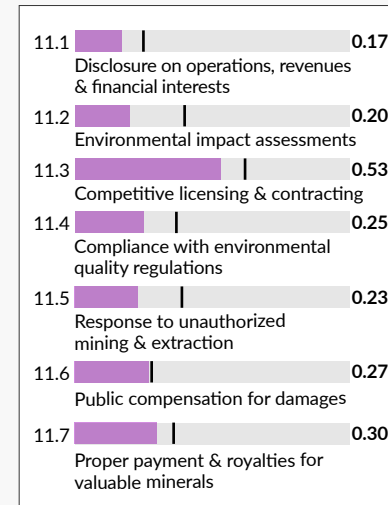
### Pillar II. Practices by Environmental Theme



\*Not applicable

## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Air Quality	0.71	LAC Avg. 0.47
Air Pollution	0.39	0.56
Climate & Energy	0.33	0.39
Heavy Metals	0.44	0.51
Water & Sanitation	0.45	0.43
Water Resources	0.64	0.23
Agriculture	0.54	0.45
Biodiversity & Habitat	0.89	0.22
Forests	0.18	0.57
Fisheries	0.00	0.46

Source: Yale Environmental Performance Index 2018.





# Brazil

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.52
Constraints on Government Powers	0.53
Absence of Corruption	0.45
Open Government	0.61
Fundamental Rights	0.51
Order & Security	0.64
Regulatory Enforcement	0.51
Civil Justice	0.54
Criminal Justice	0.34

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	22.75	LAC Avg.
Environmental public spending per capita (in USD)	7.57	22.95
Environmental public spending/Public spending	0.20%	0.80%
Environmental public spending/GDP	0.07%	0.20%
Number of annual inspections	N/A	
Complaints investigated	14,743	
Requested environmental impact assessments	132	

Sources: ECLAC 2018 and government sources 2018.

## Part Three Select Laws & Regulation

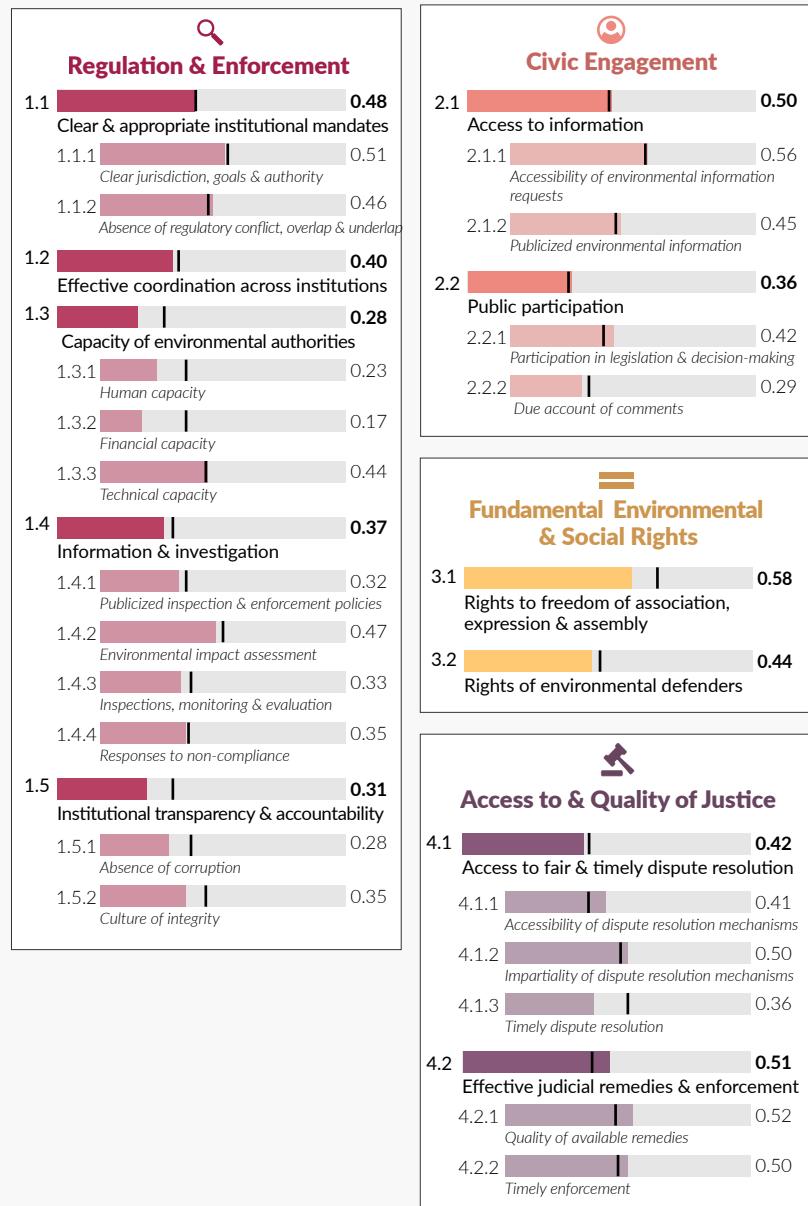
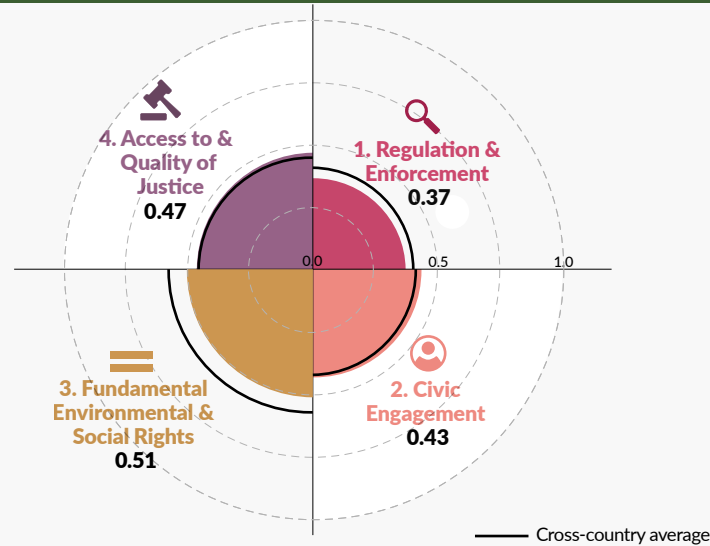
Environmental Rights	
Constitutional right to or provision for a healthy environment	✓
Right to protection of vulnerable populations	1.0 ✓
Right to nondiscrimination of indigenous peoples	0.75 —

Environmental Quality Standards		
Minimum air protection standards	N/A	N/A
Air emission limits that comply with WHO standards	N/A	N/A
National water protection norms	N/A	N/A
Water quality regulations determined by use	N/A	N/A

Sources: UN Environment Programme, Inter-American Development Bank

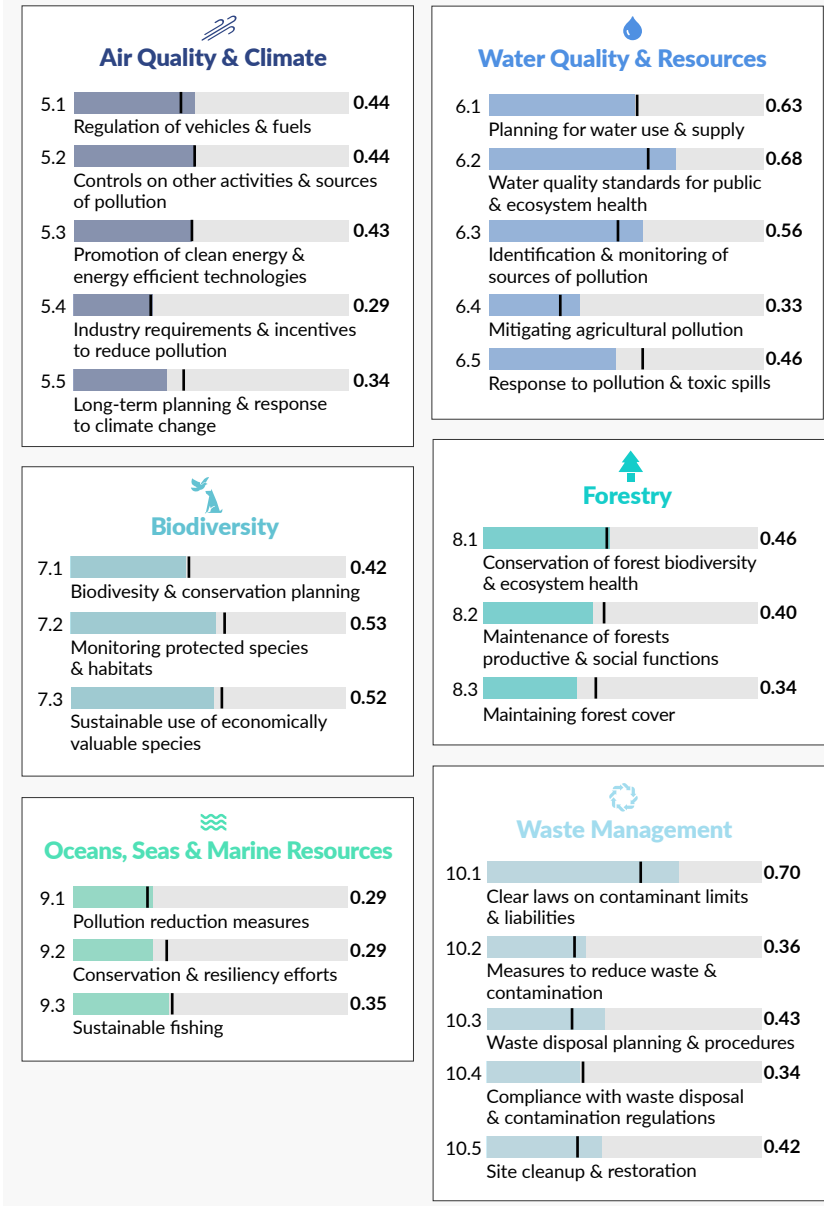
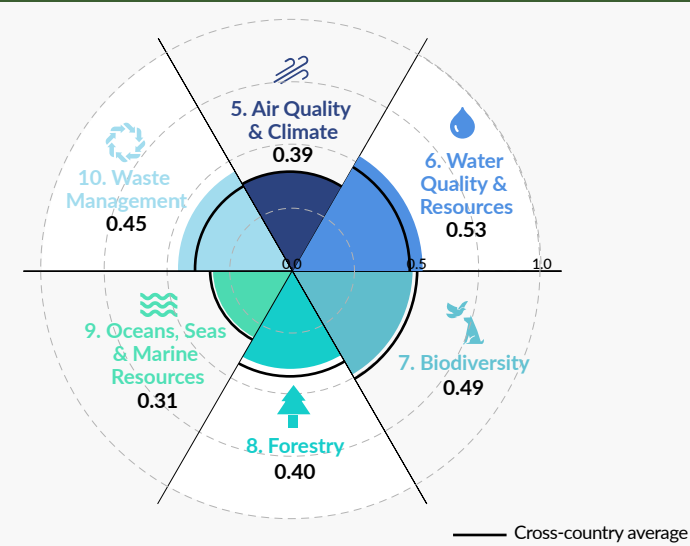
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



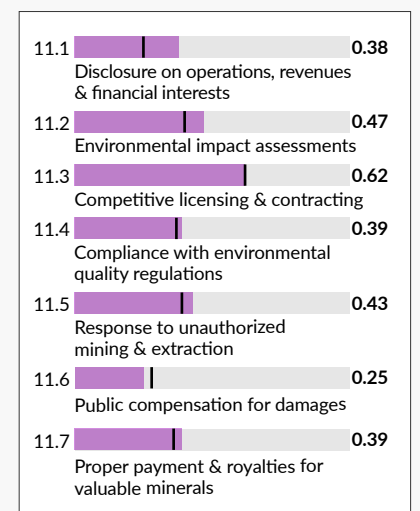
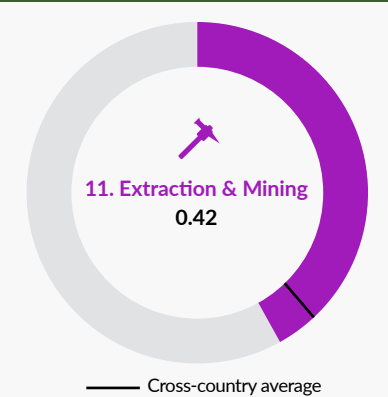
## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Air Quality	0.79	LAC Avg. 0.47
Air Pollution	0.38	0.56
Climate & Energy	0.33	0.39
Heavy Metals	0.49	0.51
Water & Sanitation	0.46	0.43
Water Resources	0.81	0.23
Agriculture	0.59	0.45
Biodiversity & Habitat	0.88	0.22
Forests	0.12	0.57
Fisheries	0.81	0.46

Source: Yale Environmental Performance Index 2018.

# Colombia

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.50
Constraints on Government Powers	0.53
Absence of Corruption	0.39
Open Government	0.64
Fundamental Rights	0.53
Order & Security	0.56
Regulatory Enforcement	0.52
Civil Justice	0.49
Criminal Justice	0.34

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	11,757.58	LAC Avg.
Environmental public spending per capita (in USD)	4.61	22.95
Environmental public spending/Public spending	0.32%	0.80%
Environmental public spending/GDP	0.06%	0.20%
Number of annual inspections	N/A	
Complaints investigated	N/A	
Requested environmental impact assessments	755	

Sources: ECLAC 2018 and government sources 2018.

## Part Three Select Laws & Regulation

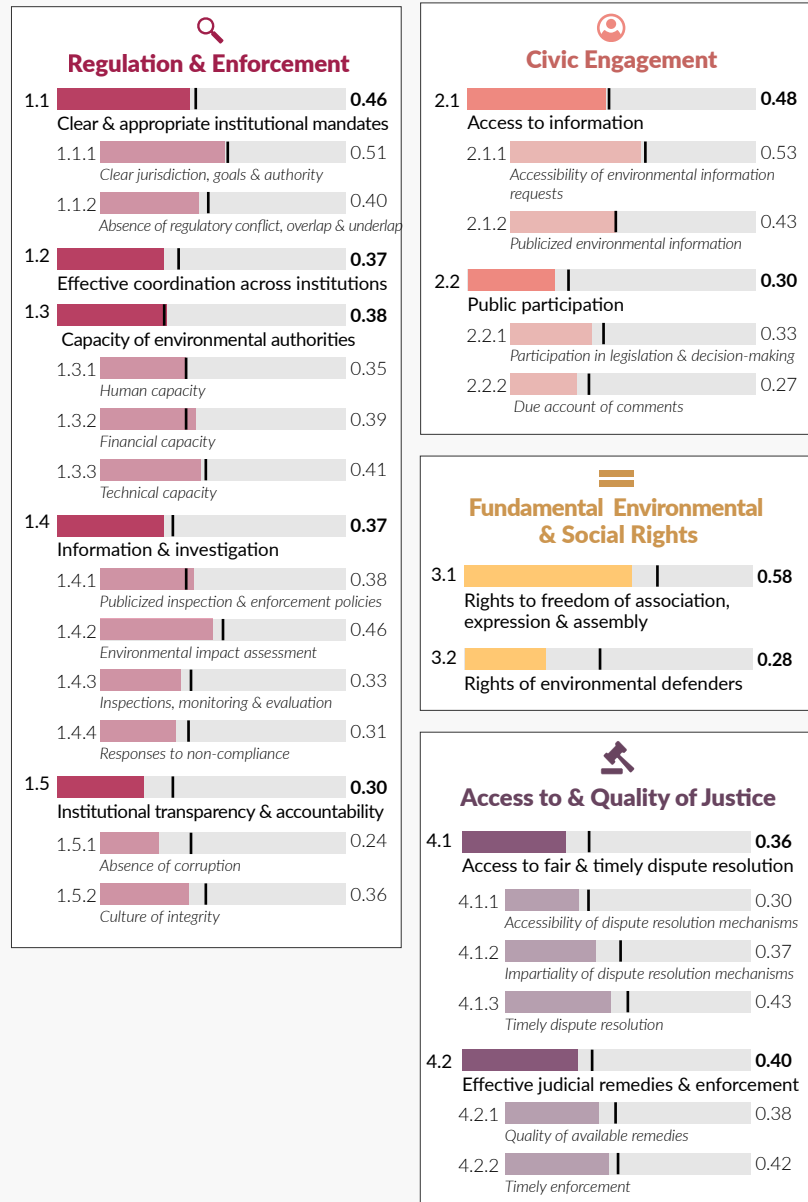
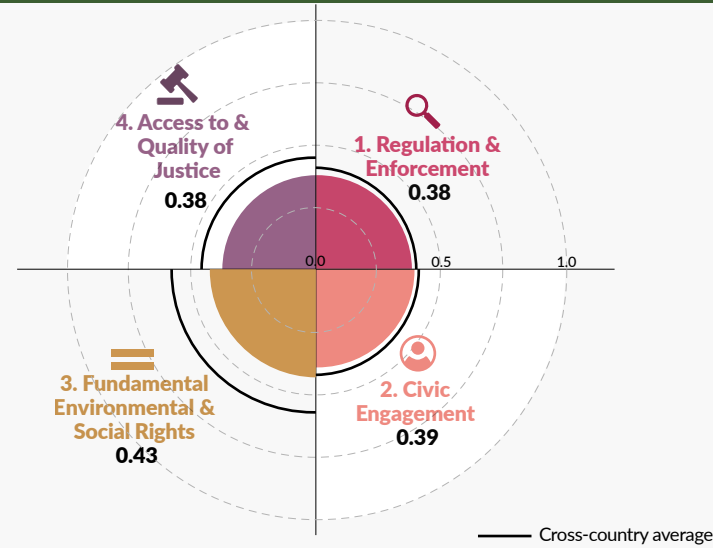
Environmental Rights	
Constitutional right to or provision for a healthy environment	✓
Right to protection of vulnerable populations	1.0 ✓
Right to nondiscrimination of indigenous peoples	1.0 ✓

Environmental Quality Standards		
Minimum air protection standards	N/A	N/A
Air emission limits that comply with WHO standards	N/A	N/A
National water protection norms	N/A	N/A
Water quality regulations determined by use	N/A	N/A

Sources: UN Environment Programme Inter-American Development Bank

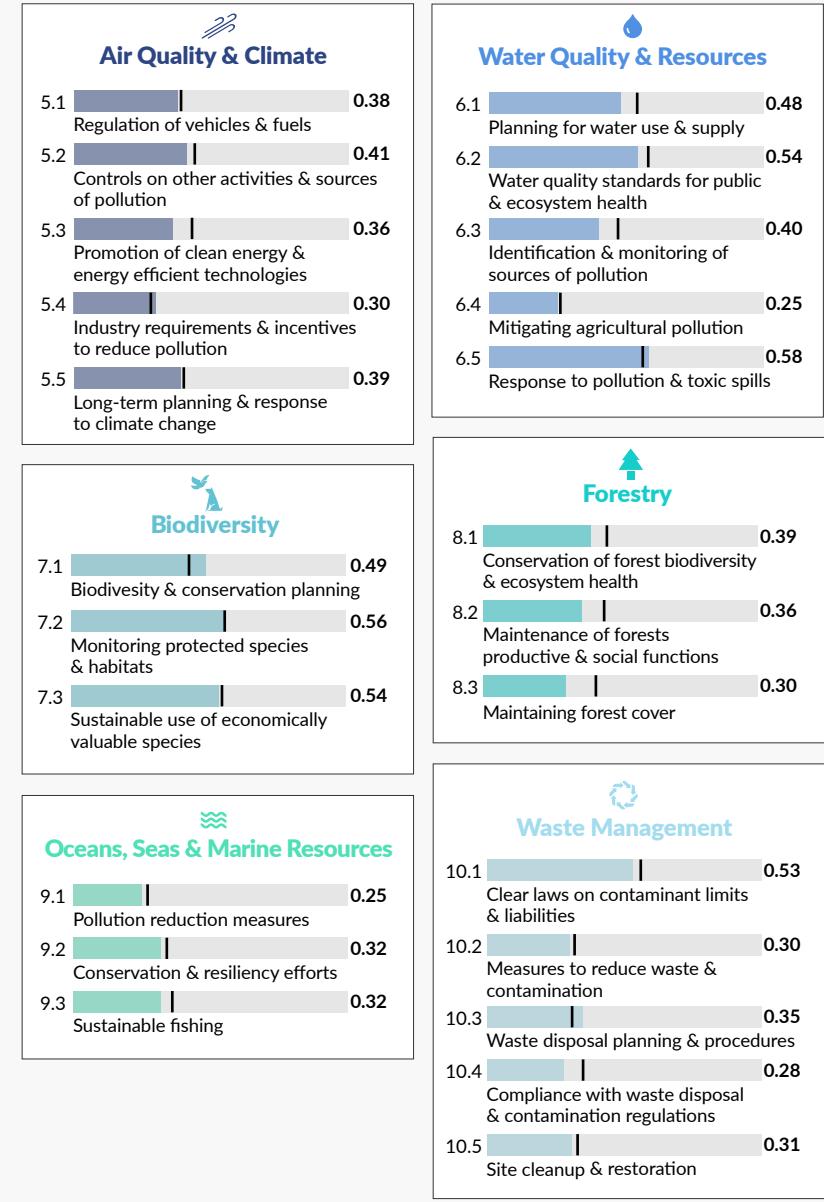
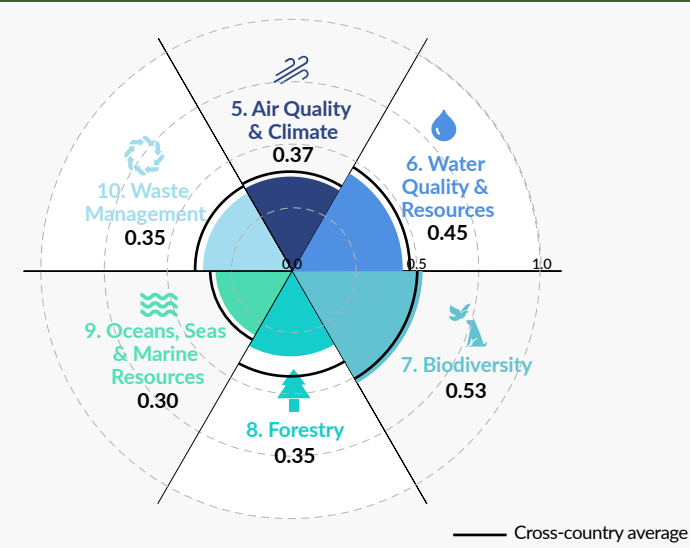
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



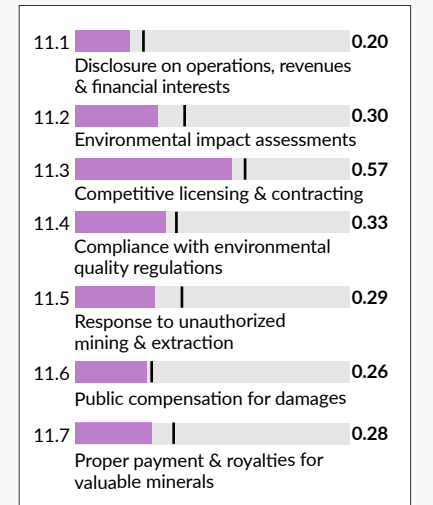
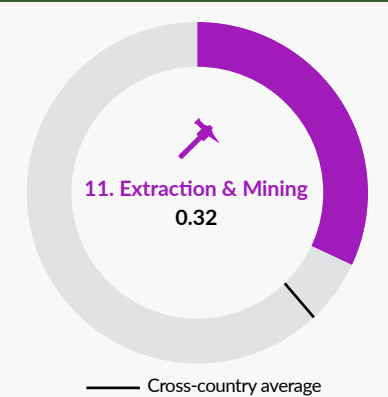
## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Indicator	Score	LAC Avg.
Air Quality	0.77	0.47
Air Pollution	0.57	0.56
Climate & Energy	0.50	0.39
Heavy Metals	0.60	0.51
Water & Sanitation	0.60	0.43
Water Resources	0.77	0.23
Agriculture	0.10	0.45
Biodiversity & Habitat	0.81	0.22
Forests	0.28	0.57
Fisheries	0.93	0.46

Source: Yale Environmental Performance Index 2018.

# Costa Rica

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.68
Constraints on Government Powers	0.76
Absence of Corruption	0.66
Open Government	0.70
Fundamental Rights	0.79
Order & Security	0.68
Regulatory Enforcement	0.67
Civil Justice	0.62
Criminal Justice	0.57

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	9,883.70	LAC Avg.
Environmental public spending per capita (in USD)	14.19	22.95
Environmental public spending/Public spending	0.71%	0.80%
Environmental public spending/GDP	0.14%	0.20%
Number of annual inspections	1,042	
Complaints investigated	3,620	
Requested environmental impact assessments	1,280	

Sources: ECLAC 2018 and government sources 2017/2018.

## Part Three Select Laws & Regulation

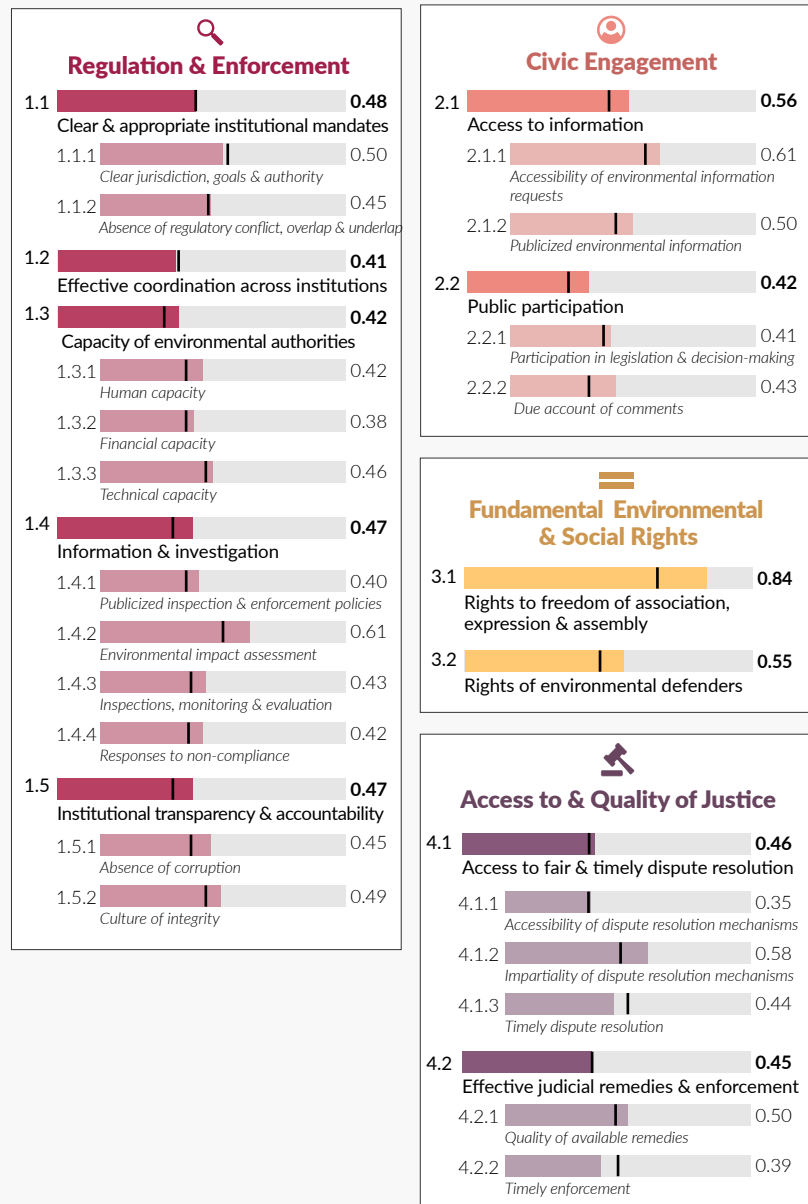
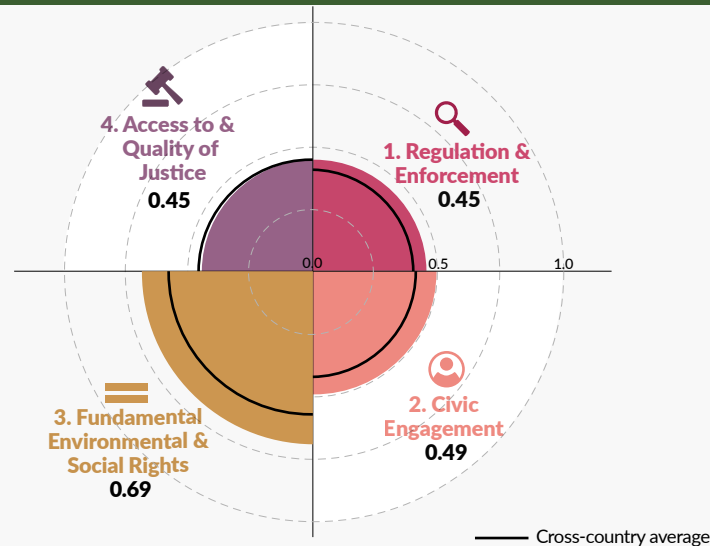
Environmental Rights	
Constitutional right to or provision for a healthy environment	✓
Right to protection of vulnerable populations	1.0 ✓
Right to nondiscrimination of indigenous peoples	0.75 —

Environmental Quality Standards		
Minimum air protection standards	N/A	N/A
Air emission limits that comply with WHO standards	N/A	N/A
National water protection norms	N/A	N/A
Water quality regulations determined by use	N/A	N/A

Sources: UN Environment Programme Inter-American Development Bank

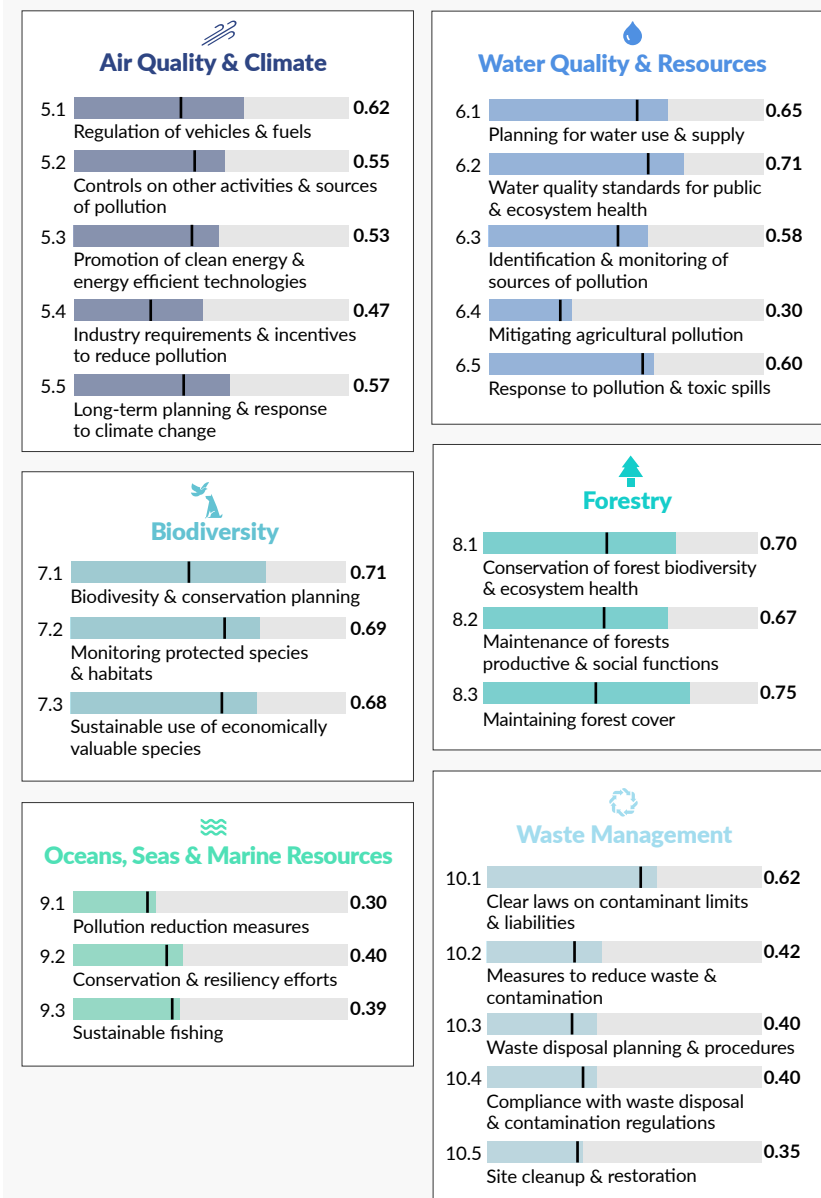
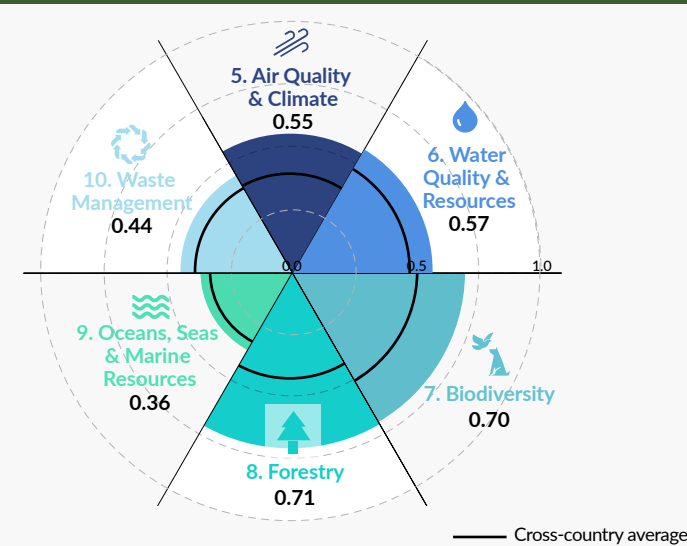
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Indicator	Score	LAC Avg.
Air Quality	0.84	0.47
Air Pollution	0.58	0.56
Climate & Energy	0.59	0.39
Heavy Metals	0.54	0.51
Water & Sanitation	0.63	0.43
Water Resources	0.65	0.23
Agriculture	0.06	0.45
Biodiversity & Habitat	0.88	0.22
Forests	0.28	0.57
Fisheries	0.70	0.46

Source: Yale Environmental Performance Index 2018.

# Dominican Republic

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.48
Constraints on Government Powers	0.47
Absence of Corruption	0.39
Open Government	0.53
Fundamental Rights	0.58
Order & Security	0.63
Regulatory Enforcement	0.42
Civil Justice	0.45
Criminal Justice	0.36

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	130.68	LAC Avg.
Environmental public spending per capita (in USD)	7.83	22.95
Environmental public spending/Public spending	0.61%	0.80%
Environmental public spending/GDP	0.10%	0.20%
Number of annual inspections	N/A	
Complaints investigated	924	
Requested environmental impact assessments	592	

Sources: ECLAC 2018 and government sources 2017/2018.

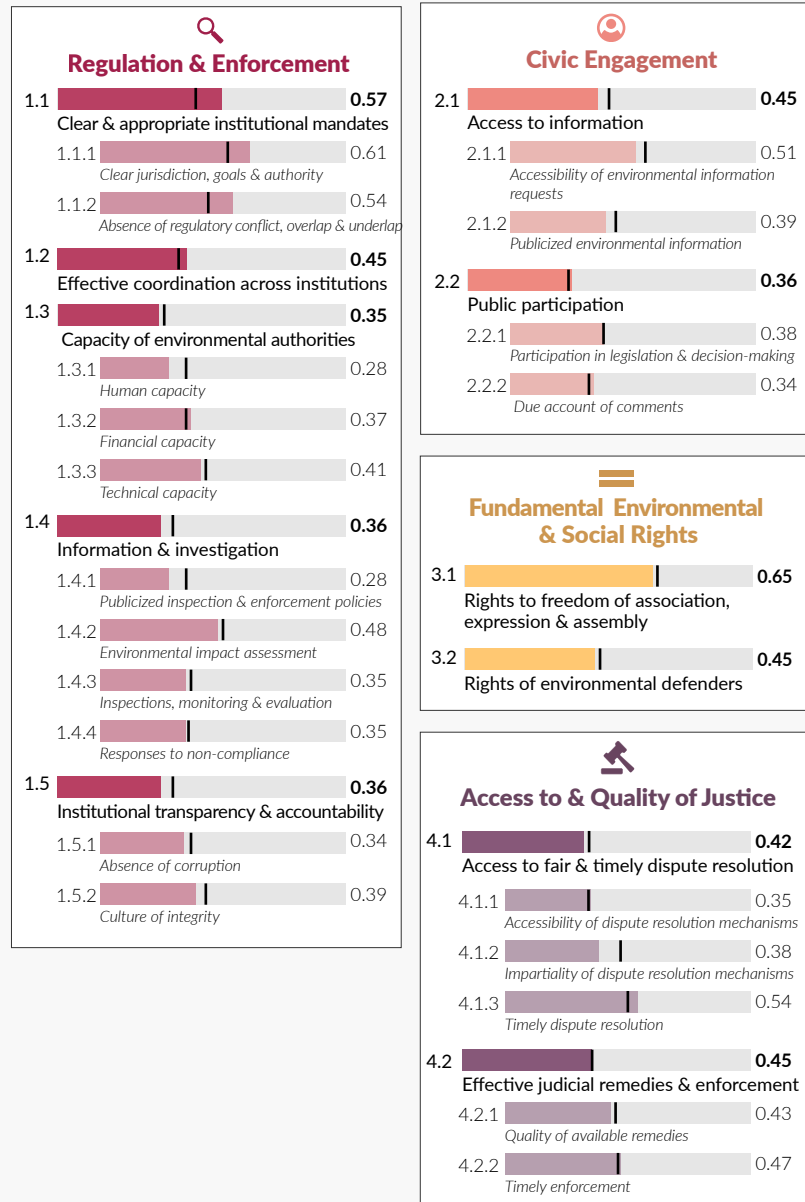
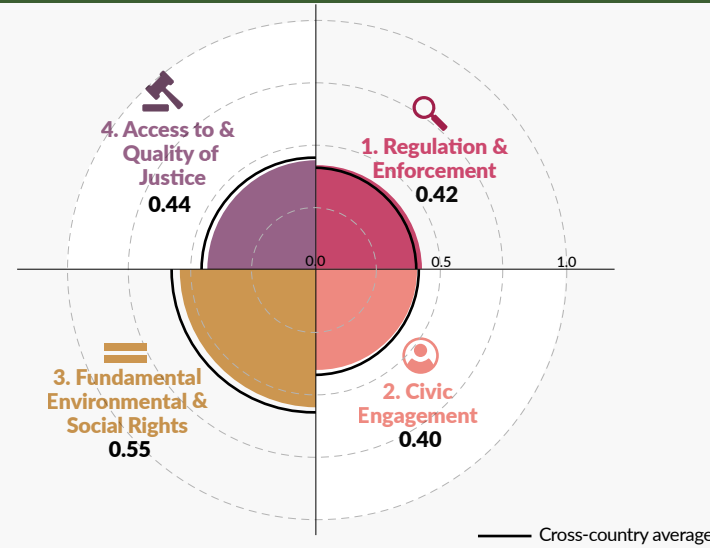
## Part Three Select Laws & Regulation

Environmental Rights		
Constitutional right to or provision for a healthy environment		✓
Right to protection of vulnerable populations	0.80	—
Right to nondiscrimination of indigenous peoples	N/A	N/A
Environmental Quality Standards		
Minimum air protection standards	N/A	N/A
Air emission limits that comply with WHO standards	N/A	N/A
National water protection norms	N/A	N/A
Water quality regulations determined by use	N/A	N/A

Sources: UN Environment Programme Inter-American Development Bank

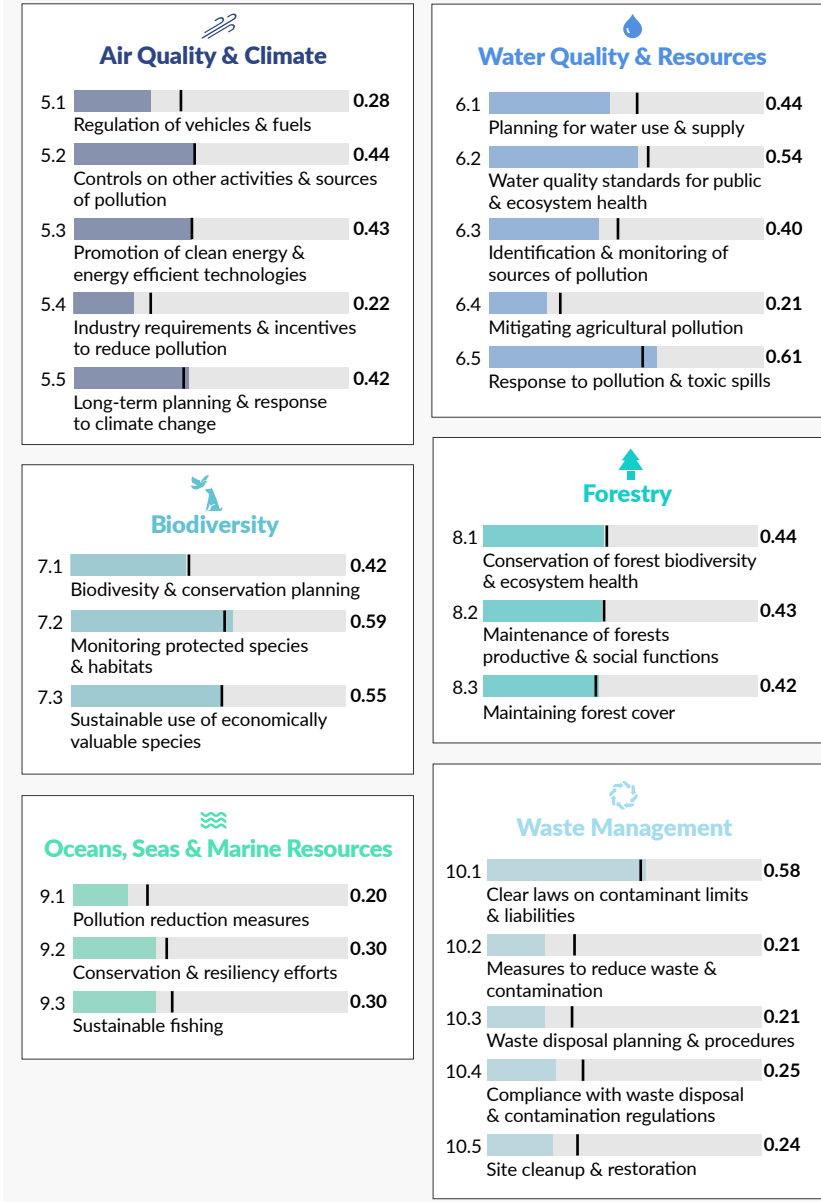
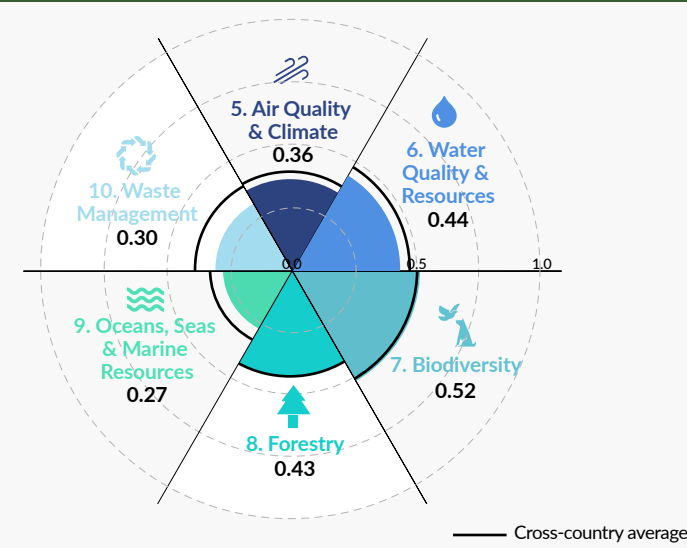
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



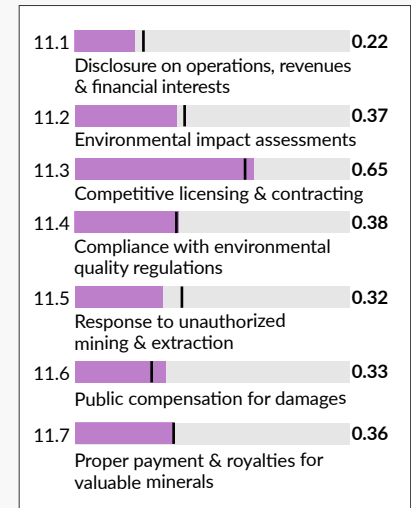
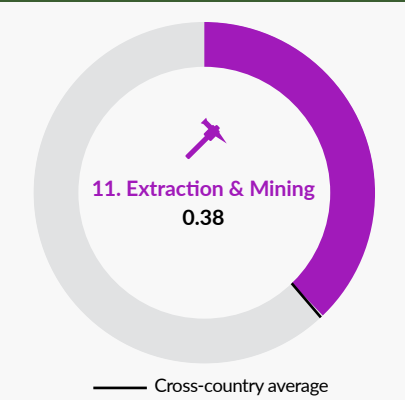
## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Indicator	Score	LAC Avg.
Air Quality	0.78	0.47
Air Pollution	0.65	0.56
Climate & Energy	0.61	0.39
Heavy Metals	0.29	0.51
Water & Sanitation	0.42	0.43
Water Resources	0.90	0.23
Agriculture	0.08	0.45
Biodiversity & Habitat	0.87	0.22
Forests	0.10	0.57
Fisheries	0.75	0.46

Source: Yale Environmental Performance Index 2018.

# El Salvador

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.49
Constraints on Government Powers	0.50
Absence of Corruption	0.38
Open Government	0.53
Fundamental Rights	0.54
Order & Security	0.65
Regulatory Enforcement	0.51
Civil Justice	0.53
Criminal Justice	0.31

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	1.95	LAC Avg.
Environmental public spending per capita (in USD)	1.70	22.95
Environmental public spending/Public spending	0.24%	0.80%
Environmental public spending/GDP	0.05%	0.20%
Number of annual inspections	200	
Complaints investigated	516	
Requested environmental impact assessments	1,715	

Sources: ECLAC 2018 and government sources 2016.

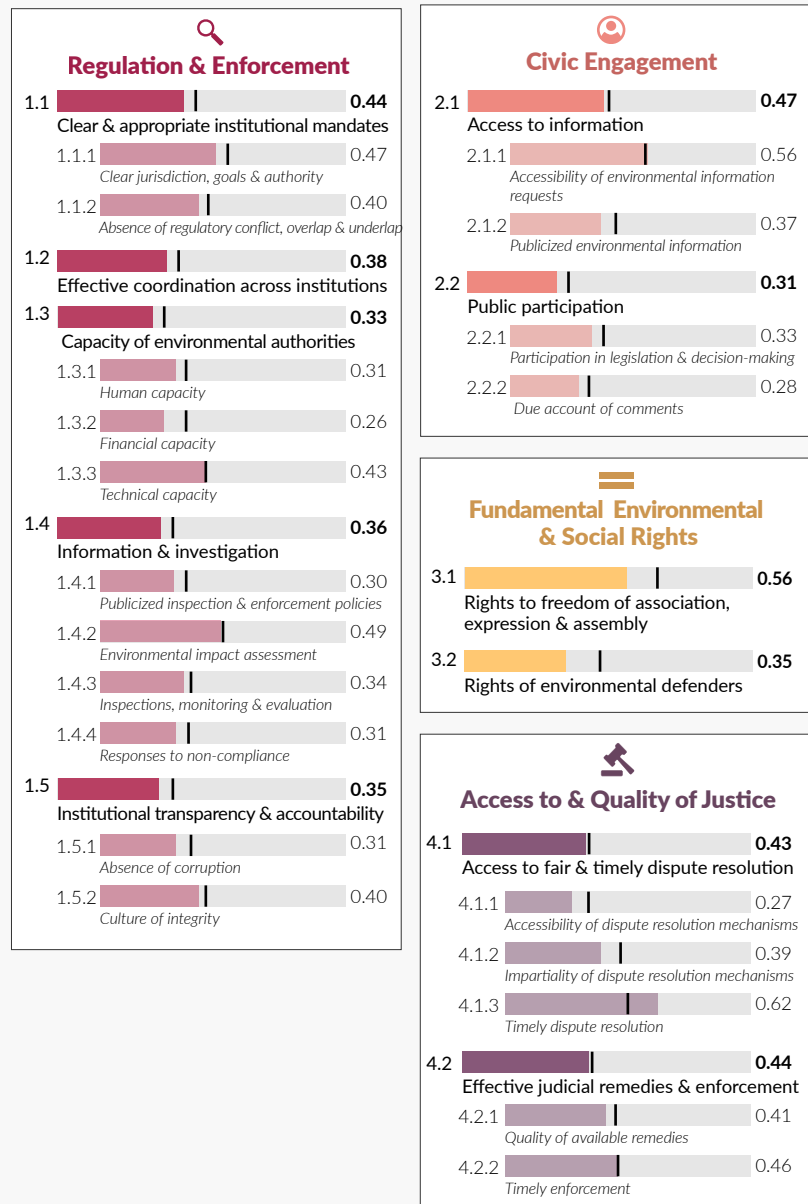
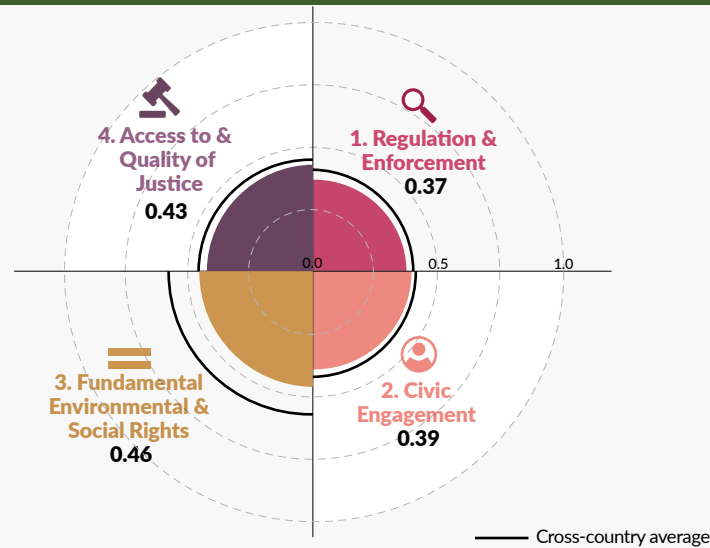
## Part Three Select Laws & Regulation

Environmental Rights		
Constitutional right to or provision for a healthy environment		✓
Right to protection of vulnerable populations	0.80	—
Right to nondiscrimination of indigenous peoples	0.50	—
Environmental Quality Standards		
Minimum air protection standards	1.0	✓
Air emission limits that comply with WHO standards	0.50	—
National water protection norms	1.0	✓
Water quality regulations determined by use	0.25	—

Sources: UN Environment Programme Inter-American Development Bank

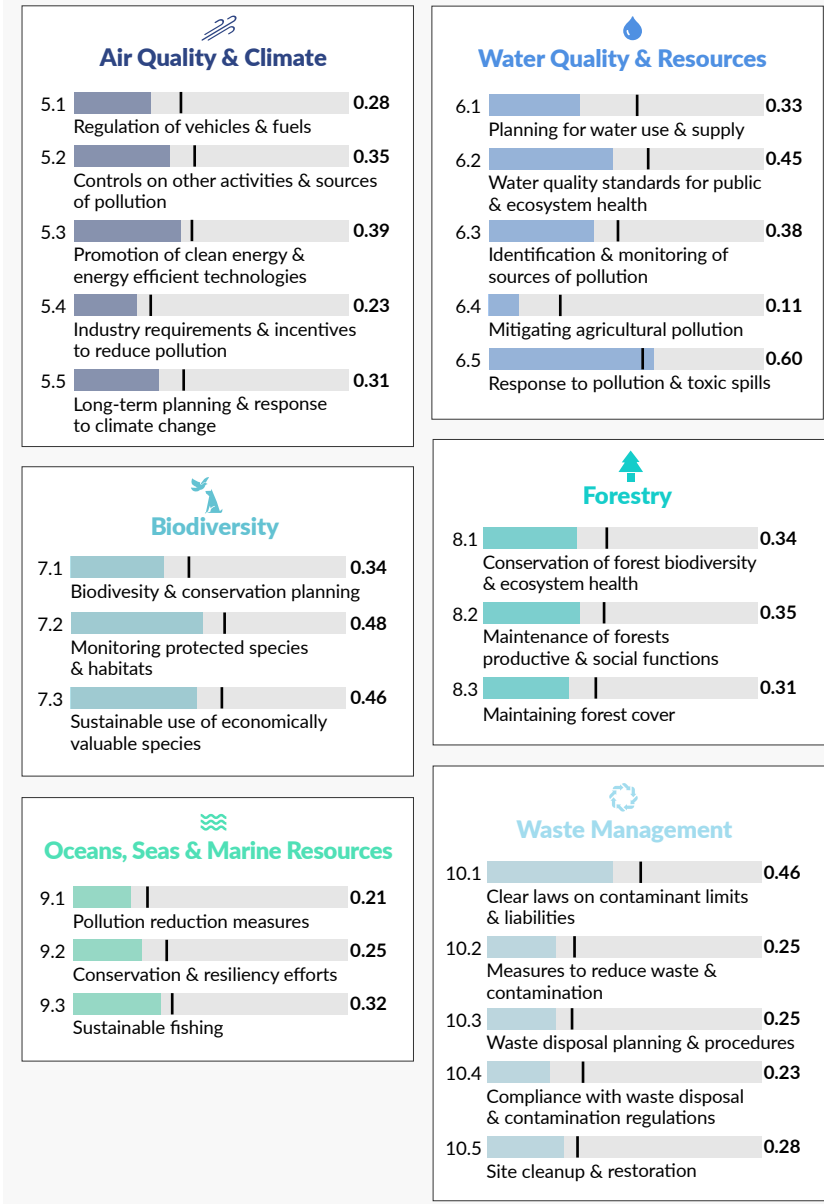
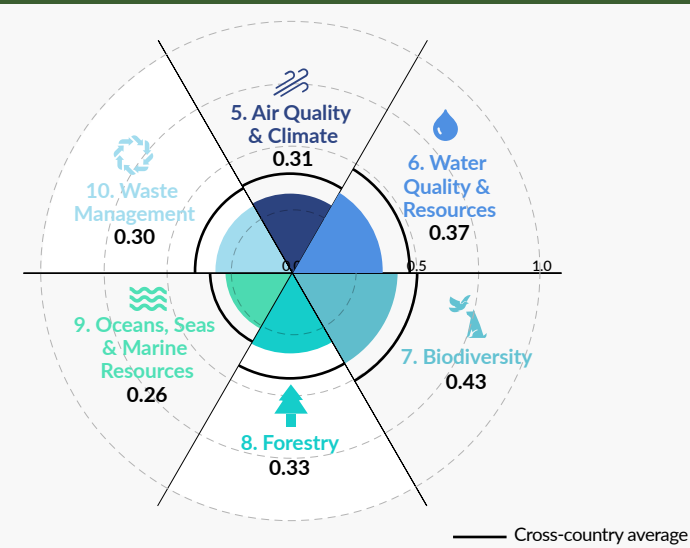
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



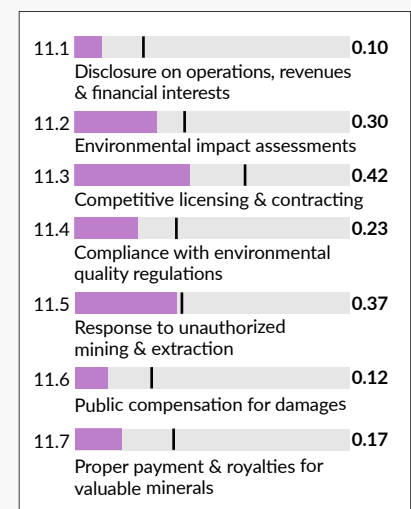
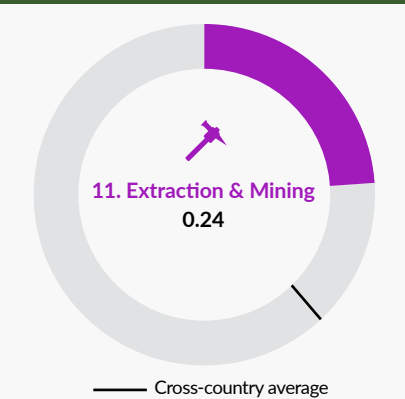
## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Air Quality	0.76	LAC Avg. 0.47
Air Pollution	0.28	0.56
Climate & Energy	0.63	0.39
Heavy Metals	0.36	0.51
Water & Sanitation	0.42	0.43
Water Resources	0.51	0.23
Agriculture	0.13	0.45
Biodiversity & Habitat	0.69	0.22
Forests	0.24	0.57
Fisheries	0.00	0.46

Source: Yale Environmental Performance Index 2018.



# Jamaica

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.57
Constraints on Government Powers	0.64
Absence of Corruption	0.55
Open Government	0.56
Fundamental Rights	0.64
Order & Security	0.61
Regulatory Enforcement	0.54
Civil Justice	0.51
Criminal Justice	0.50

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	1,173.77	LAC Avg.
Environmental public spending per capita (in USD)	8.35	22.95
Environmental public spending/Public spending	0.58%	0.80%
Environmental public spending/GDP	0.17%	0.20%
Number of annual inspections	N/A	
Complaints investigated	N/A	
Requested environmental impact assessments	6	

Sources: ECLAC 2018 and government sources 2018.

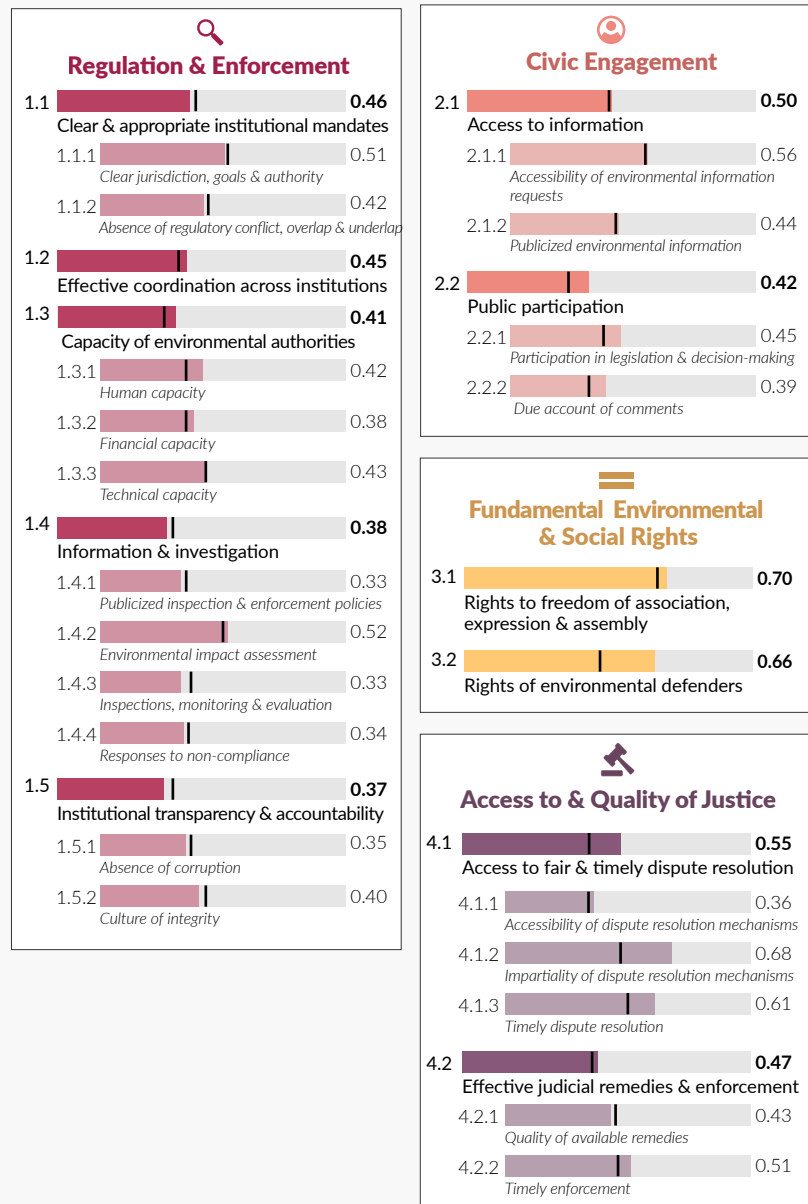
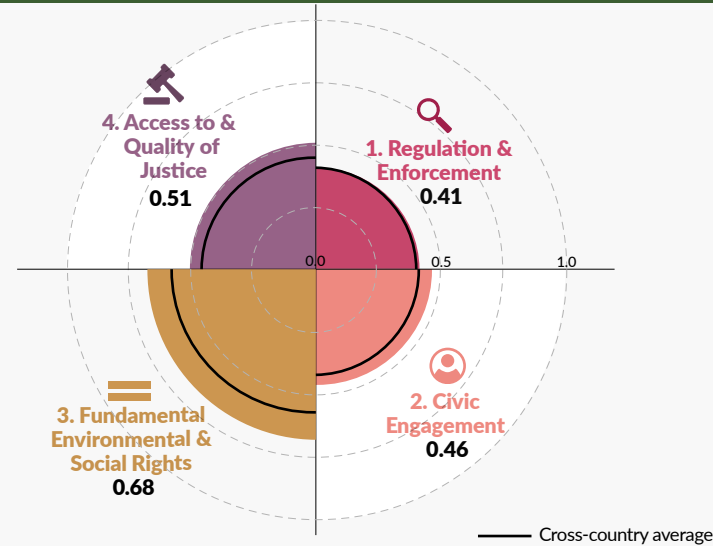
## Part Three Select Laws & Regulation

Environmental Rights		
Constitutional right to or provision for a healthy environment		✓
Right to protection of vulnerable populations	0.80	—
Right to nondiscrimination of indigenous peoples	N/A	N/A
Environmental Quality Standards		
Minimum air protection standards	N/A	N/A
Air emission limits that comply with WHO standards	N/A	N/A
National water protection norms	N/A	N/A
Water quality regulations determined by use	N/A	N/A

Sources: UN Environment Programme Inter-American Development Bank

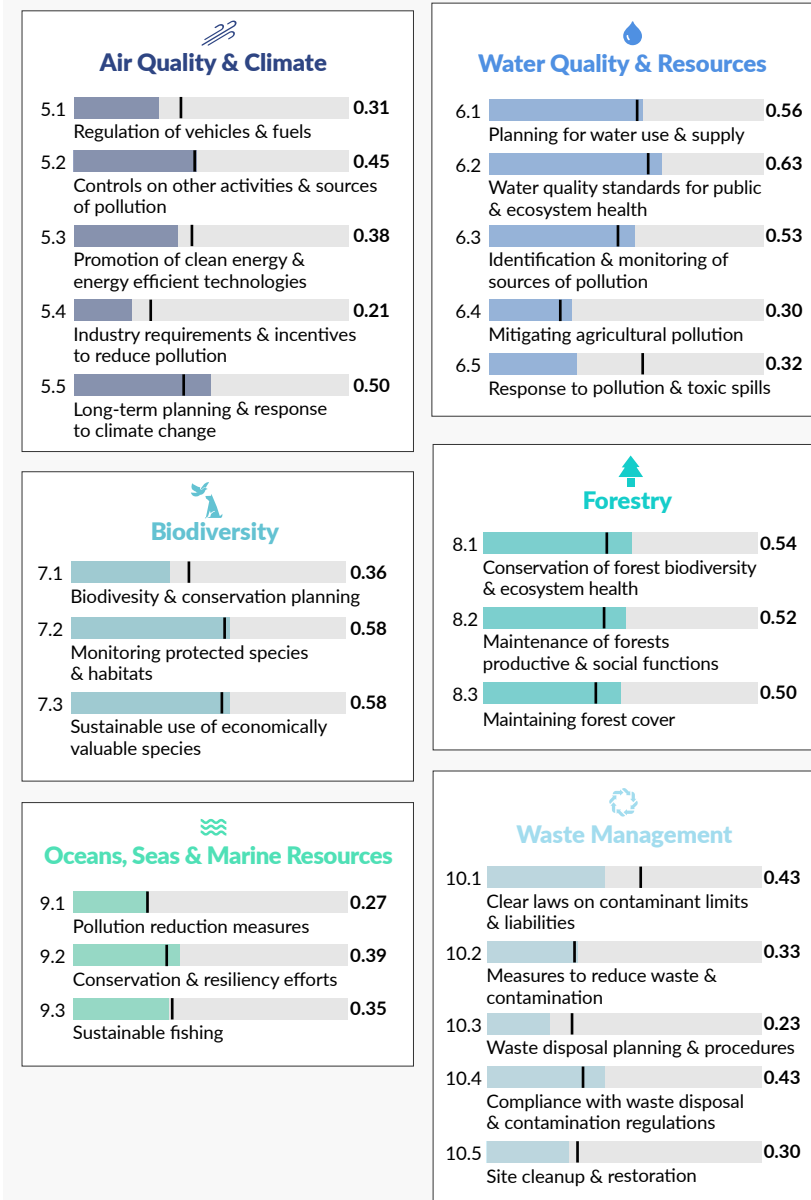
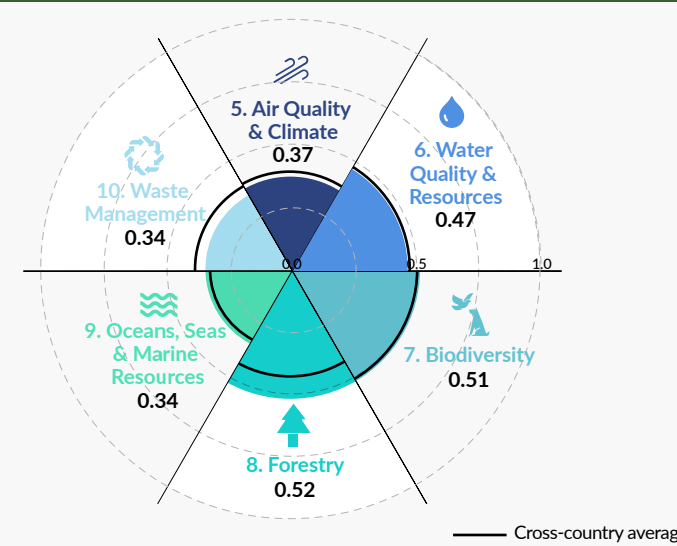
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



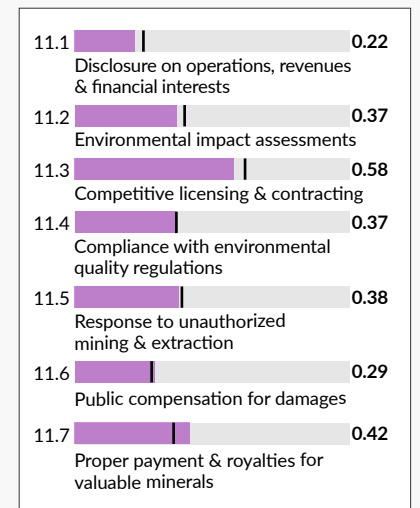
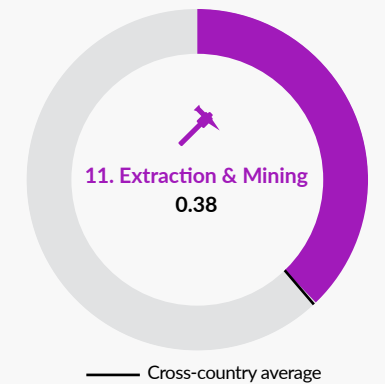
## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Indicator	Score	LAC Avg.
Air Quality	0.79	0.47
Air Pollution	0.21	0.56
Climate & Energy	0.52	0.39
Heavy Metals	0.40	0.51
Water & Sanitation	0.51	0.43
Water Resources	0.77	0.23
Agriculture	0.08	0.45
Biodiversity & Habitat	0.83	0.22
Forests	0.24	0.57
Fisheries	0.29	0.46

Source: Yale Environmental Performance Index 2018.

Scores range from 0 to 1, where 1 signifies the highest possible score.

## Part One Governance Context

Rule of Law	0.50
Constraints on Government Powers	0.60
Absence of Corruption	0.33
Open Government	0.55
Fundamental Rights	0.62
Order & Security	0.63
Regulatory Enforcement	0.49
Civil Justice	0.45
Criminal Justice	0.33

Source: WJP Rule of Law Index\* 2020.

## Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	268.81	LAC Avg.
Environmental public spending per capita (in USD)	75.44	22.95
Environmental public spending/Public spending	5.40%	0.80%
Environmental public spending/GDP	1.19%	0.20%
Number of annual inspections	4,198	
Complaints investigated	1,428	
Requested environmental impact assessments	474	

Sources: ECLAC 2018 and government sources 2018.

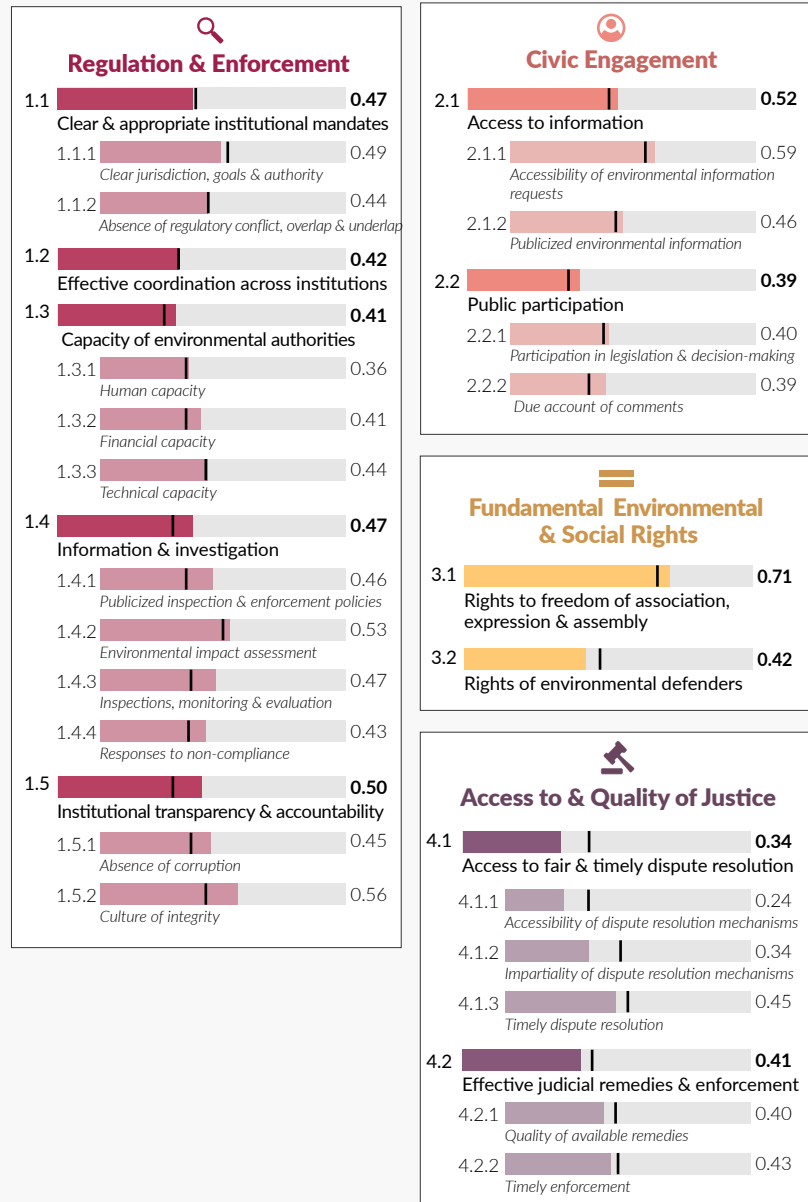
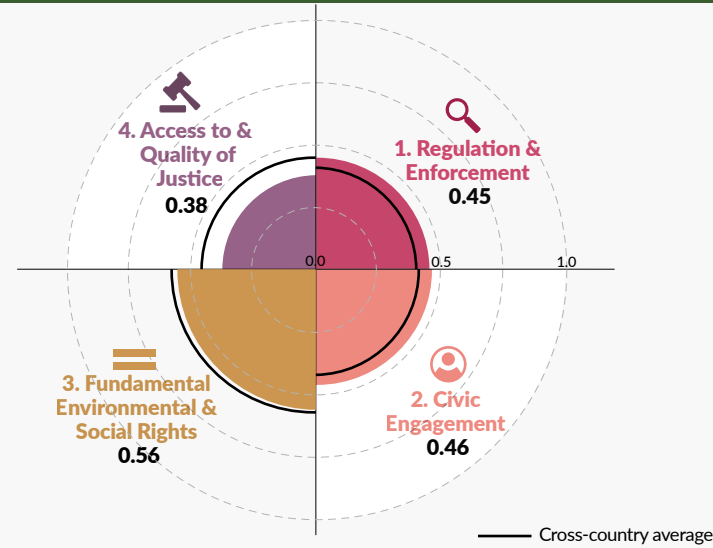
## Part Three Select Laws & Regulation

Environmental Rights		
Constitutional right to or provision for a healthy environment		✓
Right to protection of vulnerable populations	1.0	✓
Right to nondiscrimination of indigenous peoples	1.0	✓
Environmental Quality Standards		
Minimum air protection standards	1.0	✓
Air emission limits that comply with WHO standards	0.50	—
National water protection norms	1.0	✓
Water quality regulations determined by use	0.25	—

Sources: UN Environment Programme Inter-American Development Bank

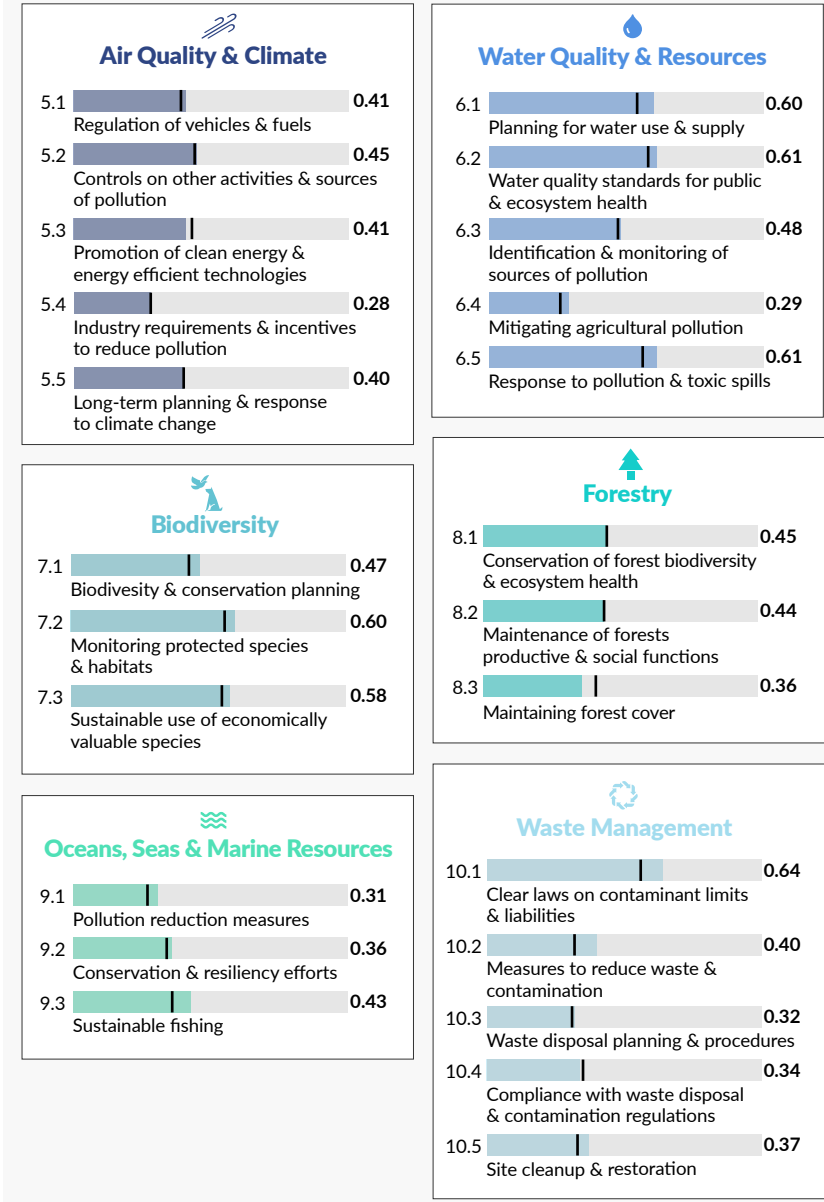
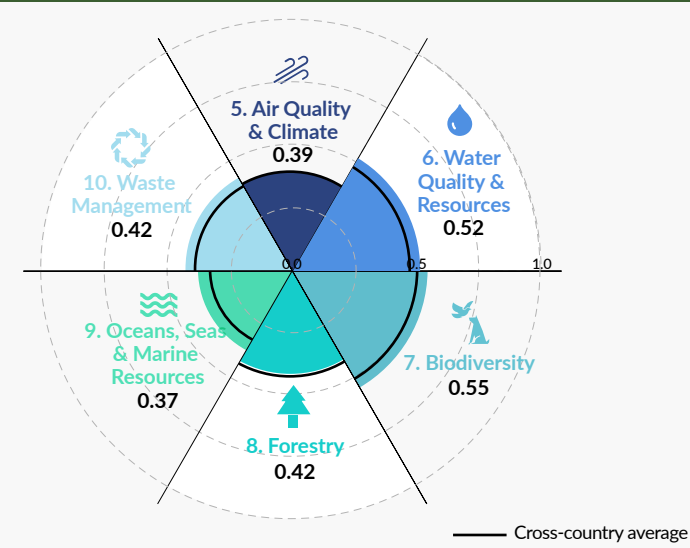
## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law



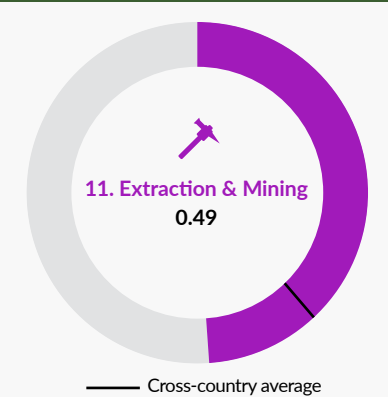
## Part Four: Environmental Governance

### Pillar II. Practices by Environmental Theme



## Part Four: Environmental Governance

### Pillar III. Practices by Sector



## Part Five Environmental Performance Indicators

Indicator	Score	LAC Avg.
Air Quality	0.58	0.47
Air Pollution	0.58	0.56
Climate & Energy	0.58	0.39
Heavy Metals	0.71	0.51
Water & Sanitation	0.50	0.43
Water Resources	0.88	0.23
Agriculture	0.30	0.45
Biodiversity & Habitat	0.84	0.22
Forests	0.26	0.57
Fisheries	0.86	0.46

Source: Yale Environmental Performance Index 2018.

### Part One Governance Context

Rule of Law	0.71
Constraints on Government Powers	0.76
Absence of Corruption	0.73
Open Government	0.72
Fundamental Rights	0.78
Order & Security	0.69
Regulatory Enforcement	0.70
Civil Justice	0.74
Criminal Justice	0.56

Source: WJP Rule of Law Index\* 2020.

### Part Two Institutional Capacity Data

Environmental public spending per capita (in LCU)	213.70	LAC Avg.	
Environmental public spending per capita (in USD)	5.85	22.95	
Environmental public spending/Public spending	0.14%	0.80%	
Environmental public spending/GDP	0.04%	0.20%	
Number of annual inspections	750		
Complaints investigated	462		
Requested environmental impact assessments	198		

Sources: ECLAC 2018 and government sources 2016.

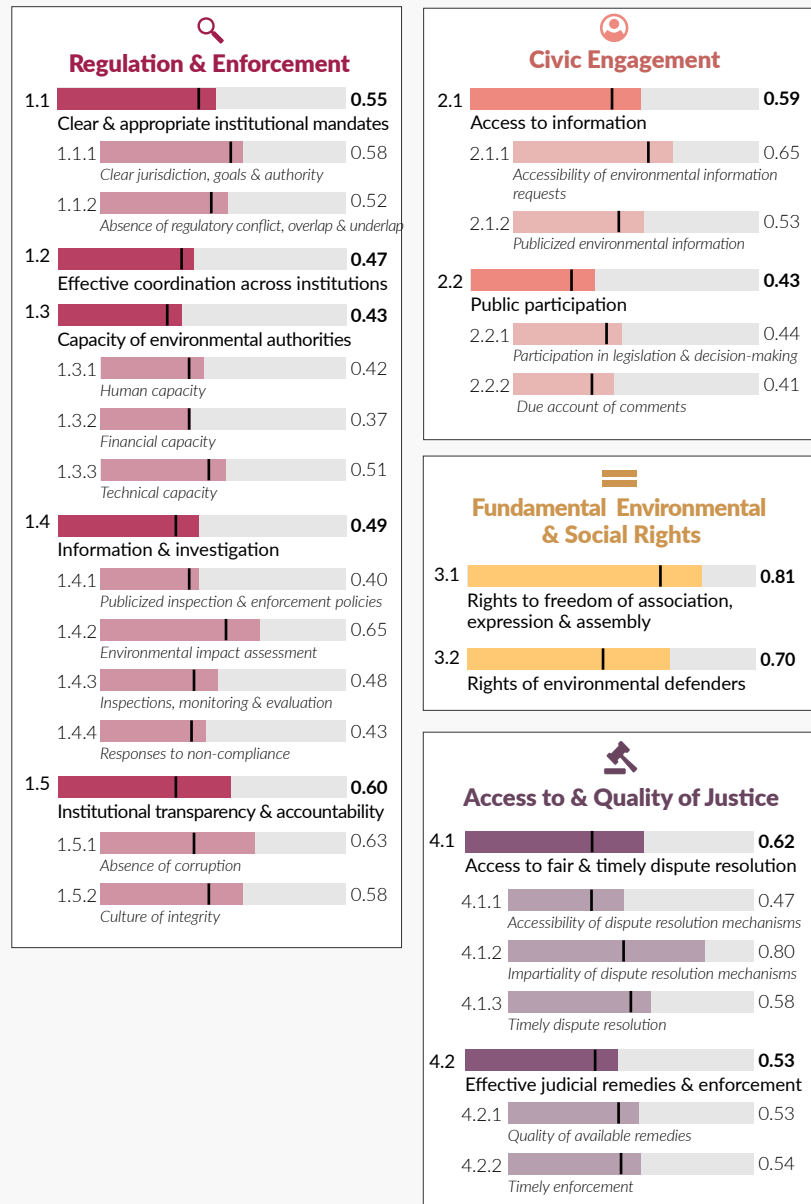
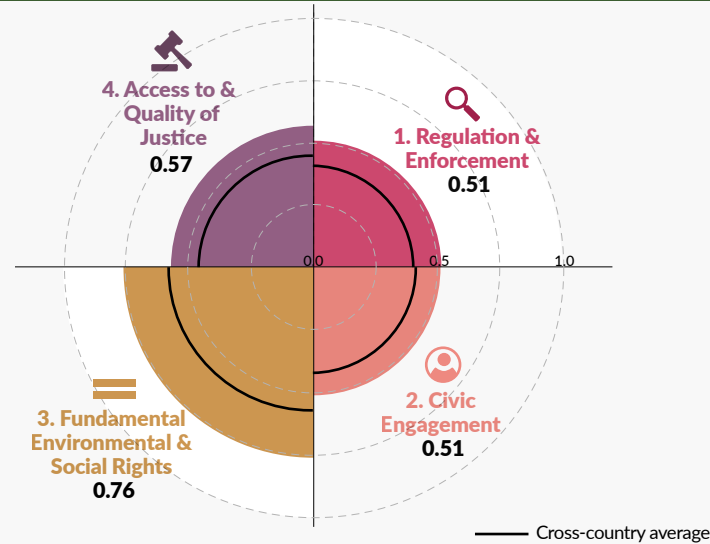
### Part Three Select Laws & Regulation

Environmental Rights		
Constitutional right to or provision for a healthy environment		✓
Right to protection of vulnerable populations	1.0	✓
Right to nondiscrimination of indigenous peoples	N/A	
Environmental Quality Standards		
National air protection standards	0.0	✗
Air emission limits that comply with WHO standards	0.75	—
National water protection norms	1.0	✓
Water quality regulations determined by use	0.25	—

Sources: UN Environment Programme Inter-American Development Bank

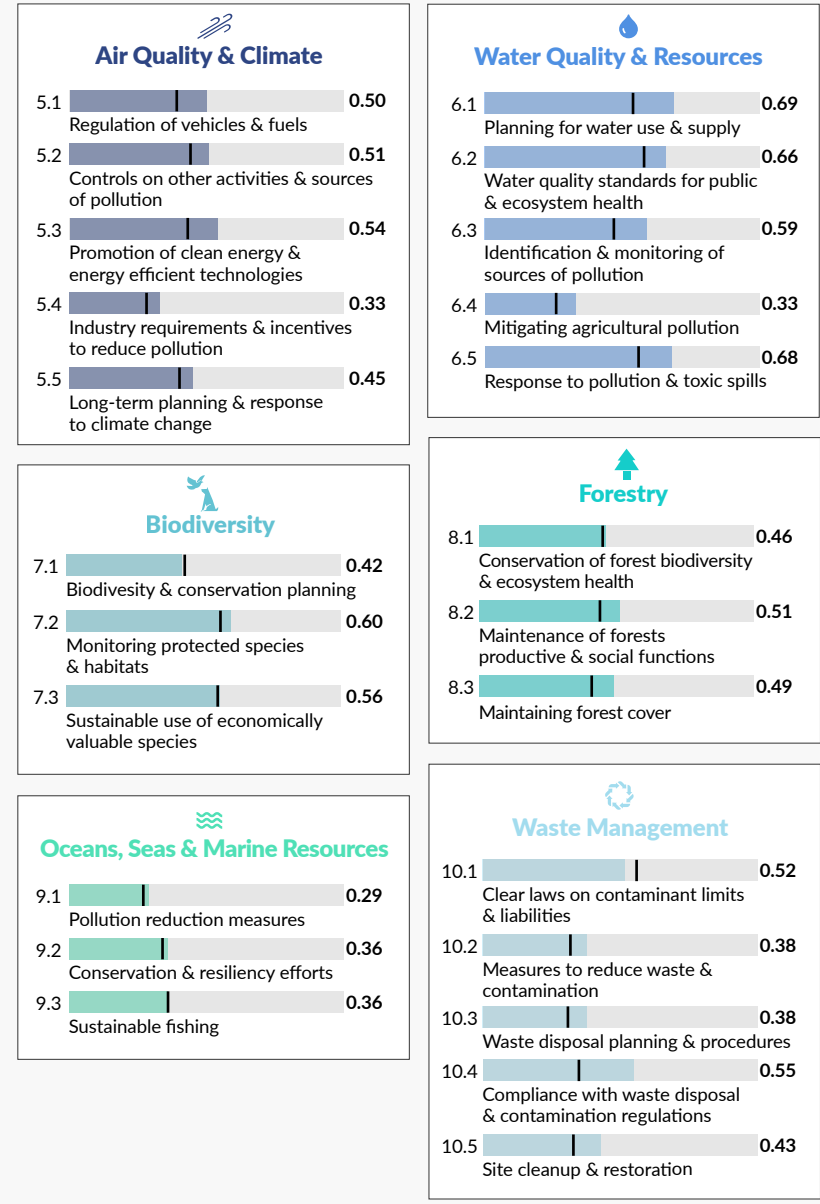
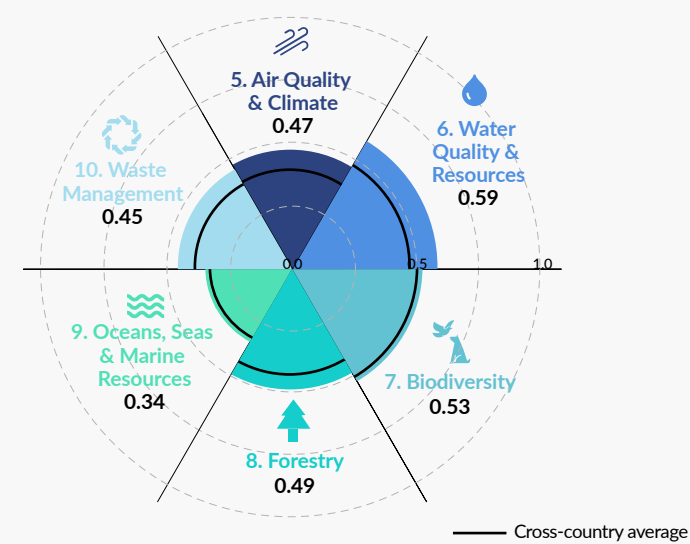
### Part Four: Environmental Governance

#### Pillar I. Environmental Rule of Law



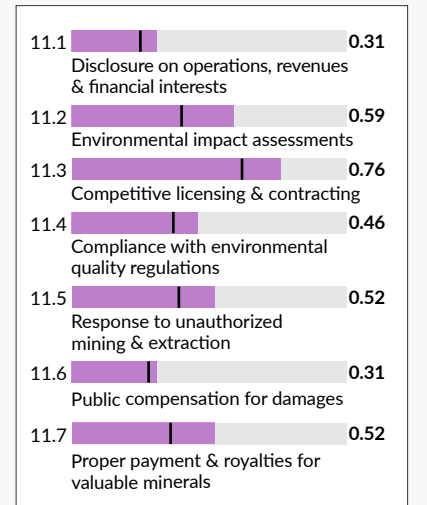
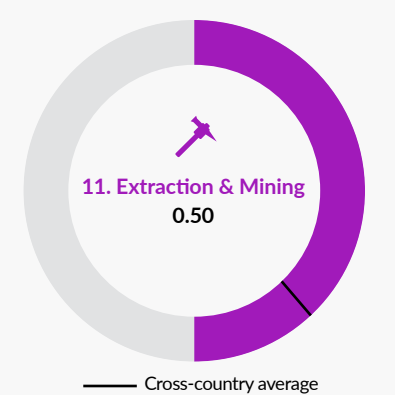
### Part Four: Environmental Governance

#### Pillar II. Practices by Environmental Theme



### Part Four: Environmental Governance

#### Pillar III. Practices by Sector



### Part Five Environmental Performance Indicators

Indicator	Score	LAC Avg.
Air Quality	0.87	0.47
Air Pollution	0.00	0.56
Climate & Energy	0.79	0.39
Heavy Metals	0.57	0.51
Water & Sanitation	0.83	0.43
Water Resources	0.59	0.23
Agriculture	0.62	0.45
Biodiversity & Habitat	0.50	0.22
Forests	0.00	0.57
Fisheries	0.61	0.46

Source: Yale Environmental Performance Index 2018.



A photograph of a tree trunk covered in white, cup-shaped fungi, surrounded by fallen leaves. The fungi are arranged in a line along the trunk, and the leaves are scattered around it. The image is framed by a white border.

# 5 Behind the Numbers

# Environmental Governance Indicator Descriptions

## Part One: Governance Context

**Rule of Law:** Measures countries' adherence to rule of law, based on performance across eight rule of law factors: Constraints on Government Powers, Absence of Corruption, Open Government, Fundamental Rights, Order and Security, Regulatory Enforcement, Civil Justice, and Criminal Justice.

- **Constraints on Government Powers:** Measures the extent to which those who govern are bound by law. It comprises the means by which the powers of the government are limited, and includes non-governmental checks on the government's power.
- **Absence of Corruption:** Measures the absence of bribery, improper influence by public or private interests, and misappropriation of public funds or other resources in a number of government branches and agencies.
- **Open Government:** Measures the extent to which the government shares information, empowers people with tools to hold the government accountable, and fosters citizen participation in public policy deliberations.
- **Fundamental Rights:** Measures the effective enforcement of laws that ensure equal protection, the right to life and security of the person, due process of law and the rights of the accused, freedom of opinion and expression, freedom of belief and religion, the right to privacy, freedom of assembly and association, and fundamental labor rights.
- **Order & Security:** Measures how well society ensures the security of persons and property, covering three threats to order and security: crime, political violence, and violence as a socially acceptable means to redress personal grievances.
- **Regulatory Enforcement:** Measures the extent to which regulations are fairly and effectively implemented and enforced, as well as whether administrative proceedings are conducted without unreasonable delays, that due process is respected in administrative proceedings, and that there is no expropriation of private property without adequate compensation.
- **Civil Justice:** Measures whether civil justice is accessible and affordable, free of discrimination, free of corruption, and free from improper influence by public officials. It also measures whether court proceedings are conducted in a timely manner and not subject to unreasonable delays, as well as the accessibility, impartiality, and efficiency of mediation and arbitration systems that enable parties to resolve civil disputes.
- **Criminal Justice:** Evaluates whether criminal justice systems are capable of investigating and adjudicating criminal offenses successfully and in a timely manner, through a system that is impartial and nondiscriminatory, and is free of corruption and improper government influence. It also measures whether correctional systems effectively reduce criminal behavior.

## Part Two: Institutional Capacity Data

- **Environmental public spending per capita (in LCU):** Measures how much a country allocates per capita, in local currency, to environmental public spending.
- **Environmental public spending per capita (in USD):** Measures how much a country allocates per capita, in US dollars, to environmental public spending.
- **Environmental spending/Public spending:** Measures a country's yearly environmental spending as a portion of its total public spending.
- **Environmental public spending/GDP:** Measures a country's yearly environmental public spending as a portion of its GDP.
- **Number of annual inspections:** Measures the number of annual inspections conducted by the national environmental authority.
- **Complaints investigated:** Measures the number of complaints to environmental authorities that are investigated.
- **Requested Environmental Impact Assessments:** Measures the number of environmental impact assessments requested per year.

## Part Three: Existence of Select Laws and Regulation

### Environmental Rights

- **Constitutional right to or provision for a healthy environment:** Indicates whether the constitution guarantees individuals a right to a healthy environment, or includes provisions that give government agencies authority to take action to protect environmental health.
- **Right to protection of vulnerable populations:** Measures the existence and extent of equal rights provisions for different groups — including racial and ethnic minorities, women, and persons with disabilities — including the right to consultation, participation, and the existence of rules to prevent exclusion.
- **Right to nondiscrimination of indigenous peoples:** Measures the existence and strength of a national regulatory framework that recognizes ethnic, social, cultural, and linguistic characteristics, as well as the extent of implementation of international declarations of rights of Indigenous Peoples and the regulation on free, prior, and informed consent of indigenous populations.

### Environmental Quality Standards

- **Minimum air protection standards:** Measures the existence of minimum air protection standards.
- **Air emission limits that comply with WHO standards:** Measures whether air emissions standards establish limits on, at minimum, the contaminants considered most dangerous by the World Health Organization (WHO).
- **National water protection standards:** Measures the existence of national water protection standards.
- **Water quality regulations determined by use:** Measures whether water quality regulations set different quality standards based on water usage type.

## Part Four: Environmental Governance

### Pillar I. Environmental Rule of Law

#### ✓ 1. Regulation & Enforcement

##### 1.1 Clear & appropriate institutional mandates:

Measures whether institutions tasked with environmental policy and regulation have clear jurisdiction, goals, and authority, as well as the coherence and coverage of environmental regulations.

###### 1.1.1 Clear jurisdiction, goals & authority:

Measures whether the laws and regulations clearly define the authority and responsibilities for institutions responsible for enforcing environmental regulations and whether these regulations are unambiguous.

**1.1.2 Absence of regulatory conflict, overlap & underlap:** Measures whether national authorities suffer instances of duplicated mandates, instances in which no institution has a mandate to act, and conflicts between environmental regulations and those of the productive sector.

**1.2 Effective coordination across institutions:** Measures whether environmental authorities coordinate their activities, exchange information, and agree on common positions with relevant national, state, local, and customary agencies, ministries, and organizations on matters of shared interest.

**1.3 Capacity of environmental authorities:** Measures the human, financial, and technical capacity of institutions tasked with environmental policy and regulation.

**1.3.1 Human capacity:** Measures whether the national environmental authority has sufficient staff with the appropriate skills, training, and compensation to accomplish its mandate.

**1.3.2 Financial capacity:** Measures whether the national environmental authority has adequate financial resources to accomplish its mandate.

**1.3.3 Technical capacity:** Measures whether the national environmental authority uses high-quality data to understand and address the most crucial environmental risks and challenges and assess the regulated community's compliance with environmental laws and policies, and whether it uses metrics to track progress.

**1.4 Information & investigation:** Measures whether the national environmental authority publicizes inspection and enforcement policies, conducts environmental impact assessments, and monitors environmentally impactful activities.

**1.4.1 Publicized inspection & enforcement policies:** Measures whether the national environmental authority publishes clear and focused inspection and enforcement policies.

**1.4.2 Environmental impact assessment:** Measures whether the national environmental authority carries out screenings and scoping for projects with significant environmental impacts, evaluates the environmental impact of such projects, and produces

## Pillar I. Environmental Rule of Law

comprehensive explanations of agency decisions.

**1.4.3 Inspections, monitoring & evaluation:** Measures whether the national environmental authority monitors environmental performance and compliance for activities potentially affecting the environment, conducts routine inspections of pollution sources, and conducts investigations effectively and consistently.

**1.4.4 Responses to non-compliance:** Measures whether the national environmental authority effectively and evenly punishes noncompliance with environmental laws.

**1.5 Institutional transparency & accountability:** Measures whether the national environmental authority is free from corruption and promotes a culture of integrity.

**1.5.1 Absence of corruption:** Measures whether the national environmental authority effectively fights corruption when it appears and whether whistleblowers reporting violations, misconduct, and corruption are effectively protected.

**1.5.2 Culture of integrity:** Measures whether the national environmental authority actively promotes a culture of transparency and integrity and whether it publicizes, adheres to, and enforces standards for ethical conduct.

## 2. Civic Engagement

**2.1 Access to information:** Measures the accessibility of environmental information.

**2.1.1 Accessibility of environmental information requests:** Measures the affordability, quality, accessibility, and timeliness of agency responses to information requests, as well as the extent to which information requests are free of corruption and whether noncompliance with requests can be challenged.

**2.1.2 Publicized environmental information:** Measures whether environmental agencies publish easy-to-understand, accessible, and timely information on environmental issues and regulations.

**2.2 Public participation:** Measures public participation in the planning of programs and activities that impact the environment, as well as the extent to which the government accommodates and considers public feedback on such projects.

**2.2.1 Participation in legislation and decision-making:** Measures participation of various stakeholders and segments of the public in the development and refinement of plans, programs, and policies relating that impact the environment.

**2.2.2 Due account of comments:** Measures the extent to which the national environmental authority

considers and issues an official response to public comments on projects and programs impacting the environment.

## 3. Fundamental Environmental & Social Rights

**3.1 Rights to freedom of association, expression & assembly:** Measures whether procedural rights to freedom of opinion, expression, assembly, and association are effectively guaranteed.

**3.2 Rights of environmental defenders are effectively guaranteed:** Measures the likelihood of violence against environmental defenders by public officers, private companies, criminal organizations, and members of the community; whether of violence or retaliation results from non-violent demonstrations; and whether acts of violence against environmental defenders are properly investigated, prosecuted, and punished.

## 4. Access to & Quality of Justice

**4.1 Access to fair & timely dispute resolution:** Measures the accessibility, impartiality, and timeliness of dispute resolution.

**4.1.1 Accessibility of dispute resolution mechanisms:** Measures whether dispute resolution mechanisms are affordable, present in local communities, offer translators, and follow procedures that can be easily followed by the general public, as well as whether citizens are aware of their rights and the availability of resolution mechanisms.

**4.1.2 Impartiality of dispute resolution mechanisms:** Measures the absence of bias and discrimination, corruption, and undue influence in dispute resolution on environmental matters.

**4.1.3 Timely dispute resolution:** Measures whether the dispute resolution process is conducted in a timely manner.

**4.2 Effective judicial remedies & enforcement:** Measures the quality of available remedies for environmental disputes and whether enforcement of environmental adjudication is timely.

**4.2.1 Quality of available remedies:** Measures the effectiveness of enforcement mechanisms, the timely provision of remedies, and the availability of various remedies, including compensation, restitution, restoration, and interim and permanent relief from harmful activities.

**4.2.2 Timely enforcement:** Measures the timeliness of enforcement of decisions or agreements reached in cases pertaining to the environment or natural resources.

## Pillar II. Practices by Environmental Theme

### 5. Air Quality & Climate

**5.1 Regulation of vehicles & fuels:** Measures whether vehicle regulations inspections are effectively implemented, the use of energy efficient vehicle technologies, and efforts to reduce reliance on fossil fuels.

**5.2 Controls on other activities & sources of pollution:** Measures whether environmental authorities have developed an emissions inventory; and the extent to which caps, bans, and regulations on pollutants are effectively implemented.

**5.3 Promotion of clean energy & energy efficient technologies:** Measures whether programs to increase clean, efficient, and renewable energy usage are effectively implemented.

**5.4 Industry requirements & incentives to reduce pollution:** Measures whether economic incentives and requirements to reduce pollution are effectively implemented.

**5.5 Long-term planning & response to climate change:** Measures whether efforts to reduce greenhouse gas emission reduction and adapt to climate change are effectively implemented.

### 6. Water Quality & Resources

**6.1 Planning for water use and supply:** Measures whether the effectiveness of legal structures, technical standards, and agencies that ensure the availability and quality of water for domestic, industrial, and agricultural use.

**6.2 Water quality standards for public & ecosystem health:** Measures whether a governmental agency or entity develops and enforces water quality standards to ensure its safety for human consumption and ecosystem health.

**6.3 Identification & monitoring of sources of pollution:** Measures whether a government agency identifies, measures, and monitors the types of pollutants found in the nation's water sources and enforces regulation to address transboundary water pollution.

**6.4 Mitigating agricultural pollution:** Measures whether legislation and regulations effectively limit contaminants and excessive fertilizer use, and address storm water runoff and other forms of nutrient pollution.

**6.5 Response to pollution & toxic spills:** Measures whether companies and municipalities are held liable for water pollution, toxic spills, and discharges of pollutants to waters, and whether liability and penalties are assigned based on the severity of the pollution or toxic spill.

### 7. Biodiversity

**7.1 Biodiversity & conservation planning:** Measures whether environmental authorities have identified components of biodiversity warranting conservation and activities that affect them, created economic incentives for preservation, and integrated conservation plans with other aspects of national policy.

**7.2 Monitoring protected species & habitats:** Measures whether environmental authorities monitor and list species and habitats as endangered, and whether those listings trigger protective measures.

**7.3 Sustainable use of economically valuable species:** Measures whether the environmental or wildlife authority promulgates guidelines for and effectively regulates the sustainable use and harvest of economically valuable species.

### 8. Forestry

**8.1 Conservation of forest biodiversity & ecosystem health:** Measures whether actions to conserve forests' biological diversity, ecosystem health, soil, and water resources are effectively implemented.

**8.2 Maintenance of forests' productive & social functions:** Measures whether actions for preserving the productive functions of forest ecosystems and their sustainable use for socio-economic functions are effectively implemented.

**8.3 Maintaining forest cover:** Measures the effectiveness of deforestation prevention and conservation programs and their contribution to global carbon cycles.

### 9. Oceans, Seas, & Marine Resources

**9.1 Pollution reduction measures:** Measures whether regulations to reduce marine nutrient pollution and litter are effectively implemented.

**9.2 Conservation & resiliency efforts:** Measures the effective implementation of measures to protect and strengthen the resilience of coastal ecosystems, manage marine protected areas, minimize the impacts of ocean acidification, increase scientific knowledge and technology that benefit ocean health, and coordinate with other countries to manage shared and protected marine areas.

**9.3 Sustainable fishing:** Measures the effectiveness of regulations to address overfishing, illegal fishing, and other destructive fishing practices; the implementation of science-based plans for restoring fish stocks; and artisanal fishers' access to marine resources and markets.

## Pillar II. Practices by Environmental Theme

### 10. Waste Management

#### **10.1 Clear laws on contaminant limits & liabilities:**

Measures whether laws and regulations clearly define criteria and limits on the presence of contaminant substances in air, soil, and water; define the type and degree of contamination that triggers an obligation to return a site to a clean condition; and delineate liability for harm from waste disposal.

#### **10.2 Measures to reduce waste & contamination:**

Measures the effectiveness of restrictions on the production and use of inorganic and organic hazardous substances, waste reduction, recycling, and urban waste systems in reducing the quantity of and contamination caused by waste.

**10.3 Waste disposal planning & procedures:** Measures the quality of planning, systems and procedures for disposing of waste in an environmentally sound manner, in particular substances with a high potential to pollute.

**10.4 Compliance with waste disposal & contamination regulations:** Measures whether regulation of waste disposal locations and licensure of waste disposal actions is effectively enforced as well as the prevalence of obstacles to effective waste management, including poor enforcement of transboundary waste contamination regulations, allowing contamination on privately owned land, and the sale of contaminated land to avoid cleanup liability.

**10.5 Site cleanup & restoration:** Measures whether site cleanup is driven by risk assessment; sufficiently funded, resourced, and planned; effectively implemented; and not hindered by corporate veils limiting companies' responsibility for cleanup.

## Pillar III. Practices by Sector

### 11. Extraction & Mining

#### **11.1 Disclosure on operations, revenues & financial interests:**

Measures whether the government discloses information about operations, revenues, licensing, and contracts for mining and extraction operations, as well as audits of state-owned companies. This sub-indicator also measures whether officials who manage the extractive sector or work for state-owned companies or natural resource funds disclose their financial interests in the oil, gas, or mining sector.

**11.2 Environmental impact assessments:** Measures whether mining and extraction companies comply with environmental impact assessment requirements, and whether the government publishes environmental impact reports prior to consultations and before the award of any mineral rights.

**11.3 Competitive licensing & contracting:** Measures whether there is a transparent and competitive licensing process that all mining and extraction operations must follow before commencing work.

**11.4 Compliance with environmental quality regulations:** Measures whether mining and extraction companies comply with regulations pertaining to waste disposal, water and air quality, and site restoration.

**11.5 Response to unauthorized mining & extraction:** Measures whether environmental authorities effectively respond to unauthorized mining, extraction, or prospecting in national parks, burial sites, land trusts, prime farmland, or vulnerable areas.

**11.6 Public compensation for damages:** Measures whether mining and extraction companies fairly compensate affected communities for losses or damages resulting from mining operations.

**11.7 Proper payment & royalties for valuable minerals:** Measures whether mining and extraction companies pay fair market value for publicly owned minerals found on publicly owned lands, and whether the national environmental authority effectively responds to the exporting of precious minerals such as gold and diamonds without paying required royalties.

## Part Five: Environmental Performance Indicators

**Air Quality:** Measures household air pollution, given as the health risk posed by the incomplete combustion of solid fuels; chronic exposure to particulate matter; and acute exposure to particulate matter.

**Air Pollution:** Measures NOX and SO2 emissions from the entire economy, as a blend of current-year intensity and a 10-year trend, with data from 1997 to 2010, relative to economic peers.

**Climate & Energy:** Measures total carbon dioxide emissions, carbon dioxide emissions from the power sector, methane emissions, nitrous oxide emissions, and black carbon emissions.

**Heavy Metals:** Measures severity of lead exposure using the number of age-standardized disability-adjusted life years (DALYs) lost per 100,000 persons due to said exposure.

**Water & Sanitation:** Measures the proportion of a country's population exposed to health risks from poor sanitation, defined by the primary toilet type used by households, as well as the proportion of a country's population exposed to health risks from poor access to potable drinking water, defined by the primary water source used by households and the household water treatment, or the treatment that happens at the point of water collection.

**Water Resources:** Measures percentage of wastewater that undergoes at least primary treatment in each country, normalized by the proportion of the population connected to a municipal wastewater collection system.

**Agriculture:** Measures from the Sustainable Nitrogen Management Index, which uses nitrogen use efficiency (NUE) and crop yield to measure the environmental performance of agricultural production.

**Biodiversity & Habitat:** Measures percentage of marine protected areas (MPAs) within a country's exclusive economic zone; the percentage of biomes in protected areas, weighted by national and global composition of biomes; the average area of species' distributions in a country with protected areas; the extent to which terrestrial protected areas are ecologically representative; and the proportion of habitat within a country remaining, relative to a baseline set in the year 2001.

**Forests:** Measures tree cover loss, calculated as the total area of tree loss in areas with greater than 30% tree canopy cover divided by the forest cover in the year 2000, with a 5-year rolling average applied.

**Fisheries:** Measures the percentage of fish stocks caught within a country's Exclusive Economic Zone (EEZ) that are overexploited or collapsed, and the regional marine trophic index, which represents the overall health of the ecosystem.

## Methodology

The *Environmental Governance Indicators for Latin America and the Caribbean*® (EGI) is the first attempt to systematically and comprehensively quantify environmental governance across countries, and is unique in its operationalization of environmental governance dimensions into concrete questions. The EGI presents information on 11 composite indicators that are further disaggregated into 42 sub-indicators and 20 sub-sub indicators (see page 12). These indicator scores are built from more than 230 variables drawn from the assessments of 525 in-country practitioners in ten Latin American and Caribbean countries, providing new, primary data and making this study one of the most robust approaches to measuring environmental governance in a country. In addition, this study presents 31 indicators from third-party data sources on the governance context, institutional capacity, select environmental laws, and environmental performance to provide a more holistic picture of the situation in each country.

### The Environmental Qualified Respondents' Questionnaire

The Environmental Qualified Respondents' Questionnaire (EQRQ) collects data from in-country lawyers, academics, non-governmental organizations, and management consultants with expertise in environmental issues. The questionnaire gathers timely input on a range of topics from practitioners who frequently interact with environmental laws and institutions in their country. Such topics include the strength of regulatory enforcement, transparency in environmental decision-making, and the institutional capacity of environmental authorities.

The questionnaire contains over 280 closed-ended questions and several open-ended questions used for validation purposes. The EQRQ surveys were completed by respondents identified through directories of law firms, universities, research organizations, non-governmental organizations, and consultant lists on government websites, as well as through referrals from the Inter-American Development Bank (IDB) and World Justice Project's (WJP) global network of practitioners, and were vetted by staff based on their expertise. In total, the WJP built a database of more than 3,400 practitioners invited to participate in the survey. The expert questionnaires were administered in three languages: English, Spanish, and Portuguese. The EQRQ data presented in this report come from 525 surveys, which represents an average of 52 respondents per country.

See Table 2 below for a breakdown of the number of experts surveyed by country and by discipline. EQRQ responses were largely consistent across the four disciplines surveyed (see the "Validation" section on page 45 for more information). Data were collected between July 2019 and October 2019 using self-administered surveys available online and in print copy.

This survey builds on the Qualified Respondents' Questionnaire (QRQ) methodology developed by the WJP for its flagship *WJP Rule of Law Index*®, which are administered annually to in-country professionals with expertise in civil and commercial law, criminal and constitutional law, labor law, and public health, and combined with data from WJP's General Population Poll (GPP). In 2017, the WJP and the American Bar Association's Section of Environment, Energy, and Resources (ABA SEER) collaborated to produce a pilot EQRQ survey instrument and pilot *Environmental Rule of Law Index*, which the WJP piloted in Argentina, Colombia, Germany, Japan, and Kenya. The EQRQ was refined for the EGI based on lessons learned from the pilot, consultations, and to address conceptual gaps outlined in the UN Environment Programme's (UNEP's) 2019 *Environmental Rule of Law* report and in the Inter-American Development Bank's 2017 pilot study on environmental governance in Argentina, Bolivia, El Salvador, Peru, and Uruguay.

**Table 2: Expert Breakdown by Country and Discipline**

	Lawyer	Academic	NGO	Management Consultant	Total
Argentina	20	26	10	19	42
Bolivia	9	20	10	23	48
Brazil	25	15	5	5	38
Colombia	22	51	10	8	69
Costa Rica	15	34	5	26	65
Dominican Republic	15	35	5	28	60
El Salvador	7	41	13	33	73
Jamaica	2	6	4	12	24
Peru	33	20	9	20	58
Uruguay	7	30	5	15	48
<b>Total</b>	<b>525</b>				

Note: Some experts have multiple disciplines, such as lawyers who also teach at a university.



## Data Cleaning & Score Computation

The country scores presented in this report are built from more than 230 variables drawn from 525 EQRQ surveys. Once collected, the data were carefully processed to arrive at country-level scores. The respondent-level data were edited to exclude partially completed surveys, suspicious data, and outliers (which were detected using the Z-score method). Individual answers were mapped onto the 11 composite indicators, 42 sub-indicators, and 20 sub-sub indicators of the EGI (or onto the intermediate categories that make up each sub-indicator), codified so that all values fall between 0 (weakest environmental governance) and 1 (strongest environmental governance), and aggregated at the country level using the simple (or unweighted) average of all respondents. Aggregated scores were rounded to two decimal points to produce the final scores. An explanation of how questions are mapped onto indicators and how they are weighted is available on the methodology website for this study.

## Data Validation

As a final step, data were validated and crosschecked against qualitative and quantitative third-party sources to provide an additional layer of analysis and to identify possible mistakes or inconsistencies with the data. This entailed:

- 1. Conducting quantitative crosschecks against other data sources.** These included Transparency International's *Corruption Perceptions Index*; the World Bank's *Doing Business Index*; the World Energy Council and Oliver Wyman's *Energy Trilemma Index*; the World Resources Institute's *Environmental Democracy Index*; Yale's *Environmental Performance Index*; the World Economic Forum's *Global Competitiveness Report*; the Open Knowledge Foundation's *Global Open Data Index*; the *Ocean Health Index*; the World Bank's *Worldwide Governance Indicators*; and the Natural Resource Governance Institute's *Resource Governance Index*; and the World Justice Project's *Rule of Law Index*.
- 2. Holding a validation workshop with representatives of non-governmental organizations, bilateral organizations, government, and the private sector with expertise in environmental governance.** Participants from the Center for International Environmental Law, Environmental Law Institute, Environmental Protection Agency, General Electric, Green Growth Knowledge Platform, Inter-American Development Bank, World Bank, World Justice Project, World Resources Institute, and World Wildlife Fund provided feedback on the measurement approach, conceptual framework, and preliminary country results. A complete list of participants and is available in the "Acknowledgements" section of this report.
- 3. Conducting in-depth, qualitative interviews with EQRQ participants.** Two participants were randomly selected per country from a list who expressed interest in being interviewed and whose questionnaire was used to produce the final scores. These interviews were designed to provide contextual information on the state of environmental governance in their country, allow

for discussion of each country's results, and to identify potentially problematic data points. A complete list of participants is available in the "Acknowledgements" section of this report.

- 4. Estimating country scores by weighting respondent disciplines.** Given the uncertainty associated with picking a particular sample of respondents and with the varying distribution of respondent disciplines (i.e. lawyers, academics, non-government organizations, and management consultants) in each country, standard errors have been calculated using bootstrapping methods. This was done to test whether weighting scores to obtain a more even weight of respondent disciplines within countries changes the results at the primary indicator, sub-indicator, and sub-sub indicator level. Differences larger than two or more standard deviations were not found between the original scores and the scores produced as part of this validation exercise.
- 5. Calculating differences in scores by discipline.** In order to evaluate the extent to which responses were consistent across the four disciplines surveyed for this study (lawyers, academics, NGOs, and management consultants), the 11 primary indicator scores of the EGI were calculated by respondent, then averaged by country and discipline. The differences in primary indicator scores for each discipline were then calculated against the average score for the other three disciplines (e.g. the Indicator 1 score for lawyers in Argentina vs. the Indicator 1 score for academics, NGOs, and management consultants in Argentina). Differences between disciplines were statistically significant in only 12% of cases using t-tests. See Table 3 on the following page for an overview of the results of this exercise.

## Third-Party Sources of Data

Data from third-party sources are featured in this report in order to provide additional data on the governance context, institutional capacity, and environmental performance in each country. Contextual data on governance presented in Part One of the conceptual framework and country profiles come from the *World Justice Project Rule of Law Index*® 2020.

Data on environmental public spending, presented in Part Two, are based on figures published on the Economic Commission for Latin America and the Caribbean's (ECLAC) CEPALSTAT platform. Each indicator was calculated as follows:

- "Environmental public spending per capita (LCU)" is calculated using ECLAC's central government environmental protection spending figures in local currency units (LCU) at current prices with the most up-to-date data available, and then divided by the population of the country in the same year, obtained from the World Bank.
- "Environmental public spending per capita (USD)" is drawn directly from ECLAC's central government environmental protection spending per capita series reported in 2010 US dollars for comparability in time and within countries.

- “Environmental public spending as percentage of GDP” is drawn directly from ECLAC’s central government environmental protection spending as percentage of GDP figures.
- “Environmental public spending as percentage of total public spending” is calculated using ECLAC’s central government environmental protection spending in LCU divided by the total public spending for the same year. Total public spending figures were retrieved from government sources, including ministries of finance and economy. See Table 4 on page 60 for a list of the government sources used for each country.

All figures correspond to 2018 except for Bolivia, whose most recent data are from 2016. Additionally, Peru and Bolivia reported all figures as general government spending (i.e. central, intermediate, and local government spending combined) instead of as central government spending.

Environmental protection spending figures are reported according to the classification of the functions of government (COFOG) methodology by each government to ECLAC. ECLAC’s data, methodology, and technical notes for the figures outlined above are available at: <https://cepalstat-prod.cepal.org/>. As a reference point, averages for all available 2018 data on Latin America and the Caribbean using central government figures are displayed in the country profiles.

The second section of Part Two displays information on the number of annual inspections, complaints investigated, and requested environmental impact assessments. These data were retrieved from publicly available government sources between September and November 2019. Data that are not publicly available for the featured countries are noted with a “N/A” in the country profiles. See Table 4 on page 60 for a list of the government sources used for available data.

**Table 3: Differences in Score by Discipline**

#### ARGENTINA

Indicator	Lawyer	Academic	NGO	Consultant
1	0.01	0.01	-0.01	-0.02
2	0.07	0.06	-0.06	-0.04
3	0.10*	0.00	-0.05	-0.04
4	0.16*	-0.05	-0.10	-0.04
5	-0.01	0.03	-0.02	-0.07
6	0.07	-0.05*	0.00	-0.11*
7	0.04	-0.02	-0.04	-0.05
8	0.01	-0.01	-0.07	-0.08
9	0.06	0.00	-0.05	-0.06
10	0.11*	-0.04	-0.08	-0.07
11	0.13	-0.09	-0.09	-0.09

#### BOLIVIA

Indicator	Lawyer	Academic	NGO	Consultant
1	0.06	-0.04	-0.03	0.00
2	0.03	-0.06	-0.01	0.01
3	0.00	0.03	0.00	0.01
4	0.04	-0.07	-0.01	0.01
5	-0.10	-0.01	0.09	-0.05
6	-0.01	-0.11*	0.02	0.00
7	-0.09	-0.03	0.12	-0.05
8	-0.11	0.04	0.05	0.02
9	NA	NA	NA	NA
10	0.05	-0.11*	-0.03	0.04
11	0.02	-0.05	-0.03	-0.02

#### BRAZIL

Indicator	Lawyer	Academic	NGO	Consultant
1	0.06	0.01	-0.04	-0.10
2	0.08	0.03	-0.14*	-0.02
3	0.07	0.00	-0.12*	-0.01
4	0.07*	0.00	-0.02	0.00
5	0.00	0.20*	-0.18	0.04
6	0.05	0.06	-0.17*	-0.10
7	0.10*	0.02*	-0.17	-0.19*
8	0.09	0.05	-0.09	-0.03
9	0.11	0.01	-0.20*	-0.17
10	0.10	0.03	-0.20*	-0.01
11	0.21*	-0.02	-0.23*	-0.15

#### COLOMBIA

Indicator	Lawyer	Academic	NGO	Consultant
1	-0.01	0.03	-0.05	0.02
2	0.02	0.04	-0.07	-0.02
3	0.01	0.06*	-0.04	-0.03
4	0.08*	-0.03	-0.02	0.01
5	0.08	-0.04	-0.03	0.01
6	0.02	0.03	-0.03	0.01
7	0.06	0.03	-0.04	-0.04
8	-0.02	0.01	-0.02	0.07
9	0.04	0.03	-0.03	0.02
10	-0.01	0.05	-0.09*	-0.02
11	0.11*	0.02	-0.01	-0.04

**COSTA RICA**

Indicator	Lawyer	Academic	NGO	Consultant
1	-0.06	0.01	-0.05	0.03
2	-0.03	0.01	-0.09	-0.01
3	0.07*	-0.02	-0.03	-0.01
4	0.12*	0.02*	-0.09	-0.07*
5	-0.08	0.13*	0.00	-0.01
6	-0.02	0.01	-0.07	0.02
7	0.01	0.04	-0.07	-0.02
8	0.02	0.06*	0.03	-0.10*
9	-0.09	0.03	-0.06	0.00
10	0.02	0.01	-0.11	0.01
11	0.03	0.01	-0.22*	-0.05

**DOMINICAN REPUBLIC**

Indicator	Lawyer	Academic	NGO	Consultant
1	0.09	-0.08	-0.06	0.01
2	0.05	-0.05	-0.03	0.04
3	0.00	-0.06*	-0.03	0.02
4	0.10*	-0.06	-0.11	0.01
5	0.12	0.07	0.29*	-0.09
6	0.02	0.00	-0.12	-0.01
7	0.04	-0.04	-0.06	0.05
8	0.12	-0.02	0.05	0.01
9	0.11*	-0.06	0.00	0.02
10	0.00	-0.03	-0.07	0.00
11	0.10	-0.03	-0.08	-0.06

**EL SALVADOR**

Indicator	Lawyer	Academic	NGO	Consultant
1	0.00	0.02	-0.05	0.01
2	-0.01	-0.04	-0.02	0.06
3	0.01	-0.04*	-0.03	0.05*
4	0.07	-0.02	-0.03	0.05
5	0.06	0.01	-0.01	-0.05
6	-0.03	-0.01	-0.06	0.03
7	0.00	0.06	-0.17*	-0.02
8	0.00	0.04	-0.05	-0.01
9	0.09	0.04	-0.13*	-0.03
10	-0.04	-0.03*	-0.08*	0.07*
11	0.13	0.01	-0.15	0.02

**JAMAICA**

Indicator	Lawyer	Academic	NGO	Consultant
1	0.04	0.09	-0.19*	0.02
2	-0.06	0.08	-0.19*	0.06
3	-0.08	0.00	-0.04	0.05
4	0.12	0.01	-0.20*	0.06
5	-0.12	0.13	-0.01	-0.06
6	-0.03	0.23*	-0.12	-0.09
7	0.00	0.19*	-0.18	-0.04
8	-0.12	0.19	-0.05	-0.08
9	-0.10	0.19*	-0.14	-0.04
10	0.02	0.10	-0.13	-0.01
11	-0.20	0.04*	-0.25*	0.18*

**PERU**

Indicator	Lawyer	Academic	NGO	Consultant
1	0.00	-0.12*	0.00	0.06
2	0.01	-0.07	-0.03	0.03
3	0.01	-0.05*	0.01	-0.01
4	0.06	-0.05	-0.03	0.04
5	-0.07	0.01	0.17	0.03
6	-0.01	-0.08	0.05	0.03
7	0.01	-0.05	0.04	0.01
8	-0.02	-0.04	0.09	-0.01
9	-0.06	-0.02	0.05	0.02
10	0.01	-0.02	0.01	-0.03
11	0.01	-0.08	-0.13	0.07

**URUGUAY**

Indicator	Lawyer	Academic	NGO	Consultant
1	0.13*	0.02	-0.10	-0.01
2	0.05	-0.01	-0.11	0.06
3	0.06	-0.04	-0.04	0.02
4	0.13	0.00	-0.18*	0.03
5	-0.14	0.02	-0.01	0.05
6	0.16*	-0.05	-0.07	0.04
7	-0.01	-0.05*	-0.05	0.10*
8	0.07	-0.01	-0.10	0.11
9	0.17*	-0.04	-0.07	0.04
10	0.07	-0.04	-0.04	0.07
11	0.11	0.02	-0.20	-0.03

\*Difference in score is statistically significant

Table 4: Government Sources of Institutional Capacity Data

<b>Argentina</b>	<p><b>Public spending</b> Ministry of Economy, data portal <a href="https://www.minhacienda.gob.ar/onp/estadisticas/">https://www.minhacienda.gob.ar/onp/estadisticas/</a></p> <p><b>Complaints investigated</b> Fiscal Public Ministry, Informe Anual 2016 <a href="https://www.mpf.gob.ar/wp-content/uploads/2017/05/Informe-Anual-2016.pdf">https://www.mpf.gob.ar/wp-content/uploads/2017/05/Informe-Anual-2016.pdf</a></p>
<b>Bolivia</b>	<p><b>Public spending</b> Ministry of Economy and Public Finance, Memoria de la Economía Boliviana 2018 <a href="https://www.economiayfinanzas.gob.bo/memoria-de-la-economia-boliviana-2018.html">https://www.economiayfinanzas.gob.bo/memoria-de-la-economia-boliviana-2018.html</a></p> <p><b>Complaints investigated</b> National Statistics Institute, data portal for 2016 <a href="https://www.ine.gob.bo/index.php/medio-ambiente/introduccion">https://www.ine.gob.bo/index.php/medio-ambiente/introduccion</a></p>
<b>Brazil</b>	<p><b>Public spending</b> National Treasury, COFOG Central Government <a href="https://sisweb.tesouro.gov.br/apex/f?p=2501:9:::9:P9_ID_PUBLICACAO:30512">https://sisweb.tesouro.gov.br/apex/f?p=2501:9:::9:P9_ID_PUBLICACAO:30512</a></p> <p><b>Complaints investigated</b> Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), 2018 data portal <a href="https://servicos.ibama.gov.br/ctf/publico/areaseembargadas/ConsultaPublicaAreasEmbargadas.php">https://servicos.ibama.gov.br/ctf/publico/areaseembargadas/ConsultaPublicaAreasEmbargadas.php</a></p> <p><b>Requested environmental impact assessments</b> Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), 2018 data portal <a href="http://licenciamento.ibama.gov.br/">http://licenciamento.ibama.gov.br/</a></p>
<b>Colombia</b>	<p><b>Public spending</b> Ministry of Finance and Public Credit, Gobierno Nacional Central 1994-2018 <a href="https://www.minhacienda.gov.co/webcenter/portal/EntidadesFinancieras/pages_EntidadesFinancieras/PoliticaFiscal/bgg/balancefiscalgobiernocentral">https://www.minhacienda.gov.co/webcenter/portal/EntidadesFinancieras/pages_EntidadesFinancieras/PoliticaFiscal/bgg/balancefiscalgobiernocentral</a></p> <p><b>Requested environmental impact assessments</b> National Environmental Licensing Authority, Informe de Gestión 2018 <a href="http://web.anla.gov.co:85/Portals/0/documentos/institucional/planeacion/indicadores/Informe%20de%20Gestion%20ANLA%202018.pdf?ver=2019-01-31-190219-533">http://web.anla.gov.co:85/Portals/0/documentos/institucional/planeacion/indicadores/Informe%20de%20Gestion%20ANLA%202018.pdf?ver=2019-01-31-190219-533</a></p>
<b>Costa Rica</b>	<p><b>Public spending</b> Ministry of Finance, data portal <a href="https://www.hacienda.go.cr/contenido/698-gobierno-central">https://www.hacienda.go.cr/contenido/698-gobierno-central</a></p> <p><b>Number of annual inspections</b> National Environmental Technical Secretariat (SETENA), Informes de Labores Semestral 2017 <a href="https://www.setena.go.cr/informes-institucionales-2/">https://www.setena.go.cr/informes-institucionales-2/</a></p> <p><b>Complaints investigated</b> Ministry of Environment and Energy, Integrated System of Processing and Attention to Environmental Complaints (SITADA), 2018 data <a href="http://www.sitada.go.cr/denunciaspublico/">http://www.sitada.go.cr/denunciaspublico/</a></p> <p><b>Requested environmental impact assessments</b> National Environmental Technical Secretariat (SETENA), Informes de Labores Semestral 2017 <a href="https://www.setena.go.cr/informes-institucionales-2/">https://www.setena.go.cr/informes-institucionales-2/</a></p>
<b>Dominican Republic</b>	<p><b>Public spending</b> Ministry of Finance, data portal <a href="https://www.transparenciafiscal.gob.do/en/web/guest/%C2%BFpara-qu%C3%A9-se-gasta-">https://www.transparenciafiscal.gob.do/en/web/guest/%C2%BFpara-qu%C3%A9-se-gasta-</a></p> <p><b>Complaints investigated</b> Ministry of Environment and Natural Resources, Memoria institucional 2017 <a href="https://ambiente.gob.do/wp-content/uploads/2018/03/Memoria-Institucional-2017.pdf">https://ambiente.gob.do/wp-content/uploads/2018/03/Memoria-Institucional-2017.pdf</a></p> <p><b>Requested environmental impact assessments</b> Ministry of Environment and Natural Resources, Memoria institucional 2018 <a href="https://ambiente.gob.do/wp-content/uploads/2019/01/Memoria-Institucional-2018.pdf">https://ambiente.gob.do/wp-content/uploads/2019/01/Memoria-Institucional-2018.pdf</a></p>

<b>El Salvador</b>	<p><b>Public spending</b> Ministry of Finance, data portal <a href="http://www.transparenciafiscal.gob.sv/ptf/es/PTF2-Estadisticas_e_Informes/">http://www.transparenciafiscal.gob.sv/ptf/es/PTF2-Estadisticas_e_Informes/</a></p> <p><b>Number of annual inspections</b> Ministry of Environment and Natural Resources, 2016 data <a href="https://www.transparencia.gob.sv/institutions/marn/documents/estadisticas?utf8=%E2%9C%93&amp;q%5Bname_or_description_cont%5D=&amp;q%5Byear_cont%5D=2014&amp;button=&amp;q%5Bdocument_category_id_eq%5D=">https://www.transparencia.gob.sv/institutions/marn/documents/estadisticas?utf8=%E2%9C%93&amp;q%5Bname_or_description_cont%5D=&amp;q%5Byear_cont%5D=2014&amp;button=&amp;q%5Bdocument_category_id_eq%5D=</a></p> <p><b>Complaints investigated</b> Ministry of Environment and Natural Resources, Anuario Estadístico 2018 <a href="http://cidoc.marn.gob.sv/documentos/anuario-estadistico-2018/">http://cidoc.marn.gob.sv/documentos/anuario-estadistico-2018/</a></p> <p><b>Requested environmental impact assessments</b> Ministry of Environment and Natural Resources, 2016 data <a href="https://www.transparencia.gob.sv/institutions/marn/documents/estadisticas?utf8=%E2%9C%93&amp;q%5Bname_or_description_cont%5D=&amp;q%5Byear_cont%5D=2014&amp;button=&amp;q%5Bdocument_category_id_eq%5D=">https://www.transparencia.gob.sv/institutions/marn/documents/estadisticas?utf8=%E2%9C%93&amp;q%5Bname_or_description_cont%5D=&amp;q%5Byear_cont%5D=2014&amp;button=&amp;q%5Bdocument_category_id_eq%5D=</a></p>
<b>Jamaica</b>	<p><b>Public spending</b> Ministry of Finance &amp; the Public Service, data portal <a href="https://www.mof.gov.jm/budgets/fiscal-policy/2423-egdds.html">https://www.mof.gov.jm/budgets/fiscal-policy/2423-egdds.html</a></p> <p><b>Requested environmental impact assessments</b> National Environment and Planning Agency (NEPA), 2016-2019 Environmental Impact Assessments, 2018 data <a href="https://www.nepa.gov.jm/new/services_products/applications/eias/eia2016-20.php">https://www.nepa.gov.jm/new/services_products/applications/eias/eia2016-20.php</a></p>
<b>Peru</b>	<p><b>Public spending</b> Ministry of Economy and Finance, data portal <a href="https://www.mef.gob.pe/es/seguimiento-de-la-ejecucion-presupuestal-consulta-amigable">https://www.mef.gob.pe/es/seguimiento-de-la-ejecucion-presupuestal-consulta-amigable</a></p> <p><b>Number of annual inspections</b> National Service of Environmental Certification for Sustainable Investments (SENACE), Informe Memoria Institucional 2018 <a href="https://www.senace.gob.pe/wp-content/uploads/2019/06/senace-memoria-2018.pdf">https://www.senace.gob.pe/wp-content/uploads/2019/06/senace-memoria-2018.pdf</a></p> <p><b>Complaints investigated</b> National Service of Environmental Certification for Sustainable Investments (SENACE), Informe Memoria Institucional 2018 <a href="https://www.senace.gob.pe/wp-content/uploads/2019/06/senace-memoria-2018.pdf">https://www.senace.gob.pe/wp-content/uploads/2019/06/senace-memoria-2018.pdf</a></p> <p><b>Requested environmental impact assessments</b> National Service of Environmental Certification for Sustainable Investments (SENACE), Informe Memoria Institucional 2018 <a href="https://www.senace.gob.pe/wp-content/uploads/2019/06/senace-memoria-2018.pdf">https://www.senace.gob.pe/wp-content/uploads/2019/06/senace-memoria-2018.pdf</a></p> <p><i>Note: As reported by the source, this figure refers to the number of detailed, semi-detailed environmental impact studies, modifications to studies, technical support reports and preliminary environmental evaluations.</i></p>
<b>Uruguay</b>	<p><b>Public spending</b> Presidential Office of Planning and Budget, data portal <a href="https://transparenciapresupuestaria.opp.gub.uy/inicio/presupuesto-nacional/rc">https://transparenciapresupuestaria.opp.gub.uy/inicio/presupuesto-nacional/rc</a></p> <p><b>Number of annual inspections</b> National Environmental Observatory (OAN), Ministry of Housing, Territorial Planning and Environment (MVOTMA), data portal for 2016 <a href="https://www.dinama.gub.uy/oan/indicadores/">https://www.dinama.gub.uy/oan/indicadores/</a></p> <p><b>Complaints investigated</b> National Environmental Observatory (OAN), Ministry of Housing, Territorial Planning and Environment (MVOTMA), data portal for 2016 <a href="https://www.dinama.gub.uy/oan/indicadores/">https://www.dinama.gub.uy/oan/indicadores/</a></p> <p><i>Note: As reported by the source, this figure corresponds to complaints submitted to the National Directorate of Environment (DINAMA) before being classified as environmental complaints.</i></p> <p><b>Requested environmental impact assessments</b> National Environmental Observatory (OAN), Ministry of Housing, Territorial Planning and Environment (MVOTMA), data portal for 2016 <a href="https://www.dinama.gub.uy/oan/indicadores/">https://www.dinama.gub.uy/oan/indicadores/</a></p> <p><i>Note: As reported by the source, this figure refers to the number of prior environmental authorizations awarded in a year.</i></p>

As part of the data on select laws and regulations presented in Part 3 of the conceptual framework and country profiles, information on constitutional right to or provision for a healthy environment was gathered from the United Nations Environment Programme's *Environmental Rule of Law: First Global Report*. Data on the right to protection of vulnerable populations and the right to nondiscrimination of indigenous peoples come from analysis conducted by the Social Capital Group for the Inter-American Development Bank's *Technical*

*Document: Alternatives for Addressing Gaps Based on Results of the Benchmarking Study and Survey*. Data on the right to protection of vulnerable populations was originally presented on a 0 to 5 scale, and data on the right to nondiscrimination of indigenous peoples was originally presented on a scale of 0 to 4. For the purposes of comparability with other indicators in this study, these figures were re-scaled to a scale of 0 to 1, where 1 is the best possible score.

Data on environmental quality standards, also presented in Part 3 of the conceptual framework and country profiles, were gathered from the Inter-American Development Bank's *Analysis of Environmental Governance in Latin America and the Caribbean*. This study was designed to assess environmental governance, with a specific focus on air and water quality regulations and institutional capacity. Data were gathered from discussions with national and international experts and air, water, and waste management institutions in Argentina, Bolivia, El Salvador, Peru, and Uruguay. Environmental quality standards and regulations were originally rated on a scale of 0 to 4 in the IDB's study. For the purposes of comparability with other indicators in this study, these figures were re-scaled on a scale of 0 to 1, where 1 signifies the best possible score.

Environmental performance indicators presented in Part 5 of the conceptual framework and country profile were gathered from Yale's 2018 *Environmental Performance Index (EPI)*. The EPI rates countries performance on a scale of 0 to 100. For the purposes of comparability with other indicators in this study, these scores were re-scaled to a scale of 0 to 1, where 1 signifies the highest possible score.

### Strengths & Limitations

The EGI has both strengths and limitations. Among its strengths is the inclusion of in-depth surveys to in-country practitioners, ensuring that the findings are up-to-date and reflect the current condition of the countries in the report. Furthermore, the EGI approaches the measurement of environmental governance from various angles by triangulating information across different types of practitioners and types of questions. This approach not only enables accounting for different perspectives on environmental governance, but it also helps to reduce possible bias that might be introduced by any data collection from a single type of practitioner.

With the aforementioned methodological strengths come some limitations. First, the data shed light on environmental governance dimensions that appear weak or strong, but are not specific enough to establish causation. Thus, it will be necessary to use the EGI in combination with other analytical tools to provide a full picture of causes and possible solutions. Second, the methodology of the EGI did not use nationally representative respondents, with there being more representation from urban areas among EQRQ respondents. Third, given the rapid changes to environmental governance in some countries, scores for some countries may be sensitive to the specific points in time when the data were collected.

### Using the Environmental Governance Indicators

The EGI has been designed to offer a reliable and independent data source for policy makers, researchers, businesses, non-governmental organizations, and other constituencies to assess the state of a country's environmental governance as perceived and experienced by expert practitioners, and to identify a country's strengths and weaknesses. The EGI has been designed to include several features that set it apart from other studies and make it valuable for countries in the report, thus providing a powerful resource that can inform policy debates both within and across countries. However, the EGI's findings must be interpreted in light of certain inherent limitations.

1. The EGI is not intended to establish causation or to ascertain the complex relationship among different environmental governance dimensions in various countries.
2. The EGI scores are the product of a rigorous data collection and aggregation methodology. Nonetheless, as with all measures, they are subject to measurement error.
3. Indicators are subject to potential abuse and misinterpretation. Once released to the public, they can take on a life of their own and be used for purposes unanticipated by their creators. If data are taken out of context, it can lead to unintended or erroneous policy decisions.
4. Environmental governance concepts measured by the EGI may have different meanings across countries. Users are encouraged to consult the specific definitions of the variables employed in the construction of the EGI, which are discussed in greater detail in the "Environmental Governance Indicator Descriptions" section of this report.
5. The EGI is generally intended to be used in combination with other instruments, both quantitative and qualitative. Just as in the areas of health or economics, no single dataset conveys a full picture of a country's situation. Policymaking in the area of environmental governance requires careful consideration of all relevant dimensions – which may vary from country to country – and a combination of sources, instruments, and methods.

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