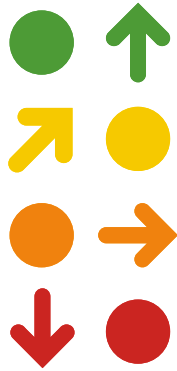




SUSTAINABLE DEVELOPMENT REPORT FOR SIDS 2023

Addressing structural vulnerability and financing the SDGs in Small Island Developing States





SUSTAINABLE DEVELOPMENT REPORT

for Small Island Developing States 2023

Addressing structural vulnerability
and financing the SDGs in Small Island
Developing States

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Acknowledgments

This report is the result of the continued collaboration of the United Nations Resident Coordinator system in the Small Island Developing States (SIDS) and the Sustainable Development Solutions Network (SDSN) for the United Nations to generate knowledge products that could assist SIDS at the time they transition from the SIDS Accelerated Modalities of Action (SAMOA) Pathway to a new 10-year plan for resilient prosperity.

In the production of this multi-pillar analysis, under the leadership of Professor Jeffrey D. Sachs and with the direct engagement of Vice-President and Head of Paris Office Guillaume Lafortune, Dr. Isabella Massa, Grayson Fuller and Dr. Leslie Bermont-Diaz, SDSN have led the technical work jointly with the United Nations Resident Coordinator in Samoa, Cook Islands, Niue and Tokelau, Dr. Simona Marinescu, and the other United Nations Resident Coordinators and their offices. Other major contributors to the data and analyses in this report include Samory Touré and Juliette Douillet.

Through various meetings and events jointly held with the governments of SIDS and the Alliance of Small Island States (AOSIS), valuable contributions have been collected and factored into the analysis to ensure the robustness and technical soundness of the recommendations provided by the authors.

Foreword



Since 2020, the SDSN and the UN Resident Coordinators (UNRCs) in the Small Island Developing States (SIDS) have produced a series of studies and policy briefs analyzing the special case of SIDS as defined by their inherent vulnerabilities and how those vulnerabilities impact the development trajectory of SIDS.

In response to a mandate given by the United Nations General Assembly in 2020 (75/215), the Sustainable Development Solutions Network (SDSN) and the UNRCs in SIDS produced the first Multidimensional Vulnerability Index (MVI) defining SIDS' propensity to losses, a construct that was well received by the respective Member States and various other groupings at the United Nations including G77+China, AOSIS and others. Further analyses of how multidimensional vulnerability affects progress toward the Sustainable Development Goals (SDG), holistically and by sector, identified strong correlations between the MVI value and the level of poverty, food insecurity, noncommunicable diseases (NCDs) and other health risks across SIDS. Overall, multidimensional vulnerability hinders SDG progress and makes development much more expensive. As a majority of the SIDS have graduated to middle- and high-income countries, their ability to access development financing is significantly constrained; for this reason, a vast majority of them register large SDG financing gaps and high levels of indebtedness.

At a time in which development financing has come under close scrutiny, with high commitments from all bilateral and multilateral actors to reform the system and restore justice in access to development cooperation, this study aims to provide an account of the state of affairs in SIDS in the pursuit of the SDGs and the challenges that would need to be addressed through the next 10-year agenda to be adopted at the fourth International Conference for SIDS in 2024.

Facing simultaneously high levels of multidimensional vulnerability, indebtedness and great financing needs to address existential threats such as climate change and loss of biodiversity is a complex reality that SIDS need to navigate at a time the entire world battles multiple crises.

The present report aims to shed light on such challenges and provides several recommendations for the immediate attention of policymakers and of the wide network of development partners committed to assisting SIDS toward a safer future.

We look forward to productive discussions among SIDS in the lead-up to the SDG Summit in September 2023 and the fourth International Conference for SIDS in 2024 drawing on the findings of the report and putting to test the solutions recommended by the authors.

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Executive summary

Global progress has stalled on the SDGs since 2020; SIDS are particularly off-track. Although they are a rather heterogeneous group of countries, SIDS share a set of common inherent characteristics – including smallness, remoteness, high dependency on strategic imports and tourism receipts, challenging natural environments, and fragile ecosystems – which impede their ability to achieve sustainable development. SIDS also face specific challenges to unlock the financing needed to invest in the SDGs. The special edition of the SDG Index for SIDS, presented for the first time in this report, shows that, despite a great degree of dispersion on SDG performance across the SIDS, these countries face greater gaps to SDG achievement than the rest of the world. The SDG Summit and COP 28 in 2023, but also the 2024 fourth International Conference on SIDS in Antigua and Barbuda, represent important milestones to define long-term pathways and unlock financing to accelerate SDG progress in SIDS.

Structural and multidimensional vulnerabilities generate severe obstacles to pursue sustainable development.

This report also introduces the Multidimensional Structural Vulnerability Index (MSVI), a new tool used to assess the structural vulnerability of 180 countries worldwide, including 33 SIDS. The MSVI is then used to analyze linkages between structural vulnerabilities and SDG progress. The MSVI reveals that, on average, SIDS face the highest levels of structural vulnerability across all three dimensions: economic, structural development and environmental. It is important to note that while SIDS share common characteristics, there are notable variations in the types of vulnerabilities they face across the three SIDS regions – the Caribbean, the Atlantic, Indian Ocean and South China Sea (AIS), and the Pacific – resulting in each region having a unique vulnerability profile. Being structurally vulnerable is associated with lower SDG Index score but also higher GDP volatility. These findings highlight the urgent need for targeted efforts and financial support to address the specific vulnerabilities faced by SIDS and promote sustainable development in highly vulnerable countries.

It is urgent to respond to the specific SDG financing needs of SIDS. Together, SIDS represent a very low share of cumulative historical greenhouse gas (GHG) emissions, yet they are particularly affected by climate change. As emphasized at the last COP in Egypt, it is now urgent to identify effective international mechanisms to share fairly and globally the burden of financing for human-induced adaptation and L&D costs among responsible countries. More broadly, the SDG Stimulus Plan, the adoption of the multidimensional vulnerability index, the Bridgetown Initiative and the upcoming Summit of the Future in 2024 must lead to substantial reforms of the global financial architecture and significantly increase global financing flows channeled to SDG investments. Multilateral Development Banks, innovative financing mechanisms (including SDG or blue bonds), debt relief, international taxation reforms and revisions of credit rating methodologies (among others) must be further mobilized to recognize the long-term growth potential of investing into the SDGs and of building up resilience, and to provide access to affordable and long-term financing for sustainable development in SIDS and developing economies. Countries' structural vulnerabilities must be considered to define effective policy and SDG financing pathways. In cooperation with international and national partners, SIDS must also strengthen their economic planning, fiscal frameworks, project implementation, financial operations, and partnerships to effectively channel substantial investment towards sustainable development.

List of acronyms and abbreviations

AIS	Atlantic, Indian Ocean and South China Sea
AOSIS	Alliance of Small Island States
CIDR	CUNY Institute for Demographic Research
CIESIN	Center for International Earth Science Information Network
COP27	twenty-seventh Conference of the Parties
CRED	Centre for Research on the Epidemiology of Disasters
DAC	Development Assistance Committee
DSA	Debt Sustainability Analysis
EM-DAT	The International Disaster Database
FAO	Food and Agriculture Organization
FDI	foreign direct investment
G20	Group of Twenty
G77	The Group of 77
GDP	gross domestic product
GFSG	Group of Twenty Green Finance Study Group
GNI	gross national income
ICT	information and communication technology
IEA	International Energy Agency
IHME	Institute for Health Metrics and Evaluation
ILO	International Labour Organization
IMF	International Monetary Fund
INFF	Integrated National Financing Framework
IPU	Interparliamentary Union
IRENA	International Renewable Energy Agency
ITU	International Telecommunication Union
IUCN	International Union for Conservation of Nature
JMP	Joint Monitoring Programme
JRC	Joint Research Centre
L&D	loss and damage
MDB	Multilateral Development Bank
MSVI	Multidimensional Structural Vulnerability Index
MVI	Multidimensional Vulnerability Index
NSS	National Statistical System
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PDB	Public Development Bank
PPP	Public-Private Partnership
SAMOA	Small Island Developing States Accelerated Modalities of Action
SDG	Sustainable Development Goal
SDR	Special Drawing Right
SDSN	Sustainable Development Solutions Network
SIDS	Small Island Developing States
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
UNRC	United Nations Resident Coordinator
UNSD	United Nations Statistics Division
V20	Vulnerable Twenty Group of Ministers of Finance of the Climate Vulnerable Forum
WASH	water, sanitation and hygiene
WHO	World Health Organization

Introduction

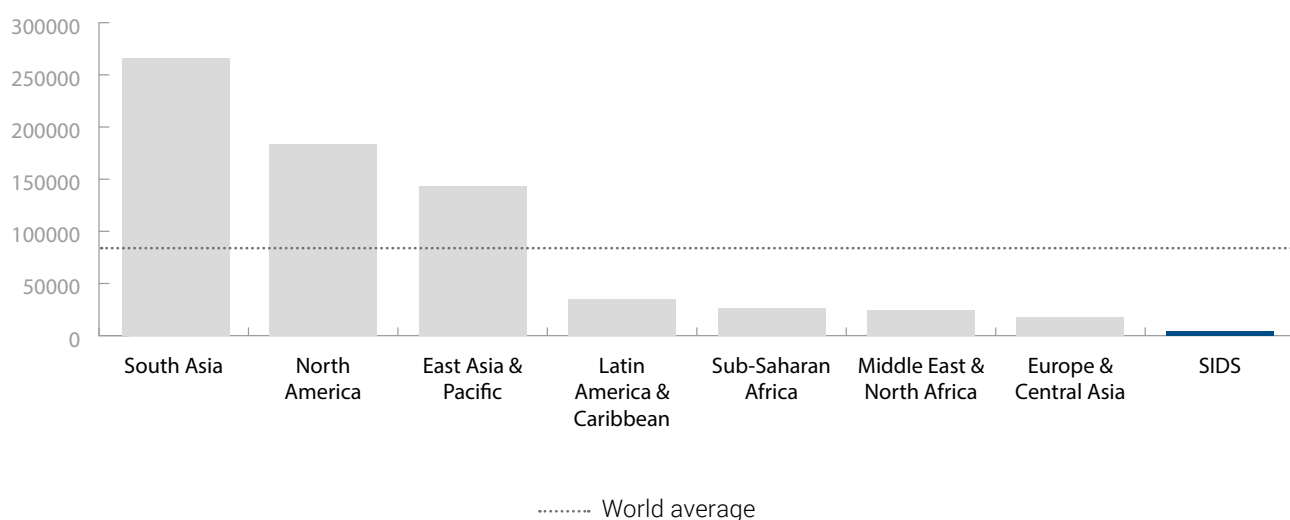
Small Island Developing States (SIDS) are a heterogeneous group of 58 countries that are located in three geographic regions – the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS).

The SIDS include independent states, overseas territories of larger countries, and associated territories, which present considerable geographical and socioeconomic differences. Their landmasses range widely in size. Some SIDS are atolls or groups of atolls with a landmass of merely 20 km² (Nauru) or even less (Tokelau, 12 km²), while others have a larger landmass; Papua New Guinea (PNG) stands out at 453,000 km² in size. Moreover, many SIDS have predominantly or exclusively low-lying land areas – such as Tuvalu, Kiribati, the Marshall Islands and the Maldives – while others, such as Haiti, include mountain ranges. SIDS have very different population sizes, ranging from about 1,600 in Niue to 11 million in Cuba. Their income levels also are diverse; most SIDS are middle-income

countries, but a few are high-income economies and eight are categorized as least developed countries (LDCs). Their economic structures also differ greatly. Many SIDS, such as the Maldives, Aruba, and Antigua and Barbuda, depend heavily on service industries – particularly tourism and travel – while others, such as PNG and Trinidad and Tobago, are based on natural resources.

Despite their diversity, SIDS share some common inherent characteristics which make them a special and distinct development context, as recognized during the 1992 United Nations Conference on Environment and Development held in Brazil. Key features of SIDS include small populations and territories, most of which are located far from global markets (figure I.1 and figure I.2).

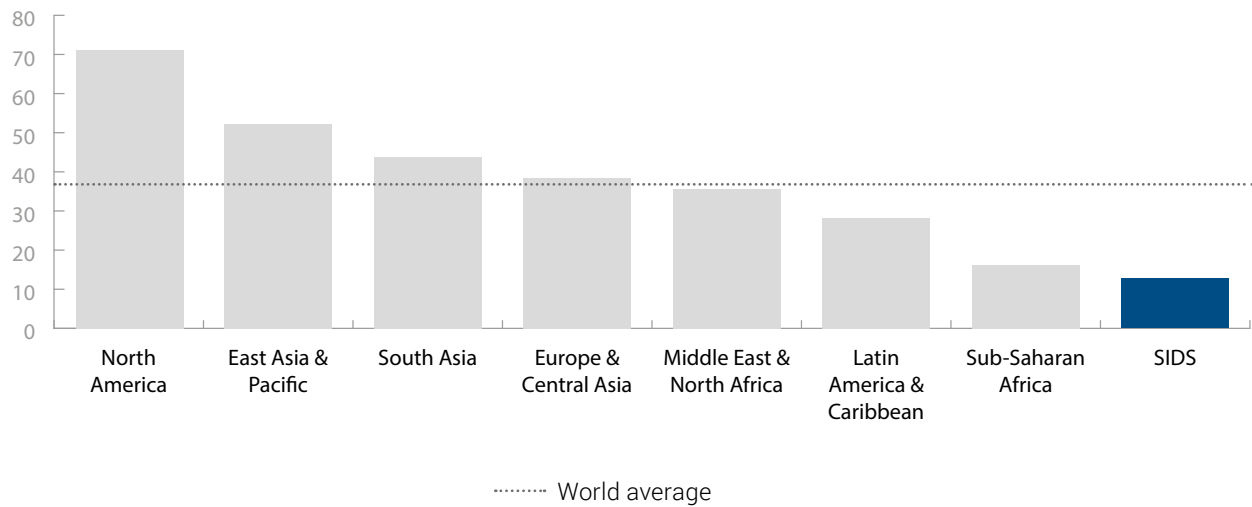
Figure I.1. Population size (in thousands), by region



Source: Authors' elaboration based on data from the World Bank (2022a).

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Figure I.2. Connectivity to global markets (0 low – 100 high), by region

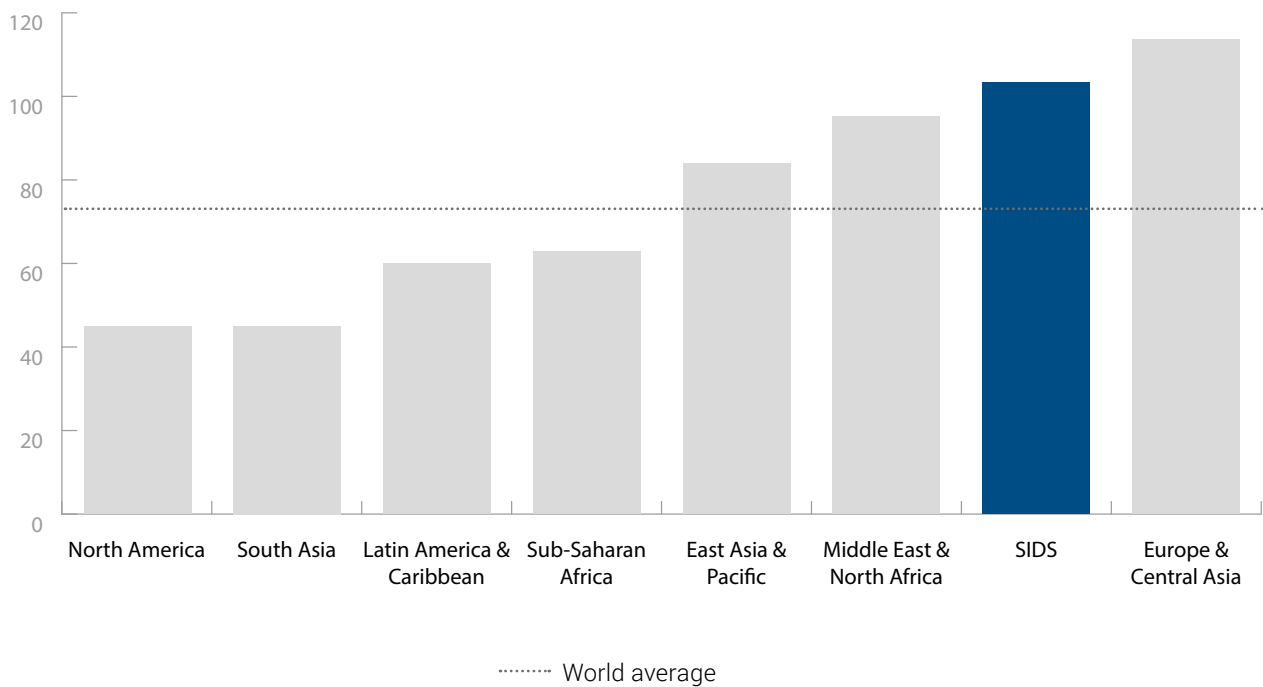


Source: Authors' elaboration based on data from UNCTAD (2023).

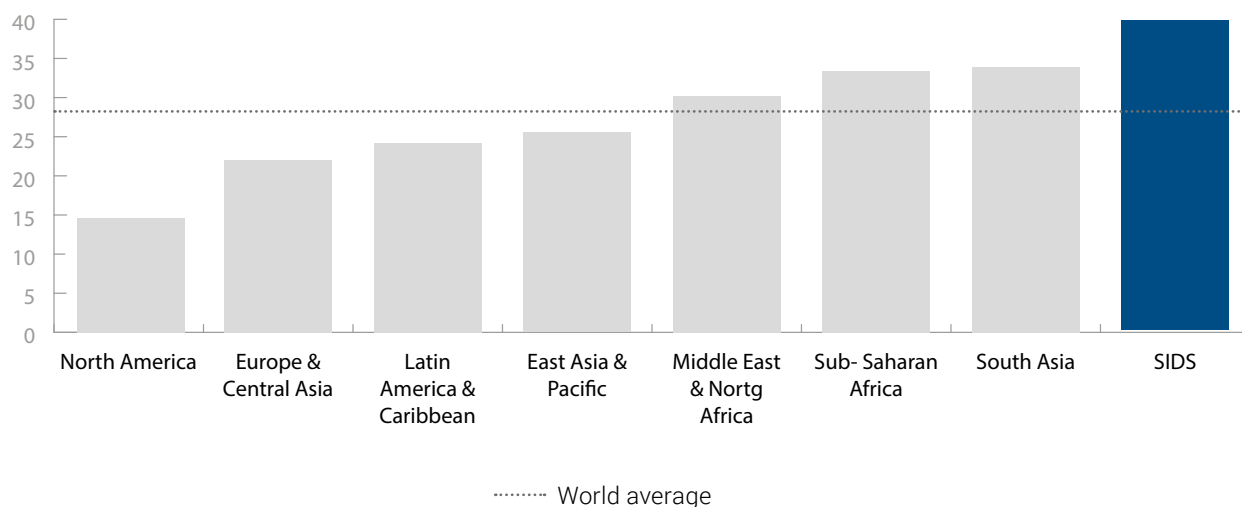
SIDS are also more open to trade than most other world regions (figure I.3), and their economies depend heavily

on key imports, such as food and fuel, and rely on only a few sectors, mainly tourism (figure I.4 and figure I.5).

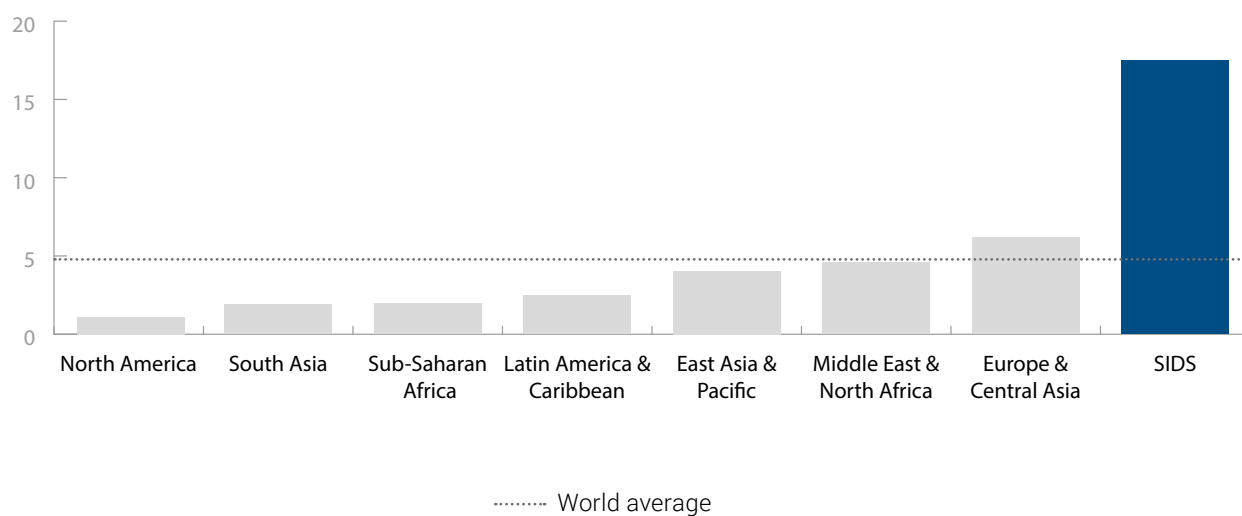
Figure I.3. Trade openness (% GDP), by region



Source: Authors' elaboration based on data from the World Bank (2022a).

Figure I.4. Food and fuel imports (% GDP), by region

Source: Authors' elaboration based on data from the World Bank (2022a).

Figure I.5. Tourism receipts (% GDP), by region

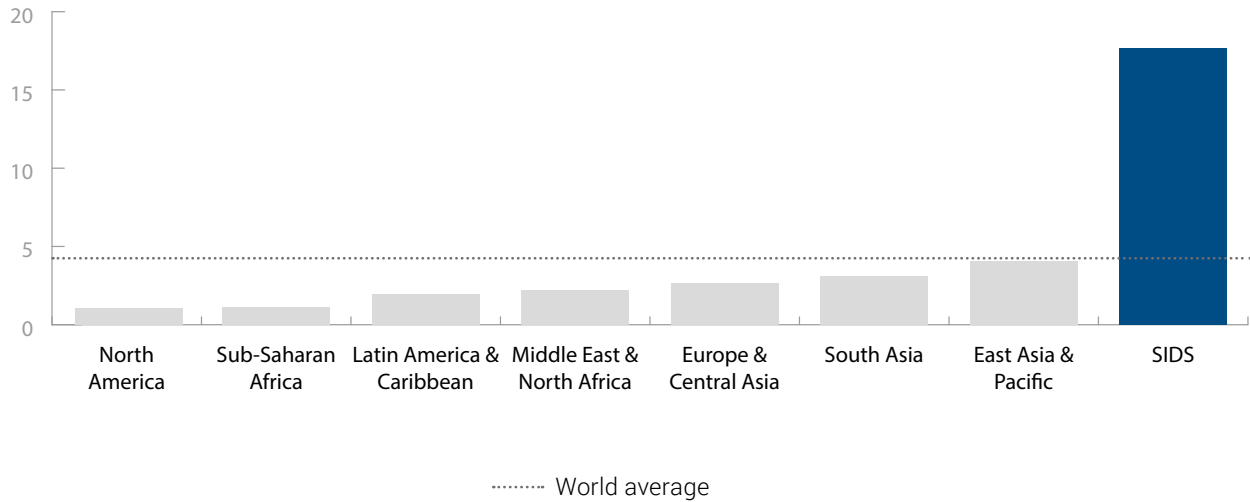
Note: International tourism receipts are expenditures by international inbound visitors, including payments to national carriers for international transport. These receipts include any other prepayment made for goods or services received in the destination country.

Source: Authors' elaboration based on data from the World Tourism Organization (2021).

Moreover, SIDS are characterized by challenging natural environments and fragile ecosystems. Not only are they located in some of the world's most disaster-prone regions,

but most are also characterized by limited water availability and minimal elevation above sea level (figure I.6), among other features.

Figure I.6. Land area where elevation is below 5 meters (% total land area), by region

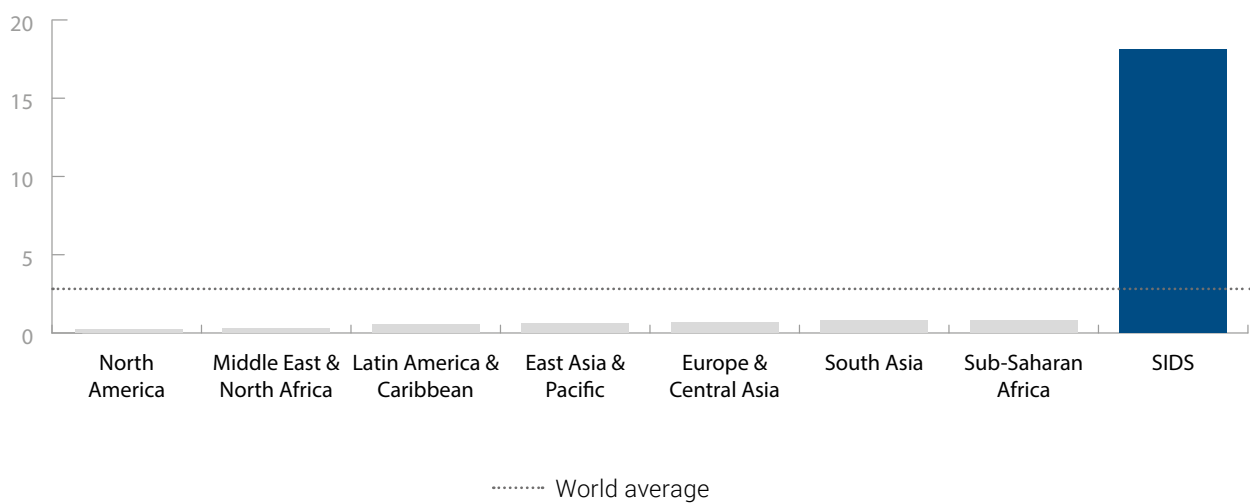


Source: Authors' elaboration based on data from the Center for International Earth Science Information Network (CIESIN) and the CUNY Institute for Demographic Research (CIDR) (2021).

Because of these inherent characteristics, SIDS are disproportionately exposed to structural (i.e. inherent, non-self-inflicted) vulnerabilities that hinder their development progress. Being small and remote, SIDS face limited opportunities to capitalize on economies of scale and must cope with expensive infrastructure and high transportation and communication costs, factors that

combine to limit their growth and development. When hit by natural disasters, which are increasingly frequent and intense, the modest size of SIDS means they may experience losses significant enough to erase progress in development that has taken decades to achieve. As shown in figure I.7, disaster costs in SIDS are significant and much higher than those in all other regions of the world.

Figure I.7. Disaster costs (% GDP), by region

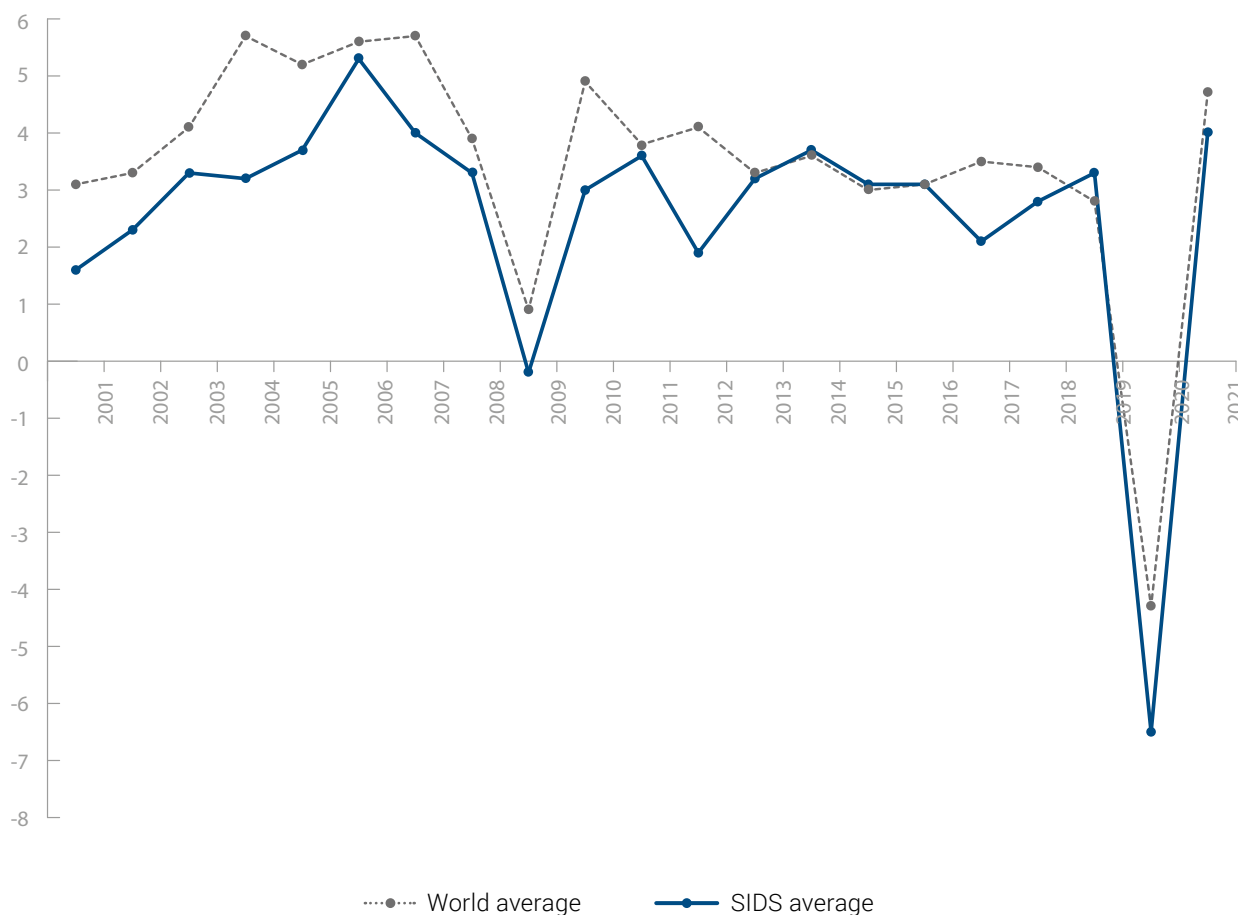


Source: Disaster costs are the total estimated damages from various categories of natural disasters (i.e. geophysical, hydrological, climatological, meteorological, biological and extra-terrestrial).

In addition to this, the high degree of trade openness and lack of economic diversification exposes SIDS to market fluctuations over which they have no control. This became apparent during the 2008/09 global financial crisis and, more recently, during the COVID-19 pandemic, when SIDS experienced the most severe economic contraction compared to the rest of the world because of their over-reliance on tourism (figure I.8). Out of the 20 countries that suffered the most significant decline in their GDP in 2020, 13 (65 percent) were SIDS (figure I.9). Among them, the Maldives, a SIDS from the AIS region, endured the

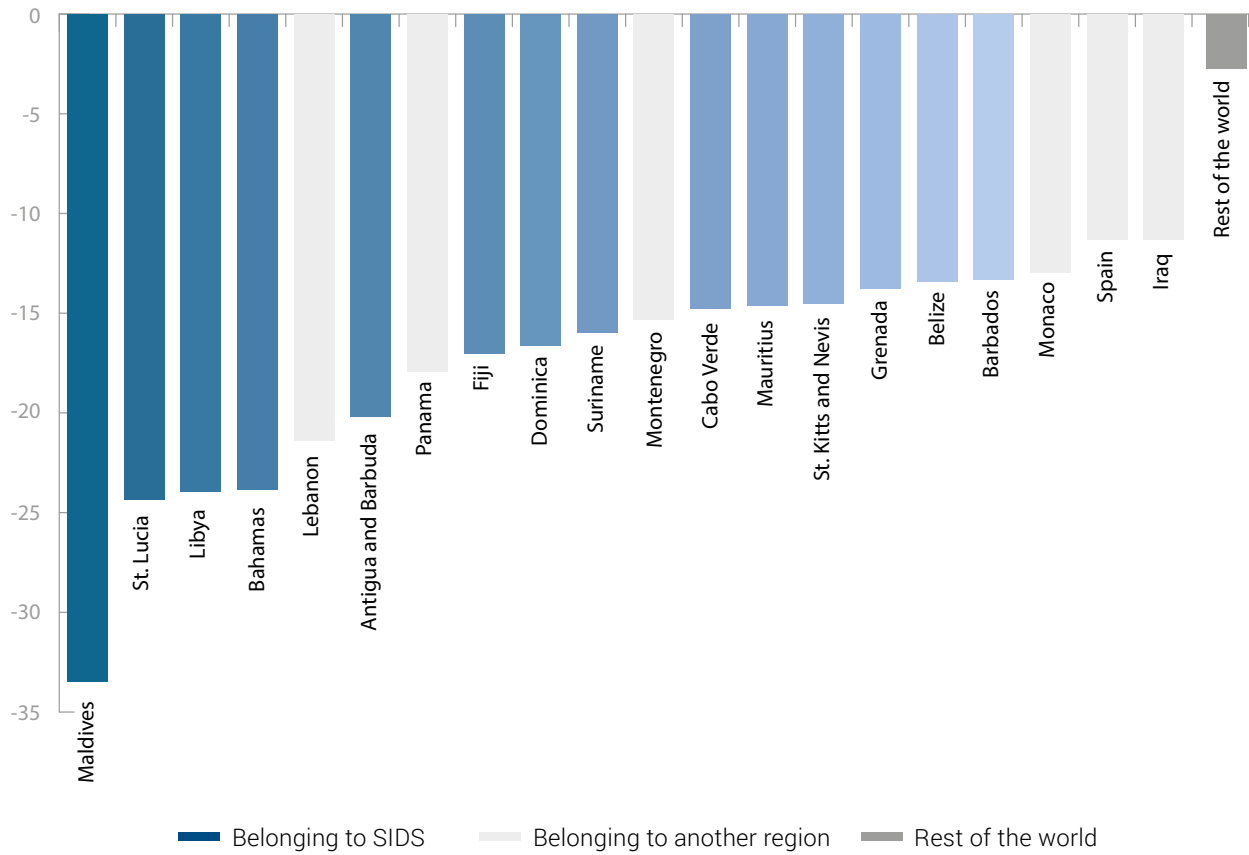
harshest blow, experiencing a 33 percent drop in its GDP in 2020. This figure is approximately 12 times higher than the average decrease in GDP growth for the rest of the world. The pronounced reliance of SIDS on tourism largely explains their overrepresentation among the countries hardest hit by the pandemic. Figure I.10 shows that in SIDS, tourism receipts as a share of GDP fell by more than half between 2019/20. The widespread lockdowns and movement restrictions imposed across the world during the pandemic led to a drop in annual real GDP growth in SIDS from 3 percent to almost -7 percent over the same period (figure I.8).

Figure I.8. Annual real GDP growth (%), 2001–2021



Source: Authors' elaboration based on data from the World Bank (2022a).

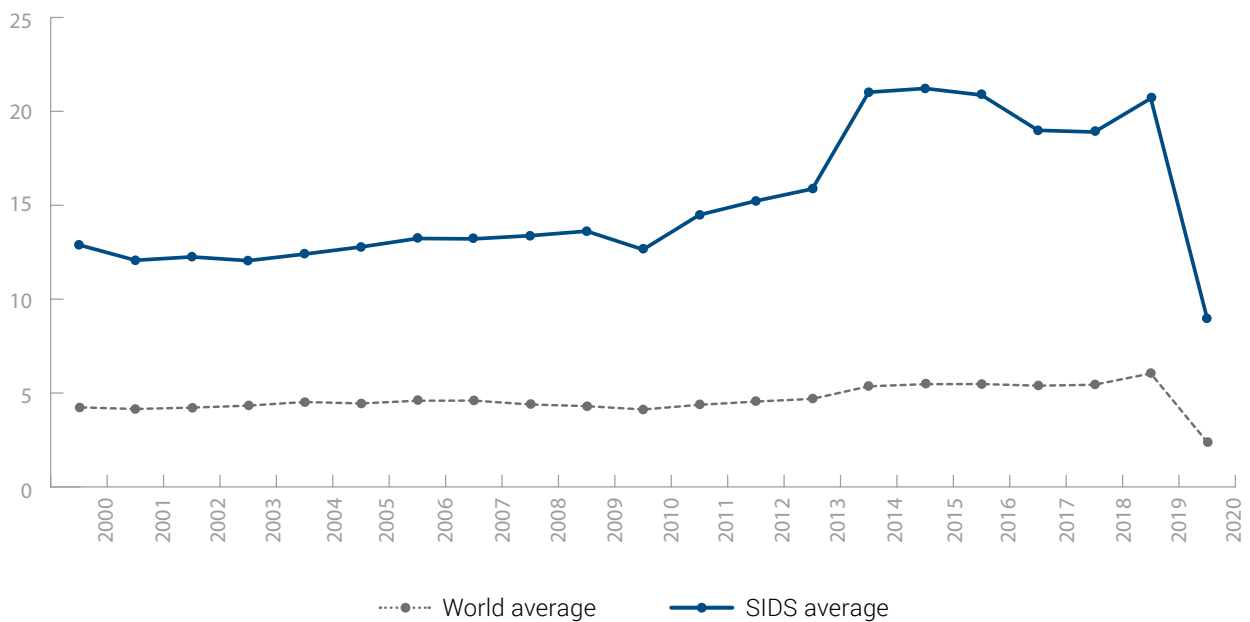
Figure I.9. Annual real GDP growth among countries with the largest GDP drops in 2020



Note: This graph shows the 20 countries that experienced the largest drops in real GDP in 2020.

Source: Authors' elaboration based on data from the World Bank (2022a).

Figure I.10. Tourism receipts (% GDP), 2000–2020



Source: Authors' elaboration based on data from the World Tourism Organization (2021).

While SIDS have not significantly contributed to climate change, they are among the most severely affected by it, primarily due to their low land elevation. Indeed, over the period 1850–2019, SIDS were responsible for just 0.02 percent of total CO₂ emissions from fossil fuels, while the United States alone accounted for more than 34 percent (Sachs et al., 2022). Because of the adverse effects of climate change including sea level rise, the mere existence of some SIDS is threatened, with Tuvalu expecting to become submerged by 2100 (Sachs and Massa, 2021; Sachs et al. 2022).

Income indicators hide the unique structural challenges faced by SIDS. While most SIDS are not among the world's poorest nations, their inherent characteristics leave them much more vulnerable than the income data might suggest. Therefore, income indicators that are commonly used as a proxy for development and as criteria for graduation and the allocation of development financing, such as the GNI per capita, fail to capture the specificities of SIDS and, in particular, their unique structural vulnerabilities.

For this reason, over the last three decades, SIDS have called for the creation of a globally accepted vulnerability index to be used alongside GNI per capita during concessional finance eligibility processes. Important steps have been made over the last years. In 2014, the SIDS Accelerated Modalities of Action (SAMOA) Pathway called upon the United Nations to develop vulnerability-resilience country profiles; in December 2020, through resolution 75/215, the United Nations General Assembly (UNGA) mandated the United Nations to produce a Multidimensional Vulnerability Index (MVI) for SIDS. In 2020, the report of the Secretary-General to the UNGA (76/211) proposed the universalization of the MVI. In response the seventy-sixth UNGA, through resolution 76/203, adopted several features of the MVI including its universalization and

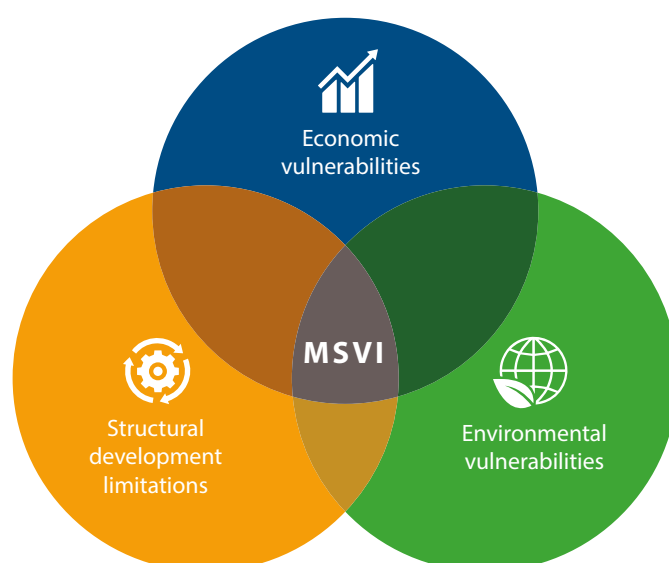
exogeneity. In February 2022, the President of the UNGA appointed a 12-member High Level Panel to carry forward work to finalize the MVI. The importance of using eligibility criteria for access to concessional financing that goes beyond the GNI per capita and that integrates the MVI has been recognized as among the key needed reforms of the global financial architecture in the United Nations Secretary-General's SDG Stimulus to Deliver Agenda 2030, launched in February 2023, as well as in the outcomes of the New Global Financing Pact Summit held in Paris in June 2023.

In this report, relying on the pilot Multidimensional Vulnerability Index developed in 2021 by the United Nations Resident Coordinators for the SIDS and the Sustainable Development Solutions Network, we propose a new tool for tracking countries' structural vulnerability – the MSVI. The MSVI is a universal, equally weighted composite index that measures structural vulnerability along three dimensions (figure I.11):

- economic vulnerability, which references factors determining the exposure of a country to unforeseen economic and financial exogenous shocks;
- structural development limitations, which references geophysical constraints that hinder a country's development;
- environmental vulnerability, which references factors determining the degree of exposure of a country to the frequency and severity of natural hazards (both hydrometeorological and seismic disasters) and to climate change.

A detailed description of the MSVI is provided in chapter 4.

Figure I.11. Framework for the Multidimensional Structural Vulnerability Index (MSVI)



Source: Authors' elaboration.

INTRODUCTION

Next to being a tool for measuring the degree of structural vulnerability, the MSVI is also a useful tool to assess to what extent structural vulnerability impacts the ability of countries, including SIDS, to achieve sustainable development as measured by the SDG Index.

The SDGs are the road map for achieving sustainable development by 2030 and building resilient prosperity. In this report, the progress of countries toward the achievement of the SDGs is measured by a new SDG Index designed with the data constraints of the SIDS in mind. In the global SDG Index, many SIDS are not included due to significant data gaps and the resulting missing data bias. The *Sustainable Development Report for SIDS 2023* presents a special edition of the SDG Index that manages to include all 38 United Nations Member SIDS. This SDG Index for SIDS uses a reduced indicator set that maximizes data availability while covering the principal dimensions of the SDGs (see chapter 1). Although the indicator set does not allow for monitoring the entire scope of the SDGs in their complexity, it remains a very good predictor of overall SDG progress. By studying the relationship between the SDG Index for SIDS and the MSVI, it is possible to estimate the impact of structural vulnerability on countries' ability to achieve the SDGs (see chapter 2).

Finally, knowing the degree and areas of structural vulnerability of a country through the MSVI is an important step to be able to identify targeted financing mechanisms that can be used to respond to its specific needs and vulnerabilities. Due to their structural vulnerabilities, SIDS have limited capacity to invest in long-term and resilient development and need, therefore, to rely on external assistance. However, SIDS struggle to access both concessional and private finance and, as a result, they experience significant financing gaps hindering the achievement of the SDGs. To enhance access to external financing, SIDS should ask for a change in the eligibility criteria to concessional development finance, and they should also use the existing financing mechanisms strategically to address their country-specific vulnerabilities. Chapter 3 provides a framework to assess which financing instruments are best placed to respond to specific structural vulnerabilities. After presenting the recent proposals put forward at the global level to enhance the availability of financial resources to vulnerable countries and to reform the global financial architecture, including the Bridgetown Initiative, the global SDG Stimulus, and the New Global Financing Pact road map, among others, it also highlights the global and national constraints to be addressed by SIDS in order to maximize the benefits of development finance.

The MSVI and the SDG Index for SIDS proposed in this report aim at contributing to the deliberations at the 2023 SDG Summit in New York and the fourth International Conference for SIDS which will be hosted by Antigua and Barbuda in 2024. The former will mark the beginning of a new phase of accelerated progress toward the SDGs through more adequate financing in terms of type and volume. The latter will aim to compare the progress between SIDS and the rest of the world toward achieving the SDGs and identify priority areas for the attention of the next 10-year agenda to be adopted in 2024 in St. John's.

CHAPTER 1

**SUSTAINABLE
DEVELOPMENT
GOALS INDEX FOR
SMALL ISLAND
DEVELOPING STATES**

The SDGs are the agenda for the future that all 193 United Nations Member States adopted in 2015.

These global goals integrate the vital considerations of human development and environmental protection into economic development. Historic both in their universality

and comprehensiveness, these goals are noteworthy for providing countries with a clear time horizon for meeting the goals by 2030, and for integrating from the outset a set of indicators to monitor countries' progress toward sustainable development and the 169 targets contained within the 17 SDGs (figure 1.1).

Figure 1.1. The 17 Sustainable Development Goals



Source: United Nations Department of Economic and Social Affairs (2020).

Despite this detail, the sheer number (232) of official indicators maintained by the United Nations Statistical Division, the lack of quantitative targets, and the non-normative nature of many of them may create difficulties for policymakers aiming to track SDG progress. To deal with these issues and make the data-policy interface clearer, the Sustainable Development Report (Sachs et al., 2023b) is published every year; it features an SDG Index that aims to mobilize data and statistics for SDG monitoring. In the case of the SIDS, however, SDG monitoring presents an additional challenge – data availability. In the global SDG Index, the SIDS (especially those in Oceania) are by far the countries with the least data available. As missing data introduces spurious noise and bias into composite indices, the SDG Index only publishes rankings for countries with data for at least 80 percent of the indicators included. However, many of these excluded countries are SIDS – precisely those countries that suffer from critical SDG gaps and where progress must be monitored and accelerated. Of the 27 countries excluded

from the global SDG Index in the Sustainable Development Report 2023, 19 of them – 70 percent – are SIDS.

To provide an assessment of where SIDS stand in terms of SDG progress, the Sustainable Development Report for Small Island Developing States 2023 presents for the first time a special edition of the SDG Index designed with the data limitations of those countries in mind. While the global SDG Index uses around 100 indicators and provides a great deal of detail on the range of issues within the SDGs, a country's score on the SDG Index can be explained or predicted with a much smaller set of indicators. To create a composite index with sufficient data to include all the United Nations Member SIDS, we selected 17 indicators – one from each SDG – that have very good data coverage, cover key dimensions of their respective goals, and replicate relatively well the global SDG Index (table 1.1). None of the selected indicators are collinear ($r < .9$) among themselves.

Table 1.1. Indicators included in the 2023 SDG Index for SIDS

SDG	Indicator	Trend	Source
1	Poverty headcount ratio at \$2.15/day (2017 PPP, %)	✓	World Data Lab
2	Prevalence of obesity, BMI ≥ 30 (% of adult population)	✓	WHO
3	Life expectancy at birth (years)	✓	WHO
4	Lower secondary completion rate (%)	✓	UNESCO
5	Seats held by women in national parliament (%)	✓	IPU
6	Population using at least basic sanitation services (%)	✓	JMP
7	Population with access to electricity (%)	✓	IEA, IRENA, UNSD, WB, WHO
8	Unemployment rate (% of total labor force, ages 15+)	✓	ILO
9	Population using the internet (%)	✓	ITU
10	Gini coefficient	✓	World Bank
11	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m ³)	✓	IHME
12	Municipal solid waste (kg/capita/day)	n/a	World Bank
13	CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	✓	Global Carbon Project
14	Ocean Health Index: Clean Waters score (worst 0-100 best)	✓	Ocean Health Index
15	Red List Index of species survival (worst 0-1 best)	✓	IUCN and Birdlife International
16	Corruption Perceptions Index (worst 0-100 best)	✓	Transparency International
17	Statistical Performance Index (worst 0-100 best)	✓	World Bank

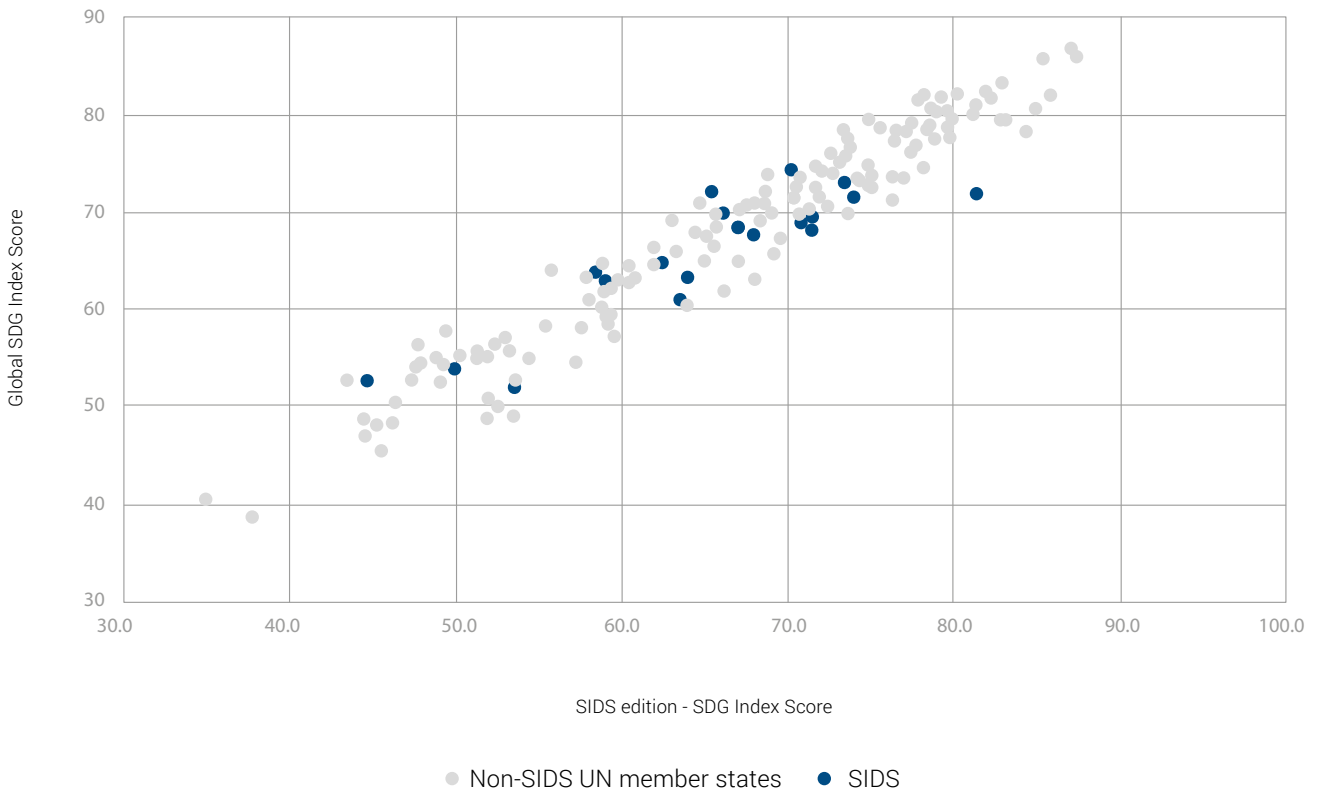
Note: Sources of the indicators include the World Data Lab; the World Health Organization (WHO); the United Nations Educational, Scientific and Cultural Organization (UNESCO); the Interparliamentary Union (IPU); the Joint Program of the WHO and the United Nations Children's Fund (UNICEF); the International Energy Agency (IEA); the International Renewable Energy Agency (IRENA); the United Nations Statistics Division (UNSD); the World Bank; the International Labour Organization (ILO); the International Telecommunication Union (ITU); the Institute for Health Metrics and Evaluation (IHME); the Global Carbon Project; the Ocean Health Index; the International Union for Conservation of Nature (IUCN) and Birdlife International; and Transparency International.

Source: Author's elaboration.

The SDG Index edition for SIDS is a very strong predictor of performance on the global SDG Index ($r = .96$) (figure 1.2). In this new edition of the Index for SIDS, we were able to include all countries into a final ranking with a missing data threshold of 30 percent for inclusion. The countries with the most missing data are St. Kitts and Nevis, the Marshall Islands, and Palau with 29 percent of data missing from each, which corresponds to five indicators. Not one of these countries is included in the global SDG Index due to missing data (44 percent,

55 percent and 54 percent respectively). Because the indicator sets differ, the scores on the 2023 SDG Index for SIDS are not comparable with the scores of the respective countries in the global report.

Figure 1.2. SIDS edition SDG Index score vs. Global SDG Index score (0 worst – 100 best)



Note: $r = .96$. The 166 observations include all countries with both a global SDG Index score and a SIDS edition – SDG Index score.

Source: Authors' calculations.

For the final ranking, we chose to display the rankings of the SIDS not among themselves, but rather among all the 189 United Nations Member States for which there is sufficient data. This presentation allows SIDS both to benchmark their

performance to their peers and to know where they stand in terms of progress toward the SDGs within the global context. For the full list of country ranks, please see our online database at sdgtransformationcenter.org.

Table 1.2. 2023 SIDS edition - SDG Index

Rank (/189)	Country	Score
13	Singapore	81.5
49	Maldives	74.1
54	Fiji	73.5
57	Seychelles	73.2
62	Timor-Leste	72.2
68	Barbados	71.6
69	Mauritius	71.5
73	Cabo Verde	70.8
79	Cuba	70.3
86	Grenada	68.6
88	Guyana	68.1
91	Samoa	67.9
92	Antigua and Barbuda	67.8
95	Suriname	67.1
98	Jamaica	66.0
103	Dominican Republic	65.5
104	St. Kitts and Nevis	65.3
106	St. Vincent and the Grenadines	65.1
110	Tonga	64.7
113	Trinidad and Tobago	64.1
115	Bahamas, the	63.6
117	St. Lucia	63.3
120	Belize	62.4
123	Dominica	61.2
133	Sao Tome and Principe	59.1
138	Bahrain	58.5
139	Kiribati	58.5
140	Tuvalu	58.3
144	Marshall Islands	57.5
146	Vanuatu	57.0
147	Micronesia, Fed. Sts.	56.5
150	Nauru	55.4
151	Palau	55.4
152	Solomon Islands	54.5
154	Comoros	53.6
168	Papua New Guinea	50.1
169	Guinea-Bissau	50.0
184	Haiti	44.8
	SIDS AIS	69.5
	SIDS Caribbean	59.6
	SIDS Pacific	56.1
	Small Island Developing States	61.3
	World	65.4

Note: The rank gives the position of each SIDS among the 189 United Nations Member States that could be included in the 2023 SDG Index for SIDS. The microstates of Andorra, Lichtenstein, Monaco, and San Marino were excluded due to high proportions of missing data. The 17 indicators included were used to generate ranks for all countries, but only the ranks of the SIDS are displayed in the table above. The regional average scores for the SIDS Atlantic/Indian/South China Sea (AIS), SIDS Caribbean and SIDS Pacific were generated using population-weighted averages. For the full ranking of countries, please see the online materials on our website: sdgtransformationcenter.org.

Source: Authors' calculations.

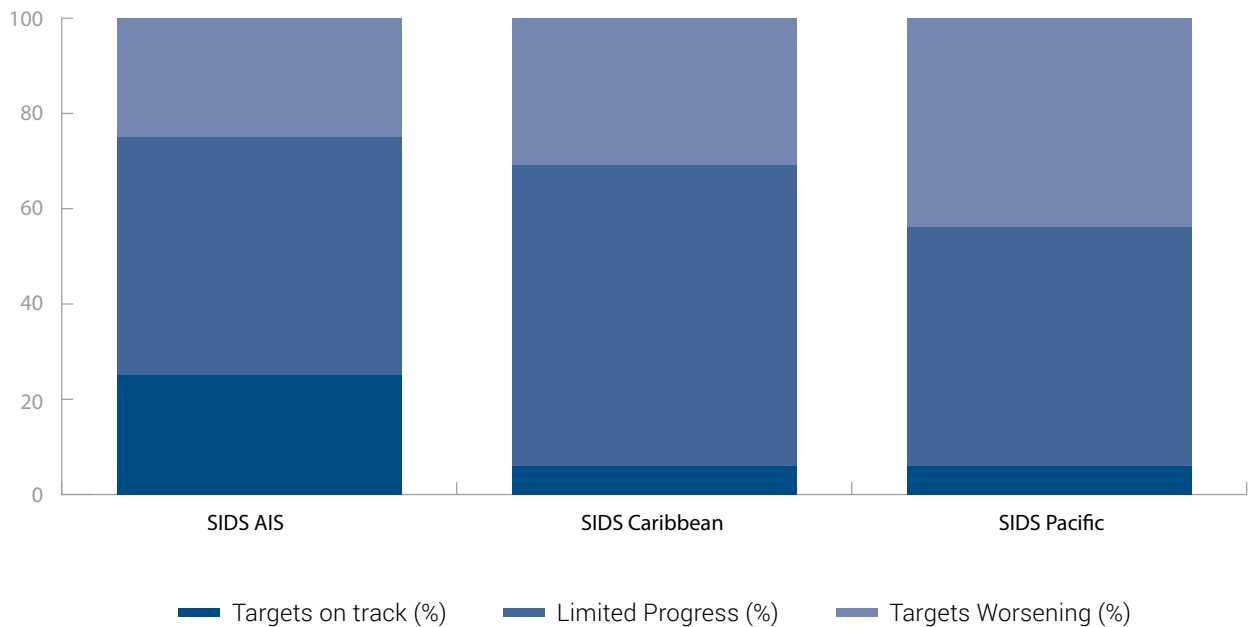
Despite having similar developmental challenges, SIDS display a wide variation in SDG performance

(table 1.2). Values range from a minimum score of 44.8 for Haiti to 81.5 for Singapore. Singapore is by far the country with the most prosperous economy and, therefore, has a greater ability to deal with structural vulnerabilities and progress toward the SDGs. On the other hand, the bottom five countries in the rankings are all low-income or lower-middle-income economies with a GDP per capita below \$4,000 (World Bank, 2022a; World Bank, 2022b). This means that these countries – the Solomon Islands, Comoros, Papua New Guinea, Guinea-Bissau and Haiti – not only face enormous structural vulnerabilities as SIDS, but they

also lack the fiscal capacity to deal with the developmental challenges engendered by their inherent vulnerabilities.

While there is a great degree of dispersion on SDG performance across the SIDS, the average SDG Index score for this group of countries is 61.3, demonstrating that they still face greater gaps to SDG achievement than the rest of the world, whose average SDG Index score is 65.4 (table 1.2). Among the subregional groupings of the SIDS, the SIDS in the Pacific region stand out for being the furthest behind in meeting the SDGs (table 1.2).

Figure 1.3. Status of SDG targets (% Trend indicators)



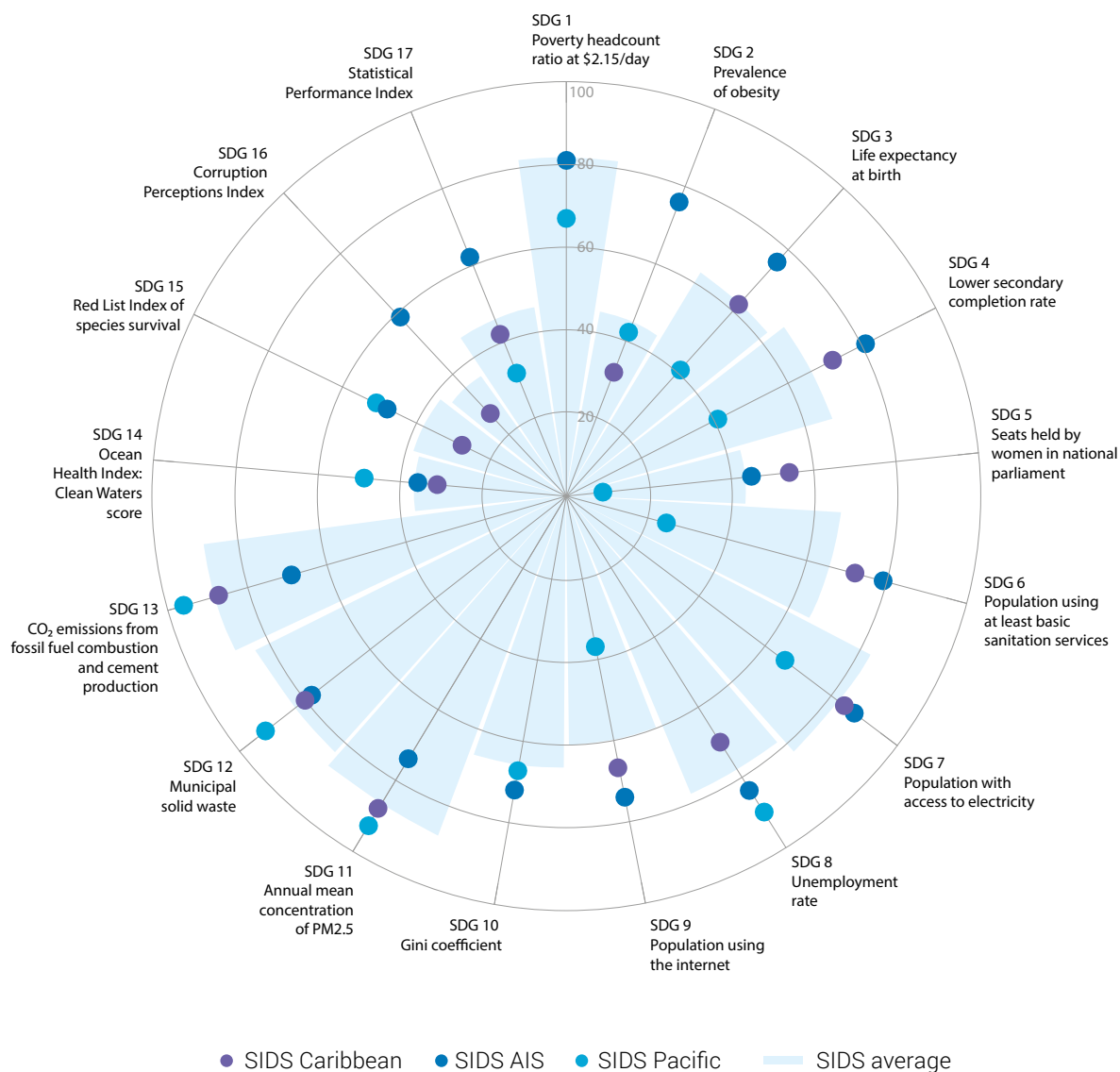
Note: The figure shows population-weighted averages. The denominator includes all indicators except for indicator 12 – municipal solid waste (kg/capita/day) – which lacked trend data and, therefore, could not be used for assessing progress over time.

Source: Authors' calculations.

Looking at the breakdown by SIDS subregion of the status of the SDG targets measured in this report, it emerges that the SIDS in the Pacific region are the ones furthest behind (figure 1.3). In addition to having the highest average SDG Index score at 69.5 (driven in part by the high performance of Singapore), the SIDS in the Atlantic and Indian Oceans and in the South China Sea subregion

also have the greatest proportion of SDG targets on track (25 percent) for the 2030 horizon. On the other hand, the SIDS in the Pacific subregion have the greatest number of targets that are moving in the wrong direction (44 percent), indicating a reversal of progress since 2015. This calls urgently for more attention and resources to accelerate SDG progress in this highly vulnerable region of the world.

Figure 1.4. Performance by indicator for SIDS and SIDS subregions



Note: Indicator scores on a scale of 0 to 100 whereby 100 denotes optimal performance. Because only one indicator was used per SDG, these should not be interpreted as “goal scores”.

Source: Authors' calculations.

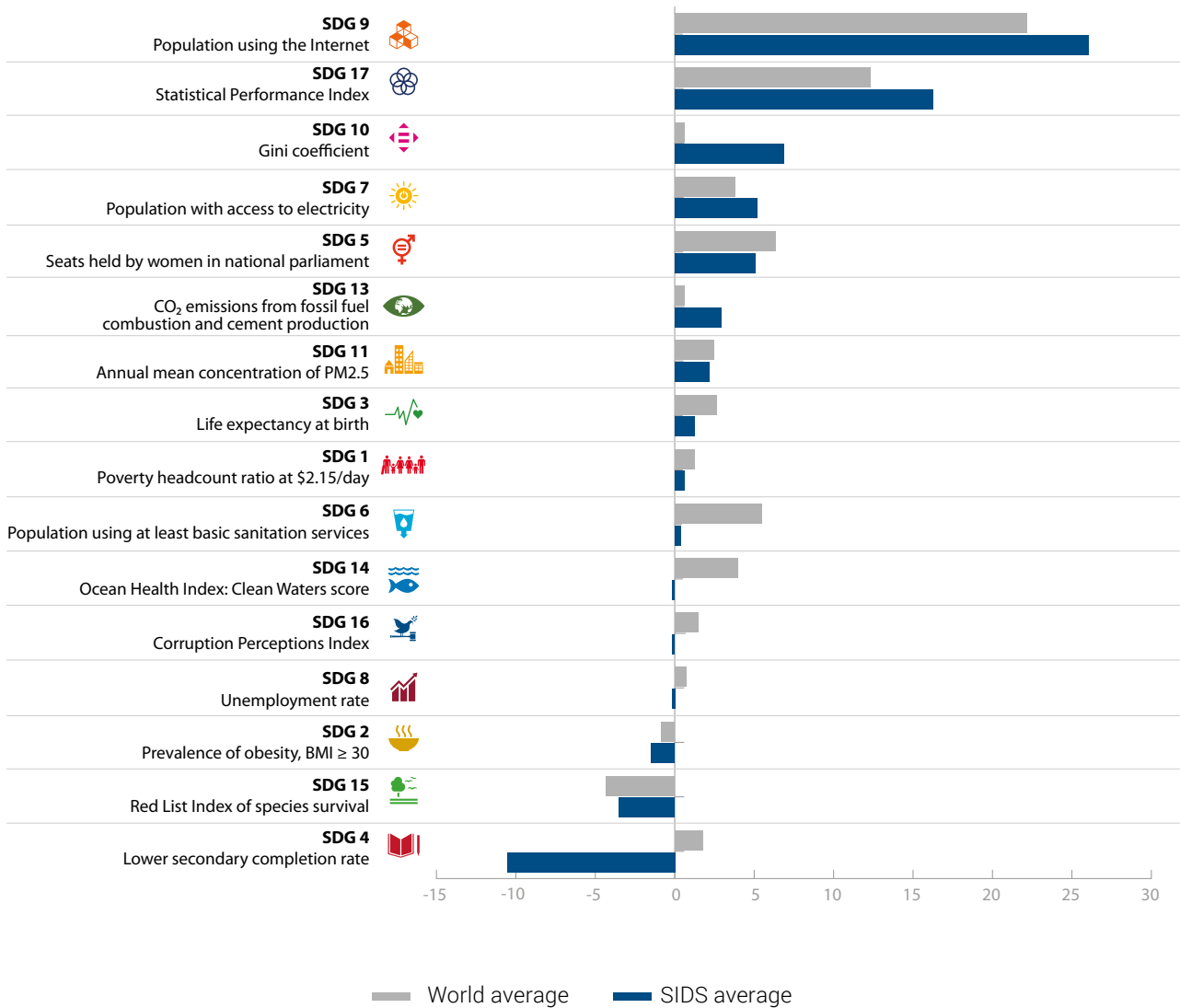
SDG challenges for SIDS vary by indicator, and while some indicators show a great deal of convergence in outcomes, others show a large degree of dispersion.

Figure 1.4 disaggregates the performance of SIDS on the SDG Index by showing the breakdowns by indicator. It is particularly noteworthy that indicator 13 – per capita CO₂ emissions – is one of the metrics showing the strongest performance, owing to the relatively low CO₂ emissions by SIDS, and especially by Pacific SIDS. And yet, despite having little responsibility in driving climate change, the SIDS are the countries that are most vulnerable to its effects (Sachs et al., 2022). Figure 1.4 also shows that environmental issues are critically important in the context

of the SIDS; indicator 15 – the Red List Index of species survival – shows an alarming loss of biodiversity in these countries that are often biodiversity hotspots. Indicator 14 – the Clean Waters Score of the Ocean Health Index – also shows major opportunities for improvement, especially given the importance of the ocean and coastal areas to the economies of SIDS. Lastly, it is important to note that indicator 17 – the Statistical Performance Index – is one of the metrics on which SIDS have the weakest performance, and this is especially true for the Pacific SIDS. This is particularly alarming given the centrality of data and statistics in monitoring and managing the complex SDG challenges in this unique group of countries.



Figure 1.5. SDG indicators that progressed or declined the most since 2015, SIDS average vs. world average



Note: Change on indicator score from 2015 until reference year of the indicator (see table A.3). Values given as population-weighted averages for SIDS and the world.

Source: Authors' calculations.

Assessing the performance over time of SIDS on the indicators shows that SIDS have progressed on some SDGs, but they also have experienced reversals in some key areas regarding sustainable development.

Figure 1.5 shows that both indicator 9 (Internet use) and indicator 17 (Statistical Performance Index) have experienced high degrees of improvement in the past few years. But as figure 1.4 shows, space remains for additional

progress. On the other hand, there have been important reversals in progress on indicator 4 (Lower secondary completion rate), which has been mostly driven by declines in the Dominican Republic and Cuba, and on indicator 15 (the Red List Index of species survival), which shows a worrying and continuing decline in biodiversity.

CHAPTER 2

THE MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX

The ability of SIDS to make progress toward achieving the SDGs is complicated by a shared set of inherent characteristics that lead to severe structural vulnerabilities. As small countries located in remote areas, SIDS are highly susceptible to economic and financial shocks, climate change, natural hazards and other vulnerabilities that impede their development. To effectively address these vulnerabilities and enhance their resilience to current and future economic and environmental crises, SIDS require increased access to financing.

Over the last three decades, SIDS have called for the creation of a globally accepted vulnerability index to be used, next to GNI per capita, in concessional finance eligibility processes. Important steps have been made over the last years. In 2005, the Mauritius Strategy for the Further Implementation of the SIDS Programme of Action recognized as a major concern of the international community the vulnerability of SIDS and recommended urgent steps to address those weaknesses. In 2014, the SAMOA Pathway called upon the United Nations to develop vulnerability-resilience country profiles, and in December 2020, the UNGA mandated the United Nations to produce a MVI for SIDS, through resolution 75/215. In 2020, the report of the United Nations Secretary-General to the UNGA (76/211) proposed the universalization of the MVI. In response, through its resolution 76/203, the seventy-sixth UNGA adopted several features of the MVI including its universalization and exogeneity. In February 2022, the President of the UNGA appointed a 12-member High Level Panel to carry forward work to finalize the MVI.

In 2021, the United Nations Resident Coordinators (UNRCs) for SIDS and the SDSN developed a first pilot MVI used to assess a set of economic, developmental and environmental vulnerabilities in SIDS and other countries worldwide. That pilot was intended to measure each country's degree of structural vulnerability– which

needs to be distinguished from the type of vulnerability generated by policy choices (Sachs et al., 2021). Put another way, structural vulnerability is the consequence of the inherent characteristics of a country and not the result of its public policies (Briguglio, 2000; Guillaumont, 2007).

This report proposes a new, updated version of the SDSN pilot MVI – to be called the Multidimensional Structural Vulnerability Index – to measure a country's structural vulnerability. The MSVI is employed to assess the structural vulnerability of 180 countries worldwide, including 33 SIDS. It is a composite index that gathers information from 18 indicators and is composed of three subpillars capturing different dimensions of vulnerability – the economic pillar, the structural development pillar, and the environmental pillar. The annex methodology in chapter 4 offers a comprehensive overview of the methodology behind the MSVI, including details on the selection of indicators and the methodology used to construct the index. Each country is assigned an individual vulnerability score on the MSVI, ranging from 0 to 100, which reflects its level of structural vulnerability.

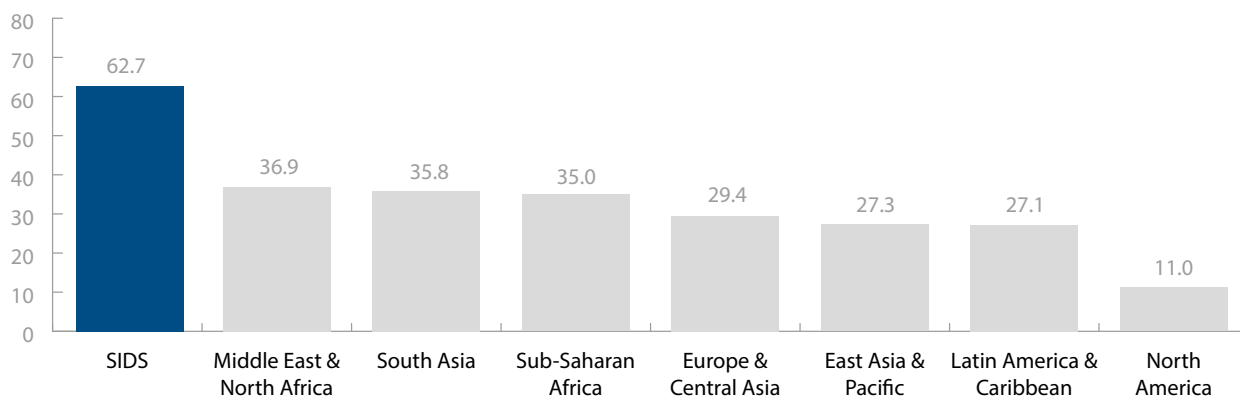
The MSVI is used to provide insights into the regional patterns and regional differences in structural vulnerability. It is also helpful to assess how structural vulnerability affects countries' economic stability and their ability to achieve the SDGs. In this way, the MSVI can support research and policy action to help direct investments and concessional finance toward the most vulnerable countries, thus enabling a targeted approach in supporting their sustainable development efforts.

SIDS are the most vulnerable countries in the world

The measurement of structural vulnerability using the MSVI reveals that on average, SIDS are the most vulnerable countries in the world. Their average score on the MSVI is 62.7, a score more than 25 points higher than the second-ranking most vulnerable region, the Middle East and North Africa region, and more than 50 points higher than the least vulnerable region, North America (figure 2.1). The prominence of SIDS in terms of

vulnerability is highlighted by their strong representation in the top 30 most vulnerable countries. A significant majority of SIDS, more than 80 percent, are included in this group. SIDS account for 83 percent of the top 30 most vulnerable countries in the environmental pillar, while they represent 70 percent of the top 30 most vulnerable countries in the economic pillar and 60 percent in the structural development pillar.

Figure 2.1. Average MSVI score for SIDS compared to other world regions



Note: The higher the score, the higher the level of structural vulnerability.

Source: Authors' elaboration.

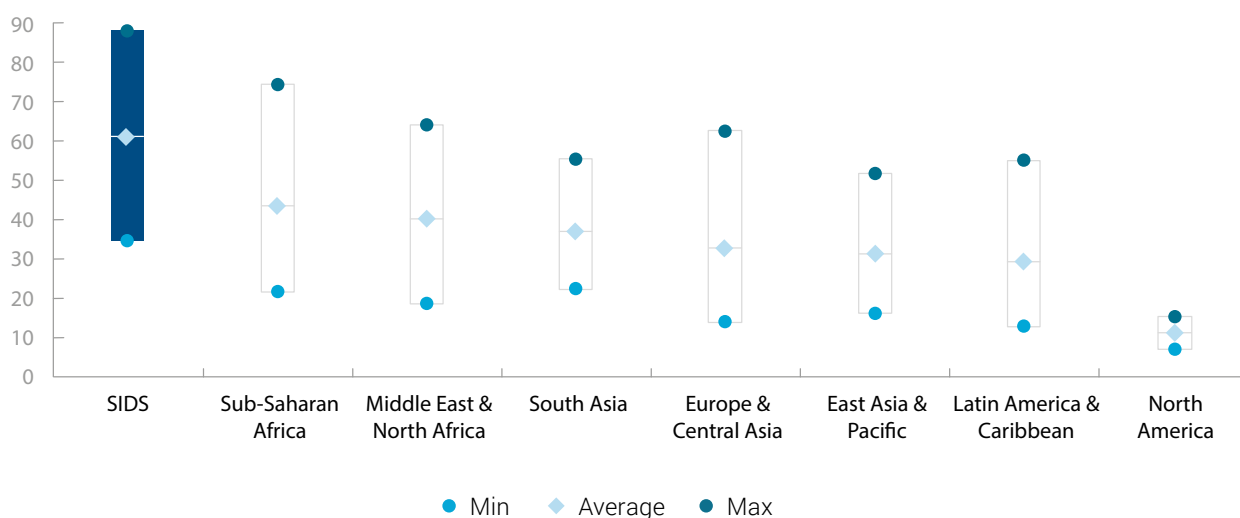
When compared to other world regions, SIDS consistently face the highest levels of structural vulnerabilities across all three dimensions – economic, structural development and environmental.

In each dimension, it is a SIDS that systematically obtains the highest vulnerability score, while none has the lowest vulnerability score. In the economic vulnerability dimension, SIDS register an average score of 60.5, which is nearly twice the average score of the rest of the world, and more than 50 points higher than the least vulnerable region (figure 2.2). In the structural development vulnerability dimension, while the gap between SIDS and other regions is slightly less pronounced, SIDS still exhibit an average score of 69.4. This is at least nine points higher than the next more vulnerable region and more than 50 points higher than

the least vulnerable region (figure 2.3). However, it is in the environmental vulnerability dimension that SIDS show the most significant gap with the rest of the world. With an average score of 58.2, SIDS are more than 40 points away from the next more-vulnerable region, which is South Asia (figure 2.4).

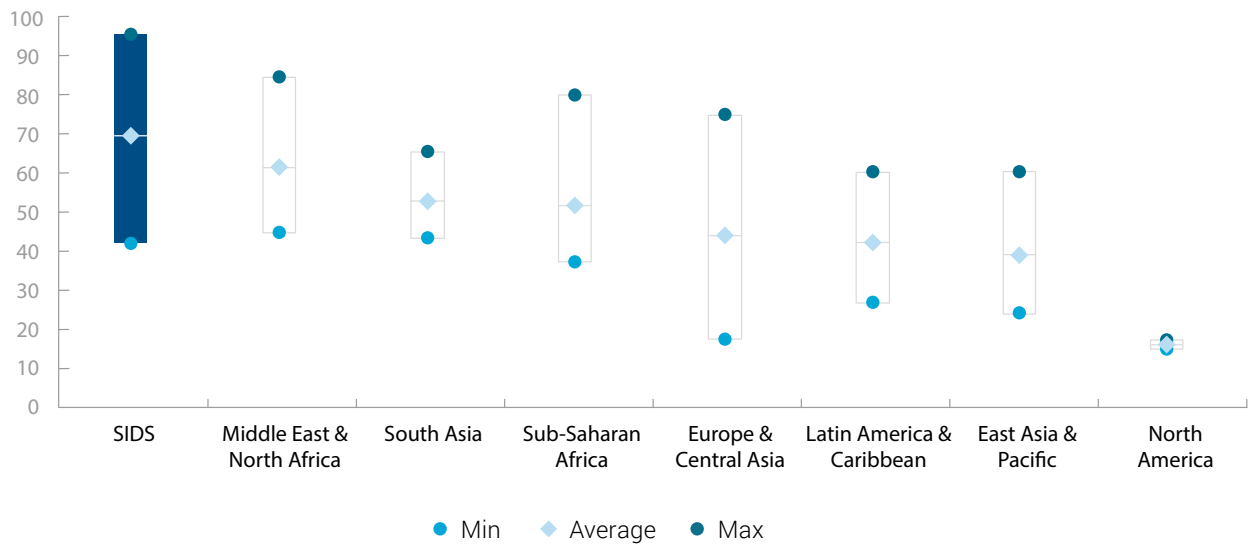
These statistical findings are further supported by an econometric analysis, which indicates that the coefficient associated with being a SIDS is positive and significant. Moreover, the coefficient for SIDS is larger compared to the coefficients associated with other regions (see annex table 2.1 at the end of this chapter).

Figure 2.2. Average economic vulnerability score for SIDS compared to other world regions



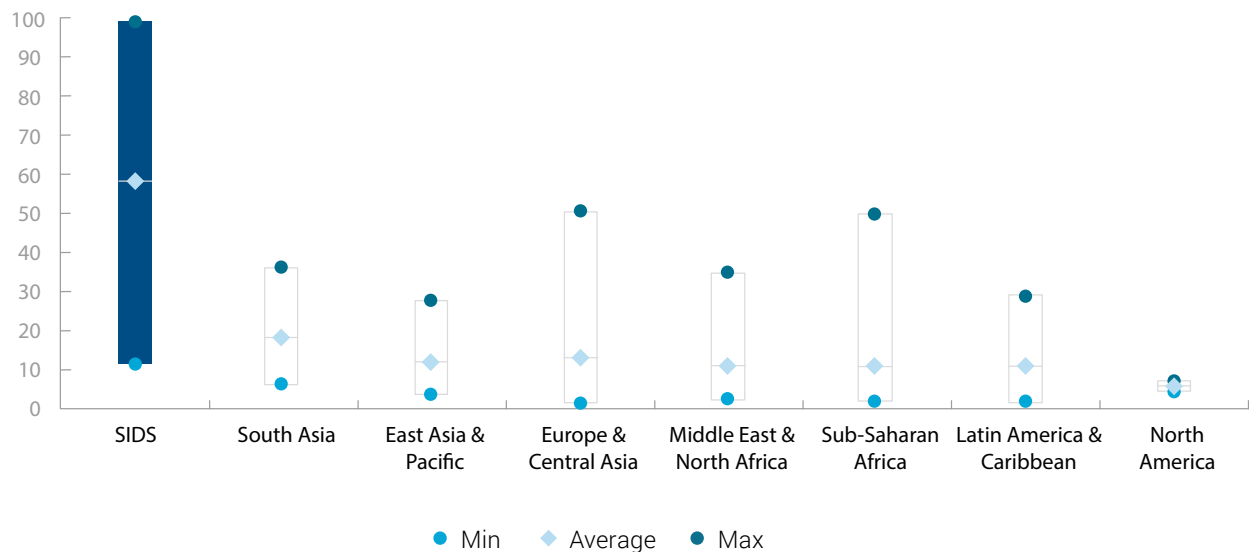
Source: Authors' elaboration.

Figure 2.3. Average structural development vulnerability score for SIDS compared to other world regions



Source: Authors' elaboration.

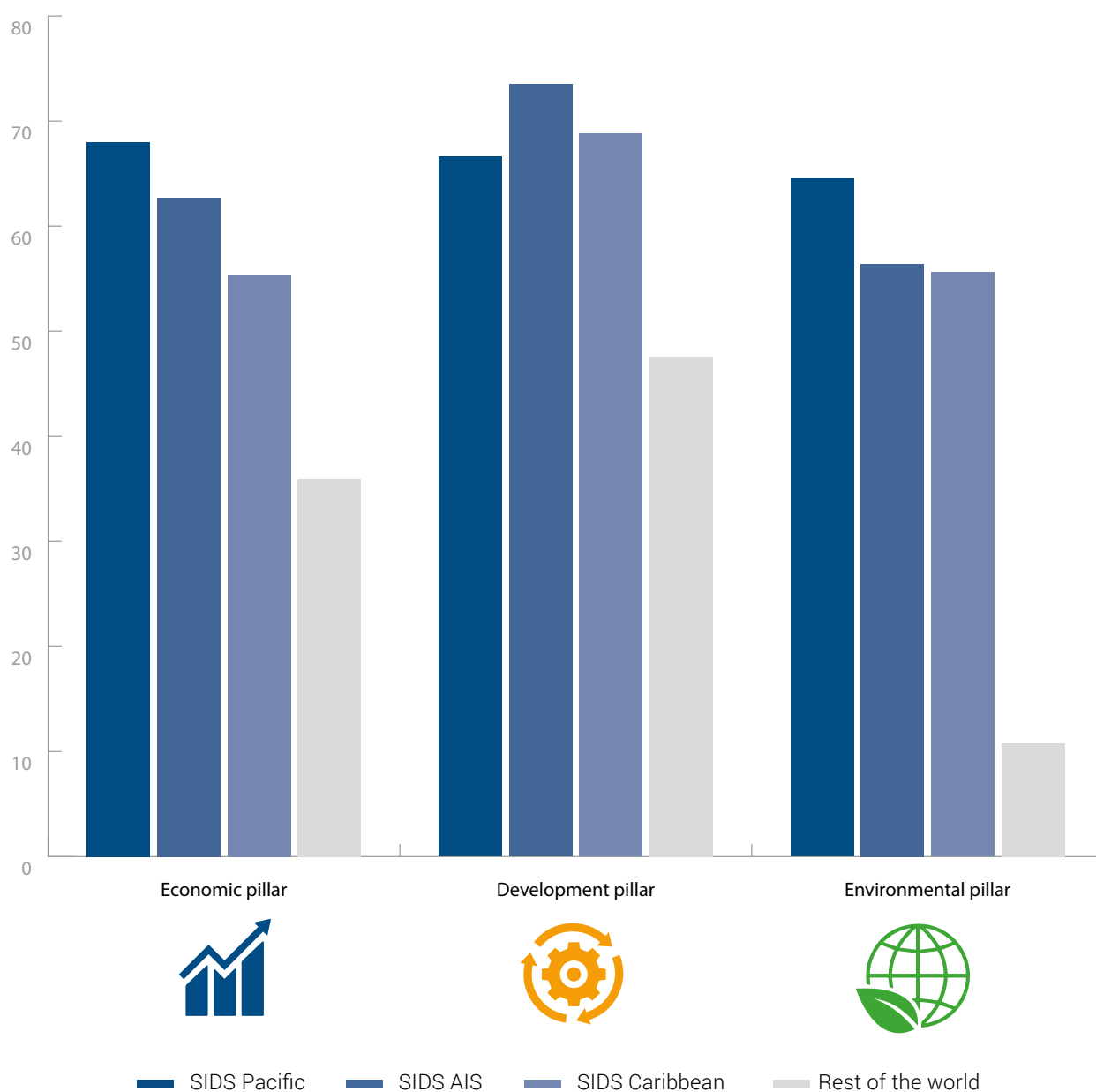
Figure 2.4. Average environmental vulnerability score for SIDS compared to other world regions



Source: Authors' elaboration.

While SIDS share common characteristics, there are notable differences in the types of vulnerabilities they face across the three SIDS regions. SIDS in the Pacific and AIS regions are particularly vulnerable economically, and AIS SIDS seem to face slightly greater development constraints compared to their counterparts. In terms of environmental vulnerability, Pacific SIDS appear to be the most exposed

to environmental shocks (figure 2.5). The vulnerability gap between SIDS regions is the highest in the economic dimension, and the lowest in the structural development dimension – where the difference with respect to the rest of the world is also the lowest. Despite these variations, each SIDS region remains on average much more vulnerable on all pillars compared to the rest of the world.

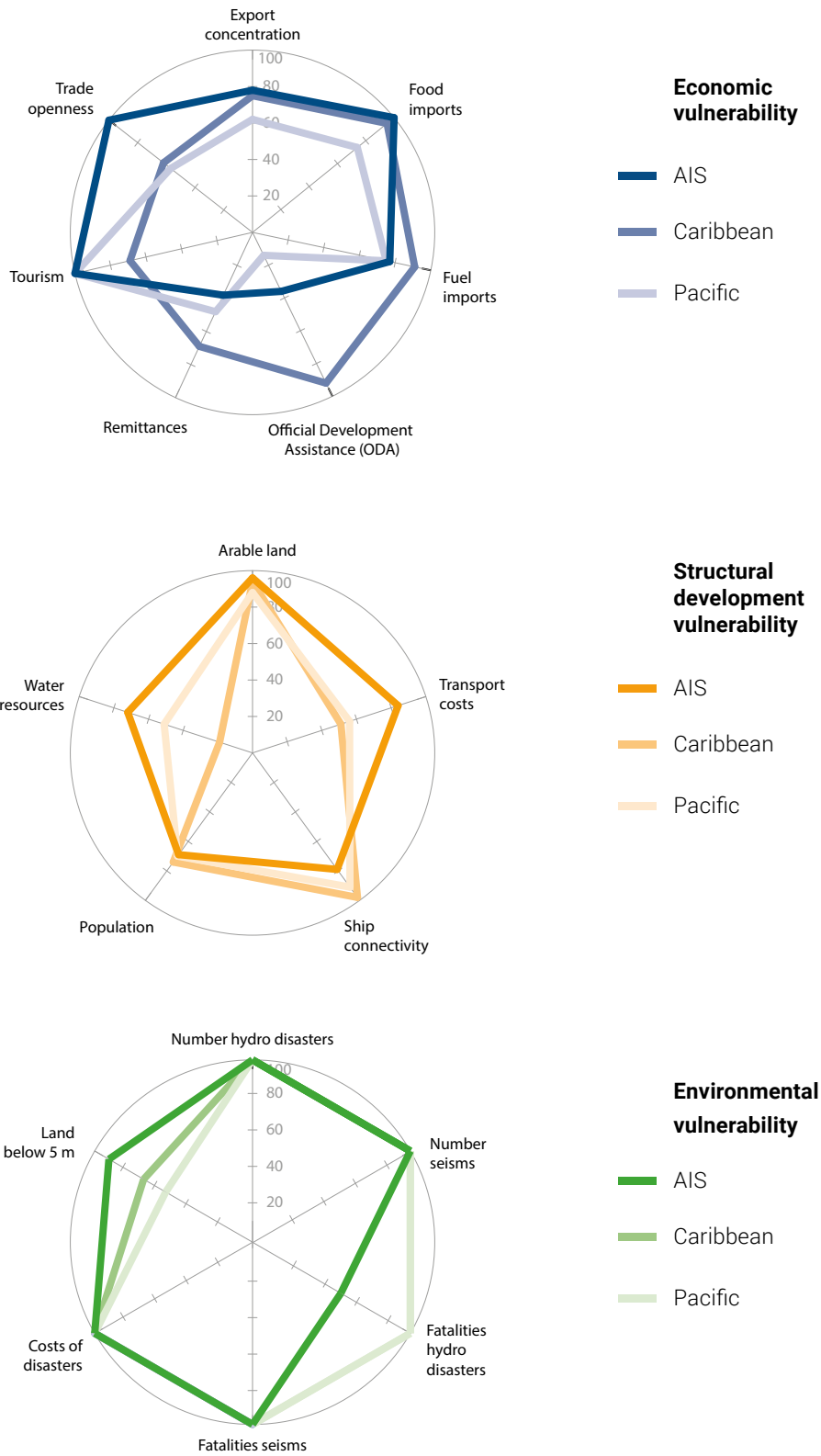
Figure 2.5. Average MSVI score by pillar across SIDS regions, compared to the rest of the world

Source: Authors' elaboration.

Although SIDS experience higher vulnerability levels across the three pillars compared to the rest of the world, it is essential to recognize that each SIDS region has a unique vulnerability profile. Factors such as geography, location, historical context and other elements contribute to the distinct vulnerabilities experienced by SIDS across the three regions. As a result, the indicators comprising the MSVI vary in their significance in explaining the average regional vulnerability scores (figure 2.6). Despite these regional variations, there are common vulnerability

factors that significantly affect all SIDS regions, such as their high dependence on food and fuel imports and on tourism receipts, the limited availability of arable land, the extensive ship connectivity, as well as their susceptibility to frequent hydrometeorological disasters relative to the size of their territory, which result in excessive disaster costs. These variables may play a crucial role in explaining the particularly high vulnerability levels observed in SIDS when compared to other regions worldwide.

Figure 2.6. SIDS regions' vulnerability profiles, by indicator



Note: Indicator scores on a scale of 0 (low) to 100 (high). ODA stands for Official Development Assistance.

Source: Authors' elaboration.

Countries with high levels of vulnerability tend to experience higher volatility of GDP growth

Vulnerable countries face greater challenges in pursuit of sustainable development compared to other countries. Besides direct consequences such as higher exposure to economic and environmental shocks, high levels of vulnerability also entail indirect effects that considerably impact countries and their populations. One notable indirect effect is the influence of vulnerability on a country's growth trajectory.

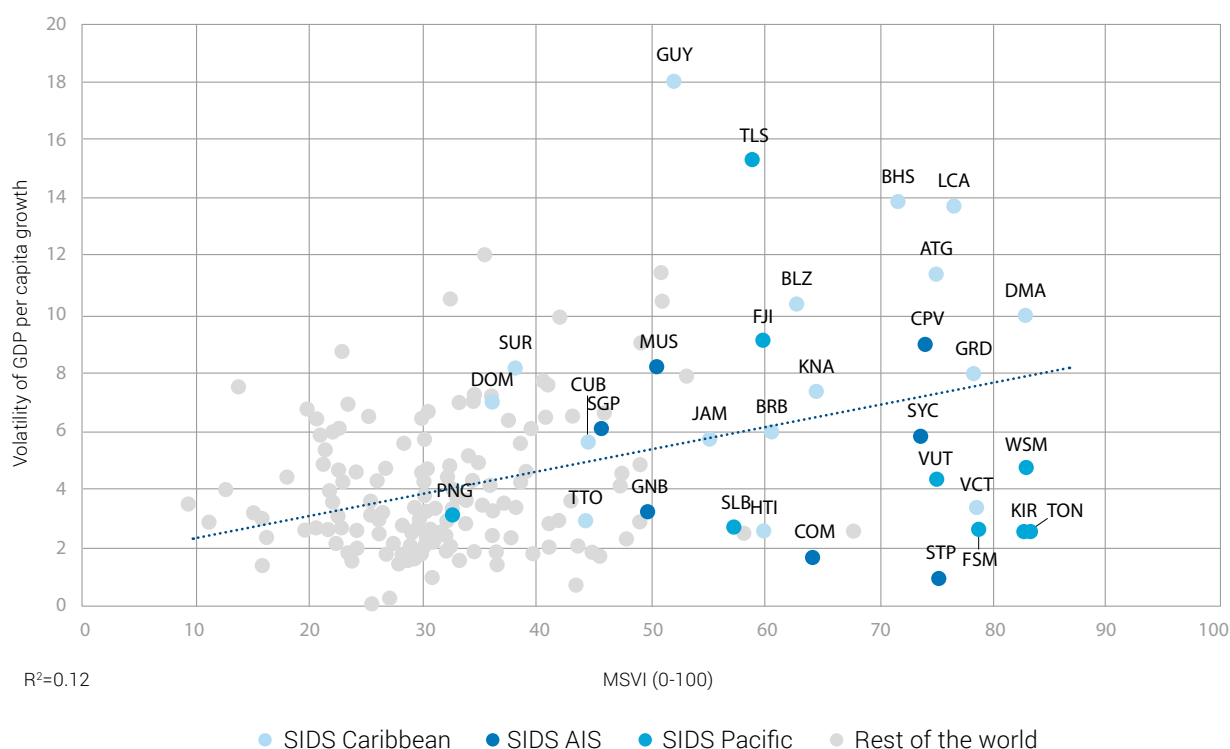
Our research reveals a significant positive relationship between the MSVI scores and the volatility of GDP per capita growth at the country level¹. Countries with high levels of vulnerability also tend to experience high volatility in their GDP per capita growth, reflecting the greater instability of their economies. In fact, for every one-point

increase in the MSVI score, there is an associated increase in the volatility of GDP per capita growth of approximately 0.1 percentage points (figure 2.7).

In addition to the level of vulnerability, various factors contribute to explaining the volatility of GDP per capita growth. These factors can be broadly categorized as:

i) structural; ii) institutional; and iii) policy variables. National and international contexts of inflation, the overvaluation of the exchange rate, the size of public deficits, or even the size of the country and the strength of the national democratic systems might explain part of the variance in growth volatility (see, for instance, Easterly, Islam and Stiglitz, 2000; Hnatkovska and Köhler-Geib, 2018; Knutsen, 2020).

Figure 2.7. MSVI scores vs. volatility of GDP per capita growth



Note: Volatility of GDP per capita growth is calculated as the standard deviation of the annual growth rates of GDP per capita over the last five years based on the data available. For representation purposes, outliers (Maldives and Libya) do not appear on the graph. The coefficient of the regression is 0.08, significant at the 1 percent level. The coefficient of determination (R^2) is 0.12.

Source: Authors' elaboration based on data from the World Bank's World Development Indicators Database (2022).

¹ While it is reasonable to anticipate that a country facing the depletion of its natural and physical resources would witness a negative impact on its GDP growth rate, additional quantitative analysis is needed to establish a causal relationship between the MSVI scores and the volatility of GDP per capita growth.

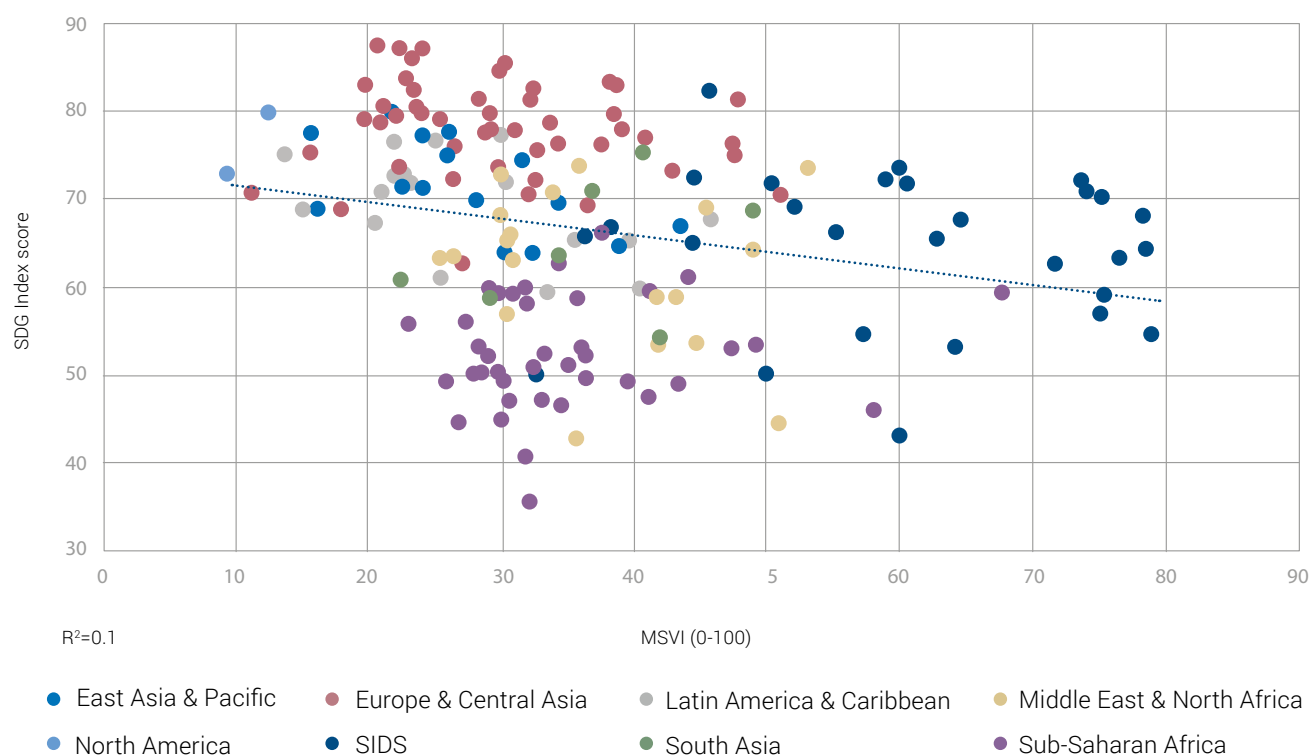
High vulnerability is associated with lower performance on the SDGs

SIDS are characterized by a high degree of structural vulnerability, which impacts their ability to progress on the SDGs. There is a significant negative relationship between the MSVI and the SDG Index, indicating that countries with high levels of structural vulnerability tend to perform lower on the SDGs (figure 2.8). This relationship suggests that countries facing severe vulnerabilities encounter substantial obstacles that must be overcome before they can effectively plan and invest in sustainable development. While SIDS score the highest levels of vulnerability on the MSVI, their performance on the SDG Index remains relatively low – although still stronger compared to most sub-Saharan African countries. It is important to note that the degree of structural vulnerability is not the sole determinant of SDG outcomes. Progress toward the SDGs may also be influenced by other factors such as institutional capacities, engagement in international partnerships, political commitment to the goals, implementation of social and environmental policies, as well as the level of private investment flows into the country.

There is a consistent pattern of negative correlation between vulnerability and specific socioeconomic outcomes, as highlighted in previous studies. These studies have demonstrated a clear association between structural vulnerability and specific SDG outcomes, suggesting that countries with higher vulnerability levels tend to experience greater obstacles to meet education and food security targets (box 2.1).

As highly vulnerable countries, SIDS face a critical need for stronger financial support from the international community to make progress on the SDGs. Due to their small size and limited resources, these countries typically have constrained public spending capacities for sustainable development. Consequently, they often face challenges in reaching higher levels of SDG performance. To achieve comparable progress toward the SDGs, countries with high structural vulnerability require approximately twice the amount of public expenditure as countries with low vulnerability (Massa and Bermont Díaz, 2023). Therefore, vulnerable countries tend to struggle more to close their SDG financing gap on their own. By providing enhanced financial assistance and tailored financing approaches, the international community can help narrow the SDG financing gap and support the progress of highly vulnerable countries toward achieving the SDGs (see chapter 3).

Figure 2.8. MSVI vs. SDG Index scores



Note: The coefficient of the regression is -0.2 and is significant at the 0.1 percent level. The coefficient of determination (R^2) is 0.1.

Source: Authors' elaboration.

Box 2.1. Structural vulnerability and socioeconomic outcomes: the case of Education (SDG 4) and Food Security and Nutrition (SDG 2)

Besides being linked to an overall lower performance on all of the SDGs, higher structural vulnerability has been consistently linked to poorer performance specifically on SDG 4 (Massa et al., 2022). Countries with higher levels of structural vulnerability often exhibit lower educational outcomes. This is particularly evident in highly vulnerable countries, such as SIDS, where limited financial resources and other constraints hinder investments in education. A high degree of structural vulnerability was also found to be associated with high levels of population displacements, food insecurity and brain drain, which negatively impacts the capacity of countries to achieve SDG 4 (Quality Education) and SDG 8 (Decent Work). While digital infrastructure and technologies hold promise in strengthening education systems and resilience in SIDS, vulnerable countries encounter persistent obstacles in implementing digital transformation. Consequently, this hinders educational attainment and compromises the quality of education in these countries.

Another study, conducted by Massa et al. (2021), sheds light on the influence of vulnerability on countries' progress toward SDG 2. It emphasizes that countries with higher vulnerability levels encounter greater challenges in eradicating hunger, achieving food security and improving nutrition. The study identifies economic vulnerabilities and structural development limitations as the primary factors negatively impacting the achievement of SDG 2. Specifically, highly vulnerable countries exhibit higher rates of obesity among their adult populations compared to less vulnerable countries. Obesity is a significant issue in SIDS, mostly caused by the decrease in food production and the increasing dependency of the populations on food imports. To tackle the problem of obesity and its associated health issues in SIDS, it is crucial to implement appropriate national legislation, policies and initiatives. Stronger support for domestic food production should be a key focus, aiming to reduce dependency on imports and promote healthier diets.

Source: Based on Massa et al. (2022), and Massa et al. (2021).

Annex Table 2.1. The impact of being a SIDS vs. belonging to another region on structural vulnerability (OLS regressions)

	(1) MSVI	(2) Economic pillar	(3) Structural development pillar	(4) Environmental pillar
SIDS	53.1*** (2.9)	50.8*** (3.7)	52.9*** (2.6)	55.4*** (4.5)
East Asia & Pacific	16.7*** (2.3)	21.4*** (3.9)	21.7*** (2.3)	7.05** (2.3)
Europe & Central Asia	18.9*** (1.7)	22.6*** (3.3)	27.2*** (1.5)	6.98*** (2.0)
Latin America & Caribbean	16.4*** (2.5)	19.6*** (3.9)	25.4*** (2.5)	4.24* (2.1)
Middle East & North Africa	26.3*** (2.3)	29.7*** (4.0)	43.4*** (2.4)	5.92* (2.7)
South Asia	25.4*** (3.3)	27.0*** (5.1)	35.8*** (3.0)	13.6** (4.8)
Sub-Saharan Africa	24.2*** (1.8)	33.1*** (3.3)	34.4*** (1.5)	5.08* (2.1)
Constant	11.1*** (1.1)	10.7*** (2.7)	17.6*** (0.3)	4.92*** (1.1)
Number of observations	180	180	180	180
R ²	0.63	0.44	0.53	0.65
Adjusted R ²	0.61	0.42	0.51	0.63

Note: The category of reference is the least vulnerable region – North America. All coefficients must be interpreted relative to this region. Standard errors in parentheses; * p < 0.05, ** p < 0.01, *** p < 0.001.

Source: Authors' elaboration.

CHAPTER 3

**FINANCING THE
SUSTAINABLE
DEVELOPMENT GOALS
IN SMALL ISLAND
DEVELOPING STATES:
CHALLENGES AND
OPTIONS**

To achieve the SDGs, investments in areas of critical importance for humanity and the planet are required, but the global financial architecture is failing to provide SDG financing at the needed pace and scale, especially in poor and vulnerable countries such as SIDS.

Cascading crisis – including climate change, pandemics and war – compounded with high inflation, tightening monetary and financial conditions and unsustainable debt burdens – are placing mounting pressure on finance available for sustainable development. Poor and vulnerable countries are suffering the most, facing major fiscal-space constraints that represent significant barriers to investing in the SDGs and pursuing a green transition. As stated by the United Nations Deputy Secretary-General Amina Mohammed, the existing global financial architecture (i.e. the system of public and private finance that channels the world's savings to the world's investment) is “too short-sighted, crisis-prone, and deeply unequal”². External concessional finance is inadequate, limited and unevenly distributed across countries and sectors. In 2022, Official Development Assistance (ODA) reached 0.36 percent of GNI of member countries of the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC); this figure is still half of the long-standing ODA target of 0.7 percent of GNI (Sachs et al., 2023a). Moreover, some of the most vulnerable economies are prevented from accessing concessional finance due to existing eligibility criteria, and ODA is unevenly distributed across the different priority areas to achieve the SDGs (Massa and Bermont Díaz, 2023). On the other hand, in global capital markets, poor and vulnerable countries are unable to borrow levels of capital sufficient to meet their long-term sustainable development needs, and they face high borrowing costs, short maturities on debts and poor credit ratings (Sachs et al., 2023a).

This challenging context has resulted in repeated calls for enhancing availability of financial resources to vulnerable countries and reforming the global financial architecture. The 2022 Bridgetown initiative, led by Barbados and its Prime Minister Mia Mottley, called for providing liquidity to stop the debt crisis and for expanding multilateral lending to governments by \$1 trillion. In February 2023, the United Nations Secretary-General António Guterres called for a global SDG Stimulus Plan of at least \$500 billion annually to scale-up affordable long-term financing for countries in need (United Nations, 2023). But as highlighted in the Addis Ababa Action Agenda, financing sustainable development is about more than the availability of financial resources, and reforms of the international financial architecture are required. Therefore, the SDG Stimulus Plan put forward several reforms; those included a revision of the current debt architecture and of the capital adequacy policies of the Multilateral Development Banks

(MDBs) and Public Development Banks (PDBs), as well as of the terms of lending. It also highlighted the need for national policies to better align all financing flows with the SDGs by using Integrated National Financing Frameworks (INFFs).

A number of reforms were also promoted to create a fit-for-climate global financial system. At COP27 in November 2022, an agreement was reached to create a new Loss and Damage Fund for sharing fairly and globally the burden of human-induced costs of loss and damages. In preparation for the 2023 Annual Meetings of Boards of Governors of the International Monetary Fund (IMF) and World Bank Group that will be held in October in Marrakech, the Vulnerable 20 (V20) Group of Ministers of Finance of the Climate Vulnerable Forum called for four steps:

1. making debt work for climate;
2. transforming the international and development financial system to support green and resilient investments;
3. making a new global deal on carbon financing; and
4. revolutionizing risk management to address climate issues.

The recent Summit for a New Global Financing Pact, held in Paris in June 2023, reiterated the importance of reforming the world's financial system to reduce poverty, achieve a green transition and preserve the planet. The Summit highlighted four equally important steps that need to be taken immediately. First is the need to enhance access to climate finance by providing \$100 billion annually to poorer countries and to increase by \$200 billion the lending capacity of MDBs over the next 10 years. Second is the necessity to introduce climate-resilient debt clauses by the end of 2025, allowing vulnerable states to suspend their debt repayments when natural disasters strike. Third is the urgency to strengthen the role of MDBs in mobilizing at least \$100 billion of private money each year in developing and emerging economies. Fourth is the call to foster international cooperation among financial institutions and other actors in various areas including the energy transition.

² Deputy Secretary-General's remarks at IMF/World Bank Spring Meetings, 13 April 2023. <https://www.un.org/sg/en/content/dsg/statement/2023-04-13/deputy-secretary-generals-remarks-imfworld-bank-spring-meetings-prepared-for-delivery>

Why do SIDS struggle to finance the SDGs?

Various global forums and initiatives have led to the crafting of important proposals that would enhance the availability of financing resources and speed the reform of global financial architecture. Yet SIDS still face chronic underfinancing of sustainable development. Due to their structural vulnerabilities and high levels of debt, SIDS have limited capacity to invest in long-term and resilient development. Moreover, as they are unable to borrow on affordable terms, key sectors linked to human development – such as health and education – are severely underfunded. Over the long term, this has grave consequences for human capital.

Because of their small size, SIDS have a limited revenue generation potential, and their tax revenues are on average lower than in other developing countries at all levels of development (OECD, 2020). On the other hand, frequent exposures to natural hazards and disasters, intensified by climate change and external economic and financial shocks, lead to exorbitant costs and limit governments' capacity to mobilize meaningful levels of public spending to progress on the SDGs. A recent study by Massa and Bermont Díaz (2023) shows that countries such as SIDS with high levels of structural vulnerability may spend only half the amount to advance on the SDGs compared to countries with low levels of vulnerability. These challenges are compounded by high levels of public debt. Public-debt-to-GDP ratios for SIDS are on average higher than for other developing countries, with several SIDS experiencing ratios over 100 percent (Bouhia and Wilkinson, 2021). From the IMF and World Bank Debt Sustainability Analyses (DSAs), it emerges that half of the SIDS (including not only low- but also middle- and high-income countries) are either in debt distress, at high risk of debt distress or have unsustainable debt levels (Fresnillo and Crotti, 2022). Such high levels of debt further constrain the little fiscal space available to respond to external shocks, thus creating a vicious cycle. A 2022 study by the civil society network Eurodad found that in 2021, SIDS investment in climate resilience was 18 times lower than the debt servicing payments they made during the same period (Fresnillo and Crotti, 2022).

To make progress on sustainable development, SIDS need significant external assistance. However, they struggle to access both concessional and private finance. Although concessional finance allocations to SIDS are higher in per capita terms compared to other developing countries due to the small size of their

populations, these countries receive very little ODA as a share of the total amount, and they receive much less than they require to overcome their vulnerabilities and respond to their needs (UNDP and UN-OHRLLS, 2015; UN-OHRLLS, 2023). On the other hand, foreign direct investment (FDI) flows to SIDS represent only 0.6 percent of global FDI, and they remain concentrated on a few countries – five high-income and middle-income SIDS account for 85 percent of FDI flows to the group (UNCTAD, 2023). A recent study by Wilkinson et al. (2023) also reports that, notwithstanding their vulnerability to climate change and disasters, SIDS receive seven times less resilience finance than least developed countries, 11 times less than lower-middle-income countries, and five times less than upper-middle-income countries³.

Two key factors may explain the limited access to external financing for SIDS. The first is the use of GNI per capita to measure development needs and allocate concessional finance across developing countries. In the current landscape for financing sustainable development, countries and territories are defined as eligible to receive ODA based on their GNI per capita. The main advantage of this income indicator is that it can be computed with data easily available across countries and is also correlated with a few non-monetary measures of development such as life expectancy at birth, child mortality rates and school enrollment rates. However, the use of the GNI per capita criterion as a measure of developmental progress has several limitations – including that it does not reflect inequalities in income distribution – and is deeply misleading in the case of SIDS. Not only does it overstate living standards in SIDS by dividing national income by a small population, but it is also unable to capture the set of inherent characteristics and structural vulnerabilities that characterize this group of countries. Because of the GNI per capita criterion, many SIDS that are classified as middle- or high-income economies are ineligible for concessional financing, even though they are still in need of aid to respond to increasing economic and environmental challenges. The lack of access to concessional finance prevents SIDS from the possibility of relying on important predictable and countercyclical financing flows, and from the opportunity of catalyzing private investments. This situation is aggravated by the fact that allocations across ODA-eligible SIDS tend to be uneven since, in most cases, they are led either by cultural and geopolitical ties or by individual shocks. According to the OECD (2018), more than half of total concessional finance to SIDS is concentrated in just five countries.

³ Resilience finance is defined as private, public and philanthropic flows that aim to reduce climate (and disaster) vulnerability and increase resilience of SIDS.

The second factor limiting SIDS' access to private sector financing is the lack of creditworthiness.

According to the current commercial credit rating methodologies, investment grade credit scores are assigned on the basis of short-term liquidity considerations rather than considering the long-growth potential of a country and the positive spillovers arising from increased investment in sustainable development (Sachs et al., 2023a; Massa and Bermont Díaz, 2023). Therefore, highly vulnerable countries such as SIDS have no creditworthiness and can only borrow at short-term maturities and high interest rates.

Persisting bottlenecks in access to finance coupled with continuous crises and environmental shocks have led to significant financing gaps to achieve the SDGs in SIDS. Recent estimates provided by the IMF show

that the median additional annual expenditure required to achieve the SDGs in five sectors (i.e. health; education; water, sanitation, and hygiene (WASH); energy; and roads) in 25 Small Developing States exposed to climate-related hazards, including 23 SIDS, amounts to 6.7 percent of the selected countries' GDP in 2030 (Tiedemann et al., 2021). Similarly, Massa and Bermont Díaz (2023) find that the additional annual spending needs for the median high-vulnerable country – the group to which most SIDS belong – to reach a level of sustainable development at which both physical infrastructure and human capital outcomes have mostly been achieved is equivalent to about 7 percent of its GDP. This is 4 percentage points higher in comparison to low-vulnerable countries.

Exploring the options for increased SDG financing in vulnerable SIDS

It is important for SIDS to explore different options for enhancing access to external financing. First, SIDS should demand the inclusion of a measure of vulnerability as a criterion (complementary to GNI per capita) to define the eligibility of a country to concessional development finance. The governments of many SIDS have already called for more favorable access to concessional resources and for developing a vulnerability index that could be used to supplement GNI per capita in assessing concessional financing needs of SIDS and other vulnerable countries. In principle, different metrics, such as GNI per capita and a MVI, can coexist to inform decisions related to access and/or allocation of concessional resources insofar as they capture different aspects of each country's development (box 3.1).

Second, SIDS should be strategic in using traditional and innovative financing mechanisms tailored to their country-specific vulnerabilities and needs. There is no fit-all financing solution to fund sustainable development in SIDS, but a combination of tailored instruments is required to address country-specific vulnerabilities and meet the SDGs. Figure 3.1 attempts to categorize various existing financing mechanisms along the three vulnerability pillars – economic, structural development and environmental – of the MSVI.

Box 3.1. The MSVI as a complementary measure to income indicators for accessing concessional finance

To assess whether a vulnerability index can be used as a complementary measure to income indicators to access and/or allocate concessional finance, we studied the relationship between the MSVI and GDP per capita in a sample of developed and developing countries (including SIDS) around the world. The analysis found no significant correlation between the degree of structural vulnerability of countries and their GDP per capita (table 3. 1).

Table 3.1. MSVI vs. GDP per capita

	GDP per capita
MSVI	-160.8 (127.3)
Constant	53712.7*** (5676.3)
Regions fixed effects	Yes
Number of observations	179
R ²	0.29
Adjusted R ²	0.26

Note: The run regression is:

$GDP_{pc_i} = \beta_0 + \beta_1 MSVI_i + \varepsilon_i$, where ε_i is the error term for country i .

Standard errors in parentheses;

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Authors' elaboration.

This means that the MSVI and GDP per capita are complementary measures that capture different aspects of development of a country. Therefore, it is possible to incorporate structural vulnerability more fully into the eligibility criteria of MDBs.

Figure 3.1. Financing options to respond to country-specific vulnerabilities

Source: Authors' elaboration.

A few financing tools are well placed to respond to all three types of vulnerabilities. These include traditional mechanisms such as grants and concessional loans, debt-relief/cancellation, but also more innovative instruments (e.g. SDG bonds, sustainability bonds and sustainability-linked bonds) and triangular cooperation. The global market for sustainability-themed bonds is growing rapidly and nowadays has reached a value of more than \$1 trillion (UNDP and Pacific Islands Forum, 2022). Nevertheless, of the 20 countries globally that have issued these sustainable thematic debt instruments, only three are SIDS. In a similar way, although several Caribbean SIDS (e.g. Dominican Republic, Haiti and Cuba) and to a lesser extent Pacific SIDS (e.g. Timor-Leste and Fiji) have implemented triangular cooperation projects over the past years, these still represent a small share of triangular cooperation projects implemented worldwide (OECD, 2018). Bonds and triangular cooperation can be powerful tools to access additional capital and bring new sources of expertise to SIDS. Triangular cooperation can also be useful to foster greater policy dialogue. With the income criterion still the sole parameter of access to ODA, SIDS that have graduated to middle-income and high-income countries would not have access to triangular cooperation either.

A set of other financing tools can be more useful in countries characterized by one or just two types of vulnerability. Public-private partnerships, for example, are particularly useful in contexts of high economic and/or structural development vulnerability. PPPs can provide financing for large-scale infrastructure projects in priority sectors such as ICT, transport, agriculture, tourism and renewable energy. Thanks to PPPs, SIDS can develop quality and cost-effective solutions to their economic and developmental structural vulnerabilities such as smallness, remoteness, limited availability of freshwater resources and high dependency on food and fuel imports. PPPs also allow SIDS to obtain the maximum benefits of the expertise and innovations of the private sector.

Regional cooperation and integration may, instead, be one of the strategies to overcome developmental and/or environmental constraints associated with remoteness, smallness and vulnerability to disasters and climate change. By promoting regional cooperation initiatives, regional clusters of SIDS may cooperate to maximize limited resources and capitalize on the potential to improve economies of scale and leverage capacities. In

several cases, these initiatives have been adopted by small island states with the objective of accelerating conservation of marine and terrestrial ecosystems (GEF LME:LEARN, 2020).

On the other hand, insurance mechanisms, contingency funds and green bonds may be particularly useful in economies with high degrees of economic and/or environmental vulnerability. Both insurance mechanisms and contingency funds have the advantage that they allow resources to be rapidly disbursed to impacted countries in the wake of economic or natural shocks. However, the use of insurance instruments, which is rather widespread in developed countries, is still very scarce in developing and vulnerable countries such as SIDS (OECD, 2021). Over the last two decades, capital markets have seen an explosive growth of green bonds, which allow capital to be channeled to green projects, such as those supporting renewable energy. These bonds can help countries overcome both economic and environmental vulnerabilities. Until now, SIDS have used them sparingly; Fiji issued a green bond in 2017, becoming the first emerging market in the world ever to do so.

Finally, there are several other mechanisms that are particularly suitable for raising finance in economies highly exposed to climate change and natural hazards. These include blue bonds, as well as compensation funds, and a set of other innovative financing instruments that have been under discussion as options to support countries in addressing loss and damage costs. Over the last two decades, blue bonds have become an important tool to address the impacts of climate change and related challenges by financing marine and ocean-based projects. The Republic of Seychelles launched the world's first sovereign blue bond in 2018. More recently both Belize and Barbados announced the issuance of a blue bond in 2021 and 2022, respectively. Due to their high vulnerability to natural hazards and climate change to which they have only slightly contributed, SIDS bear the burden of significant loss and damage (L&D) costs. Several different financing mechanisms, ranging from compensation funds to air travel levies, carbon taxes, and Special Drawing Rights (SDRs), among others, have been proposed to help SIDS to cope with environmental vulnerabilities and L&D costs. Each of these tools has certain benefits and disadvantages, but there is still no agreement within the international community on which one can be the most effective (Sachs et al., 2022).

Ways forward to overcome global and local barriers to investing into the SDGs in SIDS

To make the most of the described options to enhance SDG financing in SIDS, several barriers need to be overcome. At the global level, the distribution of concessional resources across countries and sectors as well as their effectiveness should be improved.

To achieve this objective, the MDBs should be reformed beyond their capital adequacy policies, as also stated in the global SDG Stimulus Plan. The criteria to allocate concessional finance should be revised by integrating the vulnerability criterion. Official funding resources should be directed to priority areas of investment with the highest impact on sustainable development rather than targeting profitable areas that will contribute little or nothing to the achievement of the SDGs. Cooperation among MDBs (and other development stakeholders) should be enhanced to achieve greater complementarity and collective impact (Sachs et al., 2023a).

In the credit rating system, credit rating methodologies should be reformed to recognize the long-term growth potential of developing and vulnerable countries. As highlighted by United Nations Secretary-General António Guterres, “Credit ratings should be based on comparable fundamentals and evidence, rather than harmful preconceptions”⁴. Only in this way can a broader number of SIDS get investment grade ratings and therefore have access to innovative financing tools such as sustainability-themed bonds. To allow vulnerable countries to benefit more from innovative financing instruments, the reform of the credit rating system can be complemented by bigger efforts of MDBs in improving market perceptions of risk through guarantees as well as by a reassessment of the existing IMF/World Bank debt sustainability framework (Sachs et al., 2023a). Another important way to improve their borrowing position would be for SIDS to value their natural and produced capitals and use them as collaterals for all debt instruments. This topic is further explored in two recent policy briefs (United Nations Secretary-General, 2023; UN DESA, 2022).

At the country level, several actions should be put in place to overcome human, institutional, regulatory, technological and other barriers that hinder the capacity of SIDS to access traditional and innovative financing resources and to effectively channel them toward sustainable development. Eight actions are particularly important:

1. Promote capacity-building initiatives:

SIDS are characterized by limited human and institutional capacity that affect the use of financing mechanisms. A survey conducted by the G20 Green Finance Study Group (GFSG) reveals that one of the major impediments for potential issuers to first enter the green bond market is the lack of awareness of the benefits of green bonds (OECD et al., 2016). Similarly, the main reason for the limited use of insurance instruments in developing countries is found to be governments’ lack of knowledge and understanding of insurance products (Sachs et al., 2022). Technical assistance, training programs and knowledge exchanges – including through SIDS-SIDS peer learning and cooperation – should be promoted to overcome these barriers.

2. Develop and strengthen national statistical systems (NSS):

Statistical capacity in SIDS is weak. This is clearly mirrored by the fact that on average, SIDS are missing values for 27 percent of the indicators used in the annual Sustainable Development Report produced by SDSN, against 2 percent on average for OECD countries (Sachs et al., 2023b). The development of NSS should be promoted to inform and monitor financing initiatives as well as to report on their effectiveness.

3. Promote digitalization and internet connectivity:

Due to their smallness and remoteness, SIDS have limited internet connectivity and a low degree of digitalization. Among other advantages, these technologies are vital for promoting capital markets development by providing high-quality and timely data and easing bureaucratic processes and procedures. Efforts to progress on the digital transformation would, therefore, enhance countries’ access to financing resources.

⁴ Secretary-General’s remarks to the General Assembly on his Priorities for 2022, 21 January 2022.

<https://www.un.org/sg/en/content/sg/speeches/2022-01-21/remarks-general-assembly-his-priorities-for-2022>

4. Create long-term plans, investment frameworks and enabling policy and regulatory environments:

Sound business environments should be promoted in SIDS to incentivize private sector investment.

5. Develop market infrastructure:

Adequate market infrastructure is fundamental for the depth and liquidity of capital markets. To promote the development of bond markets, SIDS should develop their market infrastructure by establishing, for example, trading platforms and clearing houses.

6. Promote good governance:

SIDS should foster effective governance structures for horizontal and vertical relationships to overcome challenges such as low efficiency, redundancy and the misguided use of funds (Tateno et al., 2022).

7. Increase focus on public expenditure management:

A strong public expenditure management, which also includes SDG budgeting, should be promoted to ensure that financing resources are used efficiently and directed toward activities that significantly impact sustainable development. An improved public expenditure management can also help to build trust and credibility with investors.

8. Develop Integrated National Financing Frameworks (INFF):

The global SDG Stimulus Plan also highlights this step. A few SIDS have already developed or are developing an INFF. Among other benefits, these frameworks are key to strengthening the alignment of development finance with national development priorities and increasing resource mobilization by identifying underutilized development finance sources.

CHAPTER 4

ANNEX METHODOLOGY

Methodology for the SDG Index for SIDS

The 2023 SDG Index for SIDS provides an assessment of progress and priorities for the 2030 Agenda for all 38 United Nations Member States that are SIDS. The overall SDG Index score is provided on a scale of 0 to 100, where 100 denotes optimal performance, and the score on the SDG Index can be interpreted as a percentage toward optimal performance on the SDGs. The 2023 SDG Index uses a basket of 17 indicators and target values that are the same for all countries to generate comparable scores and ranks.

All countries were included in the index, so the final rankings are relative to the 189 United Nations Member States that produce data sufficient to be included. This allowed for the rankings to show how SIDS perform not only with respect to their peers but also with respect to other countries. Only 1 of the top 40 countries worldwide is among the SIDS. The report also provides a visual representation of SDG progress through the indicator dashboards, as well as an assessment of trends over time. As for the MSVI, the SIDS are grouped into subregions to generate subregional aggregate data and analyses (table A.1).

Table A.1. United Nations Member SIDS for which the SDG Index is calculated

SIDS AIS	SIDS Caribbean	SIDS Pacific
Bahrain	Bahamas, the	Fiji
Cabo Verde	Barbados	Kiribati
Comoros	Belize	Marshall Islands
Guinea-Bissau	Cuba	Micronesia, Fed. Sts.
Maldives	Dominica	Nauru
Mauritius	Dominican Republic	Palau
Sao Tome and Principe	Grenada	Papua New Guinea
Seychelles	Guyana	Samoa
Singapore	Haiti	Solomon Islands
	Jamaica	Timor-Leste
	St. Kitts and Nevis	Tonga
	St. Lucia	Tuvalu
	St. Vincent and the Grenadines	Vanuatu
	Suriname	
	Trinidad and Tobago	

Source: Authors' elaboration.

The SDG Index for SIDS is a special edition of the SDG Index designed to accommodate the data constraints of the SIDS. Its methodology parallels the one used in the Sustainable Development Report – but with some refinements to cover all SIDS that are United Nations Member States. The following section gives an overview of the methods of the construction of the index, with a special focus on the refinements made for this special

edition for the SIDS. The methodology for the SDG Index has been peer-reviewed by Nature GeoScience (Schmidt-Traub et al., 2017) and Cambridge University Press (Sachs et al., 2021), and has been audited in the 2019 edition of the global report by the European Commission's Joint Research Centre (Joint Research Centre-European Commission et al., 2019). The full methodology of the SDG Index, the audit and other materials can be found online at our website (<https://sdgtransformationcenter.org/>).

Indicator selection and data sources

Due to missing data, many SIDS are omitted from the Sustainable Development Report. However, progress toward SDG achievement, as measured by the SDG Index, can be predicted or explained by a much smaller indicator set than the more than 100 metrics used in the global SDG Index. By selecting among the global indicator set those indicators that had the best coverage for SIDS while covering a key dimension of their respective SDG, we finalized a selection of 17 indicators that were highly

predictive of the score on the global SDG Index. The SDG Index for SIDS derived using these 17 indicators correlates at .96 with the global SDG index (see figure 1.2 in chapter 1 for the scatter plot). When regressing the global SDG Index score on the selected variables set, the adjusted R^2 is high at .95, which means that the 17 selected indicators can explain 95 percent of the variation in the global SDG Index (see table A.2).

Table A.2. Regression of global SDG Index score on 17 headline indicators

Dependent variable: sdgi_s	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]		Significance
n_sdg1_wpc	0.018	0.021	0.88	0.38	-0.023	0.06	
n_sdg2_obesity	0.009	0.015	0.58	0.562	-0.021	0.038	
n_sdg3_lifec	0.051	0.026	1.98	0.051	0	0.102	*
n_sdg4_second	0.067	0.02	3.4	0.001	0.028	0.106	***
n_sdg5_parl	0.026	0.011	2.3	0.024	0.003	0.048	**
n_sdg6_sanita	0.028	0.026	1.06	0.294	-0.025	0.08	
n_sdg7_elecac	0.089	0.031	2.87	0.005	0.027	0.151	***
n_sdg8_unemp	0.029	0.016	1.87	0.066	-0.002	0.06	*
n_sdg9_intuse	0.057	0.029	1.97	0.053	-0.001	0.115	*
n_sdg10_gini	0.028	0.018	1.5	0.139	-0.009	0.064	
n_sdg11_pm25	0.047	0.016	2.96	0.004	0.015	0.078	***
n_sdg12_msw	0.044	0.035	1.27	0.207	-0.025	0.113	
n_sdg13_co2gcp	0.047	0.018	2.54	0.013	0.01	0.084	**
n_sdg14_cleanwat	-0.001	0.022	-0.03	0.977	-0.044	0.043	
n_sdg15_redlist	0.05	0.013	3.88	0	0.024	0.075	***
n_sdg16_cpi	0.062	0.02	3.14	0.002	0.023	0.101	***
n_sdg17_statperf	0.086	0.024	3.55	0.001	0.038	0.135	***
Constant	17.238	4.205	4.1	0	8.867	25.609	***
Adjusted R-squared:	0.9459				Number of observations:		96

Note: Significance levels: *** $p < .01$, ** $p < .05$, * $p < .1$

Source: Authors' elaboration. The indicator abbreviations in the table above correspond to the indicator codes in the online database and metadata that accompanies this report.

The indicators retained come from a mix of official and non-governmental statistics (see table A.3). Two-thirds of the indicators come from official statistics via international organizations such as: the World Bank; World Health Organization (WHO); United Nations Educational, Scientific and Cultural Organization (UNESCO); United Nations Children's Fund (UNICEF); and the International Labour

Organization (ILO). The others come from non-governmental organizations, such as Transparency International and the Global Carbon Project, that work to fill gaps in official statistics and complement official monitoring efforts by international organizations and national statistical offices.

Missing data

Missing data is an important issue to be considered when creating composite indices because they introduce bias into the aggregated results. In the case of the SIDS, the stakes are far greater due to the preponderance of missing data for this group of countries coupled with their unique set of structural vulnerabilities and challenges that make statistical monitoring more vital.

While the global SDG Index is unable to cover most of the SIDS due to missing data, this special edition of the index for SIDS includes all 38 United Nations Member SIDS through a selection of indicators that minimize missing data. Notwithstanding this, there were still some SIDS that had a significant degree of missing data. St. Kitts and Nevis, the Marshall Islands, and Palau, for example, were all missing nearly 30 percent of the indicators. For the full breakdown of missing data by country, please consult our downloadable database online.

Construction of the index, dashboards and trends

The construction of the SDG Index for SIDS follows the methodology of the global SDG Index. As a first step, absolute quantitative targets for the 2030 horizon are chosen for all indicators based on a decision tree. When there are quantitative targets embedded in the SDGs, or in the leave-no-one-behind principle, that value is retained. Some indicators use technical or science-based targets, while other indicators use targets based on the average of the top performers. The targets in this report derive from the global SDG Index. Afterwards, indicators are scored on a scale of 0 to 100, using minimum–maximum normalization. The 2030 performance thresholds serve as the upper limit of normalization, and the lower limit is normally the 2.5th percentile, sometimes adjusted for outliers that may not be captured by the 2.5th percentile. Lastly, the indicator scores are aggregated into an overall SDG Index score using an arithmetic average whereby each indicator is weighted equally. To further mitigate missing data bias, when a country had missing data for an indicator, we imputed the subregional score.

To provide a visual representation of the challenges at the level of the indicator, the 2023 Sustainable Development Report for SIDS also provides indicator dashboards for each of the 17 indicators for all SIDS. To generate the dashboard ratings, the indicator values are grouped into a traffic light table of green, yellow, orange and red – where green denotes SDG achievement – and yellow, orange and red denote increasing distance from the SDG target.

The thresholds used to generate the indicator dashboards derive from the global SDG Index and are based on statistical techniques and expert judgment. The thresholds used to generate the indicator dashboards are reported in table A.4 below.

Lastly, we complement the assessment of the current status of SDG achievement with a dynamic evaluation of the trends over time. Using historical data, we estimate how fast a country has been progressing toward an SDG target and determine whether – if continued into the future – this pace will be sufficient to achieve the SDG by 2030 via the indicator’s green threshold. To estimate SDG trends, we calculated the linear annual growth rates needed to achieve the goal by 2030 (i.e. 2015–2030) which we compared to the average annual growth rate over the most recent period (e.g. 2015–2022). A system of four arrows was developed. A green arrow going up denotes “on track or maintaining performance above goal achievement”, the intermediate yellow and orange arrows denote “insufficient progress”, and a red arrow indicates “movement away from the target”. More information regarding the methodology of the SDG Index is available online (<https://sdgtransformationcenter.org>).

Table A.3. Indicators included in the SDG Index – SIDS edition

SDG	Indicator	Source	Reference Year	Description
1	Poverty headcount ratio at \$2.15/day (2017 PPP, %)	World Data Lab	2023	Estimated percentage of the population that is living under the poverty threshold of \$2.15 a day. Estimated using historical estimates of the income distribution, projections of population changes by age and educational attainment, and GDP projections.
2	Prevalence of obesity, BMI \geq 30 (% of adult population)	WHO	2016	The percentage of the adult population that has a body mass index (BMI) of 30kg/m ² or higher, based on measured height and weight.
3	Life expectancy at birth (years)	WHO	2019	The average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory or geographic area.
4	Lower secondary completion rate (%)	UNESCO	2021	Lower secondary education completion rate measured as the gross intake ratio to the last grade of lower secondary education (general and pre-vocational). It is calculated as the number of new entrants in the last grade of lower secondary education, regardless of age, divided by the population at the entrance age for the last grade of lower secondary education.
5	Seats held by women in national parliament (%)	IPU	2021	The number of seats held by women in single or lower chambers of national parliaments, expressed as a percentage of all occupied seats. Seats refer to the number of parliamentary mandates or the number of members of parliament.
6	Population using at least basic sanitation services (%)	JMP	2020	The percentage of the population using at least a basic sanitation service, such as an improved sanitation facility, that is not shared with other households.
7	Population with access to electricity (%)	IEA, IRENA, UNSD, WB, WHO	2020	The percentage of the population that has access to electricity.
8	Unemployment rate (% of total labor force, ages 15+)	ILO	2023	Modeled estimate of the share of the labor force that is without work but is available and actively seeking employment. The indicator reflects the inability of an economy to generate employment for people who want to work but are not doing so.
9	Population using the Internet (%)	ITU	2021	The percentage of the population that used the Internet from any location in the last three months. Access could be via a fixed or mobile network.
10	Gini coefficient	World Bank	2020	The Gini coefficient measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution.

SDG	Indicator	Source	Reference Year	Description
11	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) ($\mu\text{g}/\text{m}^3$)	IHME	2019	Air pollution measured as the population-weighted mean annual concentration of PM2.5 for the urban population in a country. PM2.5 is suspended particles measuring less than 2.5 microns in aerodynamic diameter, which are capable of penetrating deep into the respiratory tract and can cause severe health damage.
12	Municipal solid waste (kg/capita/day)	World Bank	2019	The amount of waste collected by or on behalf of municipal authorities and disposed of through the waste management system. Waste from agriculture and industry are not included.
13	CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	Global Carbon Project	2021	Emissions from the combustion and oxidation of fossil fuels and from cement production. The indicator excludes emissions from fuels used for international aviation and maritime transport. It is expressed in tons of CO ₂ per capita.
14	Ocean Health Index: clean waters score (worst 0–100 best)	Ocean Health Index	2022	The clean waters subgoal of the Ocean Health Index measures to what degree marine waters under national jurisdictions have been contaminated by chemicals, excessive nutrients (eutrophication), human pathogens, and trash.
15	Red List Index of species survival (worst 0–1 best)	IUCN and Birdlife International	2023	The change in aggregate extinction risk across groups of species. The index is based on genuine changes in the number of species in each category of extinction risk on The IUCN Red List of Threatened Species.
16	Corruption Perceptions Index (worst 0–100 best)	Transparency International	2022	The perceived levels of public sector corruption, on a scale from 0 (highest level of perceived corruption) to 100 (lowest level of perceived corruption). The CPI aggregates data from a number of different sources that provide perceptions of businesspeople and country experts.
17	Statistical Performance Index (worst 0–100 best)	World Bank	2022	The Statistical Performance Index is a weighted average of the statistical performance indicators that evaluate the performance of national statistical systems. It aggregates five pillars of statistical performance – data use, data services, data products, data sources, and data infrastructure.

Notes: Sources of the indicators include: World Data Lab; World Health Organization (WHO); United Nations Educational, Scientific and Cultural Organization (UNESCO); Interparliamentary Union (IPU); Joint Program of the WHO and the United Nations Children’s Fund (UNICEF); International Energy Agency (IEA); International Renewable Energy Agency (IRENA); United Nations Statistics Division (UNSD); World Bank; International Labour Organization (ILO); International Telecommunication Union (ITU); Institute for Health Metrics and Evaluation (IHME); Global Carbon Project; Ocean Health Index; International Union for Conservation of Nature (IUCN) and Birdlife International; and Transparency International.

Source: Authors’ elaboration.

Table A.4. SIDS edition SDG Index Indicator thresholds and justification for optimal value

SDG	Indicator	Optimum	Green	Yellow	Orange	Red	Lower bound	Justification for optimum
1	Poverty headcount ratio at \$2.15/day (2017 PPP, %)	0	$x \leq 2$	$2 < x \leq 13$	$13 < x \leq 72.6$	$x \geq 13$	72.6	SDG target
2	Prevalence of obesity, BMI \geq 30 (% of adult population)	2.8	$x \leq 10$	$10 < x \leq 25$	$25 < x \leq 35.1$	$x \geq 25$	35.1	Average of best performers
3	Life expectancy at birth (years)	83	$x \geq 80$	$80 > x \geq 70$	$70 > x \geq 54$	$x \leq 70$	54	Average of best performers
4	Lower secondary completion rate (%)	100	$x \geq 90$	$90 > x \geq 75$	$75 > x \geq 18$	$x \leq 75$	18	SDG target
5	Seats held by women in national parliament (%)	50	$x \geq 40$	$40 > x \geq 20$	$20 > x \geq 1.2$	$x \leq 20$	1.2	SDG target
6	Population using at least basic sanitation services (%)	100	$x \geq 95$	$95 > x \geq 75$	$75 > x \geq 9.7$	$x \leq 75$	9.7	Leave no one behind
7	Population with access to electricity (%)	100	$x \geq 98$	$98 > x \geq 80$	$80 > x \geq 9.1$	$x \leq 80$	9.1	Leave no one behind
8	Unemployment rate (% of total labor force, ages 15+)	0.5	$x \leq 5$	$5 < x \leq 10$	$10 < x \leq 25.9$	$x \geq 10$	25.9	Average of best performers
9	Population using the Internet (%)	100	$x \geq 80$	$80 > x \geq 50$	$50 > x \geq 2.2$	$x \leq 50$	2.2	Leave no one behind
10	Gini coefficient	27.5	$x \leq 30$	$30 < x \leq 40$	$40 < x \leq 63$	$x \geq 40$	63	Average of best performers
11	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) ($\mu\text{g}/\text{m}^3$)	6.3	$x \leq 10$	$10 < x \leq 25$	$25 < x \leq 87$	$x \geq 25$	87	Average of best performers
12	Municipal solid waste (kg/capita/day)	0.1	$x \leq 1$	$1 < x \leq 2$	$2 < x \leq 3.7$	$x \geq 2$	3.7	Average of best performers
13	CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	0	$x \leq 2$	$2 < x \leq 4$	$4 < x \leq 20$	$x \geq 4$	20	Technical optimum
14	Ocean Health Index: clean waters score (worst 0–100 best)	100	$x \geq 80$	$80 > x \geq 70$	$70 > x \geq 28.6$	$x \leq 70$	28.6	Technical optimum
15	Red List Index of species survival (worst 0–1 best)	1	$x \geq 0.9$	$0.9 > x \geq 0.8$	$0.8 > x \geq 0.6$	$x \leq 0.8$	0.6	Technical optimum
16	Corruption Perceptions Index (worst 0–100 best)	88.6	$x \geq 60$	$60 > x \geq 40$	$40 > x \geq 13$	$x \leq 40$	13	Average of best performers
17	Statistical Performance Index (worst 0–100 best)	100	$x \geq 80$	$80 > x \geq 50$	$50 > x \geq 25$	$x \leq 50$	25	Technical optimum

Source: Authors' elaboration.



Methodology for the Multidimensional Structural Vulnerability Index

How to interpret the MSVI?

Through the MSVI, the *Sustainable Development Report for Small Island Developing States 2023* provides an assessment of the structural vulnerabilities that impact countries' socioeconomic and environmental outcomes and hinder their capacity to achieve sustainable development. The MSVI measures countries' structural vulnerability, overall and on three subpillars that reflect economic, developmental and environmental vulnerabilities. Each pillar is composed of a basket of five to seven indicators related to its respective domain.

The overall MSVI and the three subpillar indexes are scores that range between 0 and 100, where 0 denotes the lowest structural vulnerability, and 100 mirrors the highest structural vulnerability. The index uses the same indicators and vulnerability thresholds for all countries, so the scores are comparable across them.

Country coverage

The report provides information on structural vulnerability for all United Nations Member States, including United Nations Member SIDS. Nevertheless, to avoid a bias in the calculation of the MSVI scores originating from excessive missing data in some countries, we do not calculate the MSVI for countries that are missing data on more than 30 percent of the indicators.

There are 180 countries in total for which the MSVI score is calculated. Among them, 33 out of 38 United Nations Member SIDS are included in the MSVI. In terms of regional distribution, 8 of the SIDS covered are in the Atlantic, Indian Ocean, and South China Sea, 16 are in the Caribbean Sea, and 9 are in the Pacific Ocean (table A.5). While documenting the structural vulnerability and progress toward the SDGs in non-United Nations Member SIDS is crucial, the scope of the present report is limited to United Nations Member States (see box A.1).

Table A.5. UN Member SIDS for which the MSVI is calculated

SIDS AIS	SIDS Caribbean	SIDS Pacific
Comoros	Antigua and Barbuda	Fiji
Cabo Verde	Bahamas	Micronesia, Fed. Sts.
Guinea-Bissau	Belize	Kiribati
Maldives	Barbados	Papua New Guinea
Mauritius	Cuba	Solomon Islands
Singapore	Dominica	Timor-Leste
Sao Tome and Principe	Dominican Republic	Tonga
Seychelles	Grenada	Vanuatu
	Guyana	Samoa
	Haiti	
	Jamaica	
	St. Kitts and Nevis	
	St. Lucia	
	Suriname	
	Trinidad and Tobago	
	St. Vincent and the Grenadines	

Source: Authors' elaboration.

Box A.1. The case of non-United Nations Member SIDS

Although we also recognize the importance of assessing the structural vulnerability of SIDS that are not members of the United Nations, we did not include them in this report for two main reasons.

First, the Sustainable Development Report and its SIDS edition aim to track progress on the SDGs for the states that committed to reaching the global goals by 2030, i.e. United Nations Members. To ensure consistency, we did not display data on the structural vulnerability of states that are not Members. Second, data availability is more limited for these economies, and the indicators chosen in the report might not be as relevant for countries that are attached to or under the jurisdiction of other states where the legislation and policy decision-making happens.

However, non-United Nations Member SIDS also encounter significant challenges. Like United Nations Member SIDS, they confront specific vulnerabilities such as small populations, limited land area, remoteness and heightened exposure to climate change and extreme weather events. Moreover, despite being institutionally linked to a mainland country, their status does not ensure systematic or timely financial support in the event of a disaster.

An illustrative example of the dire need for increased technical, human and financial assistance from sovereign states to overseas territories is the ongoing volcanic activity in Montserrat since the 1990s. Although the island was included in the United Kingdom's disaster management system, it lacked the necessary technical and financial capabilities to cope with the eruption (Wilkinson, 2015). Consequently, two-thirds of the population migrated abroad, and two decades later the remaining residents still face internal displacement (Sword-Daniels et al., 2014). It is crucial to integrate overseas territories into comprehensive disaster risk management systems and allocate appropriate financial resources to enhance their resilience in the face of natural hazards and climate change.

Selection of the indicators

The MSVI is the weighted aggregation of 18 indicators distributed across three subpillars (figure A.1). Although these variables are not exhaustive measures of a country's structural vulnerability, they were used in other vulnerability indexes such as the Economic Vulnerability Index (Guillaumont, 2009), the Commonwealth Universal Vulnerability Index (The Commonwealth, 2021), the Multidimensional Vulnerability Index for the Caribbean (Caribbean Development Bank, 2019) or the Multidimensional Vulnerability Index by the UNDP (UNDP, 2021). All indicators have been selected following the criteria of relevance, simplicity, transparency and universality.

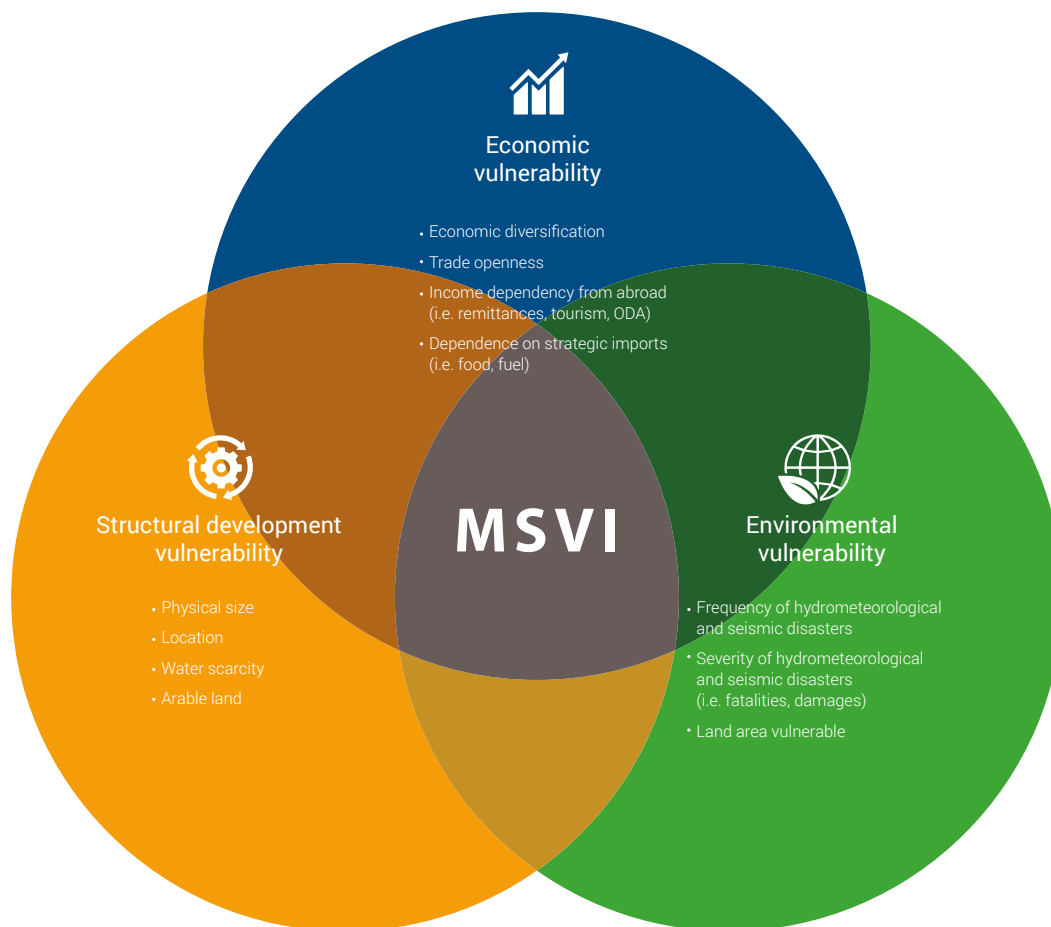
The category of economic vulnerabilities considers seven indicators measuring a country's degree of exposure to unforeseen exogenous shocks, which arise out of economic openness as well as dependence on a narrow range of exports and strategic imports such as food and fuel. To account for a country's exposure to drops in economic resources from abroad, the dependency on remittances, tourism receipts and ODA are included.

In the dimension of structural development limitations, five proxies for geophysical vulnerability are used. The size of the population is included as a measure of the physical size of a country. To consider the remoteness of an economy,

we also look at maritime connectivity and transport costs. It is assumed that countries that are more remote and less connected to global shipping networks may face higher transport costs. In addition to this, a measure of the percentage of arable land and a measure of total internal renewable freshwater resources per capita are included.

The environmental dimension includes six factors related to a country's vulnerability to natural hazards and climate change. Both the frequency and severity of extreme weather events are considered. We distinguish between hydrometeorological disasters (e.g. droughts, floods, storms and extreme temperature s) and seismic disasters (e.g. earthquakes and volcanic activity). As a proxy of vulnerability to sea level rise, the percentage of land area where elevation is below 5 meters is included.

The full list of indicators used for the construction of the MSVI, along with their definitions, data sources and thresholds, is reported below in table A.7.

Figure A.1. Framework for the Multidimensional Structural Vulnerability Index (MSVI)

Source: Authors' elaboration.

Data sources

To ensure that results are fully comparable across countries, we do not use estimates produced directly by national statistical offices. The report relies on data drawn from either official sources (e.g. international governmental organizations) or non-governmental sources (e.g. civil society organizations, academia) that adjust national data to ensure international comparability (e.g. make sure the method to compute estimates is similar across countries). International organizations use time-consuming processes for treating, validating and publishing international statistics. As a result, national statistical offices might have more recent data than those presented in the report. The data for the MSVI indicators were extracted between April and May 2023. Among the 18 indicators used to construct the MSVI, two-thirds come from data sets developed by international organizations, among which almost 60 percent are from the World Bank. Data under the Economic and Structural

Development vulnerability pillars of the index come from international organizations, including the World Bank, United Nations Conference on Trade and Development (UNCTAD), the World Tourism Organization, Food and Agriculture Organization (FAO), and the IMF. On the other hand, non-governmental data sources are used for most of the indicators under the Environmental vulnerability pillar. These include: the Emergency Events Database (EM-DAT) produced by the Centre for Research on the Epidemiology of Disasters (CRED) within the Université Catholique de Louvain; and the elevation data sets created by the Center for International Earth Science Information Network (CIESIN) and the City University of New York Institute for Demographic Research (Cuny CIDR).

Missing data and imputations

To limit bias coming from missing data, the MSVI score is only calculated for countries having data for at least 70 percent of the indicators included in the index. All data available for countries that do not have an index are nevertheless displayed in the country profiles at the end of the report. Among the 38 United Nations Member SIDS for which a country profile is available, the MSVI was calculated for 33 (see table A.6 for the list of countries that do not meet the missing data threshold and for which the MSVI could not be calculated).

To improve SIDS coverage in the sample, we perform a series of imputations. First, in the case of the ODA indicator, we allocate a value equal to zero for those countries that reported no data and are classified as

developed economies. Second, for countries that are registered as non-receiving countries (i.e. American Samoa, Brunei Darussalam, the Democratic People's Republic of Korea, Guam and Northern Mariana Islands), we replace the missing data on remittances from the World Bank source by a value of zero. Finally, for countries that meet the 70 percent data availability criteria, we replace missing data on a selection of indicators (trade openness, food imports, fuel imports, tourism receipts, transportation costs, water resources and arable land) with the obtained average value of the country's region. Imputations by indicator are signaled by an asterisk in the country profiles.

The issue of missing data to construct the MSVI sheds light on the urgent need for better data collection on vulnerability and sustainable development, especially among developing countries and in SIDS.

Table A.6. United Nations Member States not included in the MSVI

Region		Country	Missing indicators (%)	Number of missing indicators (out of 18)
SIDS	SIDS AIS SIDS Pacific	Bahrain	33.3	6
		Marshall Islands	33.3	6
		Nauru	44.4	8
		Palau	33.3	6
		Tuvalu	38.9	7
Other regions	East Asia & Pacific Europe & Central Asia	Dem. Rep. Of Korea	44.4	8
		Andorra	44.4	8
		Liechtenstein	77.8	14
		Monaco	83.3	15
		San Marino	66.7	12
	Sub-Saharan Africa	Equatorial Guinea	38.9	7
		Liberia	33.3	6
		South Sudan	33.3	6

Note: The MSVI could not be computed for these countries because they do not meet the 70 percent minimum criteria of data availability.

Source: Authors' elaboration.

Construction of the MSVI

The methodology used to compute the MSVI follows the methodology used by the SDSN for the SDG Index (Sachs et al., 2023b), which builds on the OECD and JRC Handbook for the construction of composite indexes (OECD and JRC, 2008).

Before computing the vulnerability index, we calculate – for all indicators of the MSVI – the five-year average of the latest data available. In the specific case of the indicators related to the frequency and the severity of natural disasters, we use instead the 10-year average on the latest available data.

The procedure for calculating the MSVI comprises three main steps:

1. for each indicator, determine the vulnerability thresholds at the top and bottom of the distribution
2. normalize the indicators to rescale the data in order to ensure comparability across all indicators
3. compute the MSVI and the pillar subindexes (economic, structural development, environmental) by aggregating the normalized indicators

Step 1 – Defining the upper and lower bounds

Before rescaling the indicators to make each one comparable to the others, we need to make sure that the choices of the thresholds denoting lowest and highest vulnerability do not introduce spurious variability in the data. Some indicators show an ascending relationship with vulnerability (e.g. the more a country relies on tourism, the more vulnerable it is). By contrast, others have a descending relationship with vulnerability (e.g. the more freshwater resources per capita are available, the less vulnerable a country is).

In the case of the indicators of the economic and structural development pillars, the lower bound (i.e. the threshold for lowest vulnerability) is defined as the 2.5th percentile of the distribution for ascending indicators and as the 97.5th percentile for descending indicators. For indicators of the environmental pillar, the lower bound is systematically set to zero to follow the principle of leaving no one behind (i.e. for a country not to be vulnerable to natural disasters, it must register no fatalities).

For all indicators of the index, upper bounds (i.e. the threshold for highest vulnerability) are defined as the average value of top performers in each indicator, excluding the outliers to avoid bias from overly skewed data.

Step 2 – Normalization of the indicators

To make the data comparable across all indicators, each variable is rescaled from 0 to 100, where 0 denotes lowest vulnerability and 100 reflects highest vulnerability. In the case of the indicators of population and freshwater resources, we first transform the data using the natural logarithm.

The min-max formula used to rescale the data between 0 and 100 is the following:

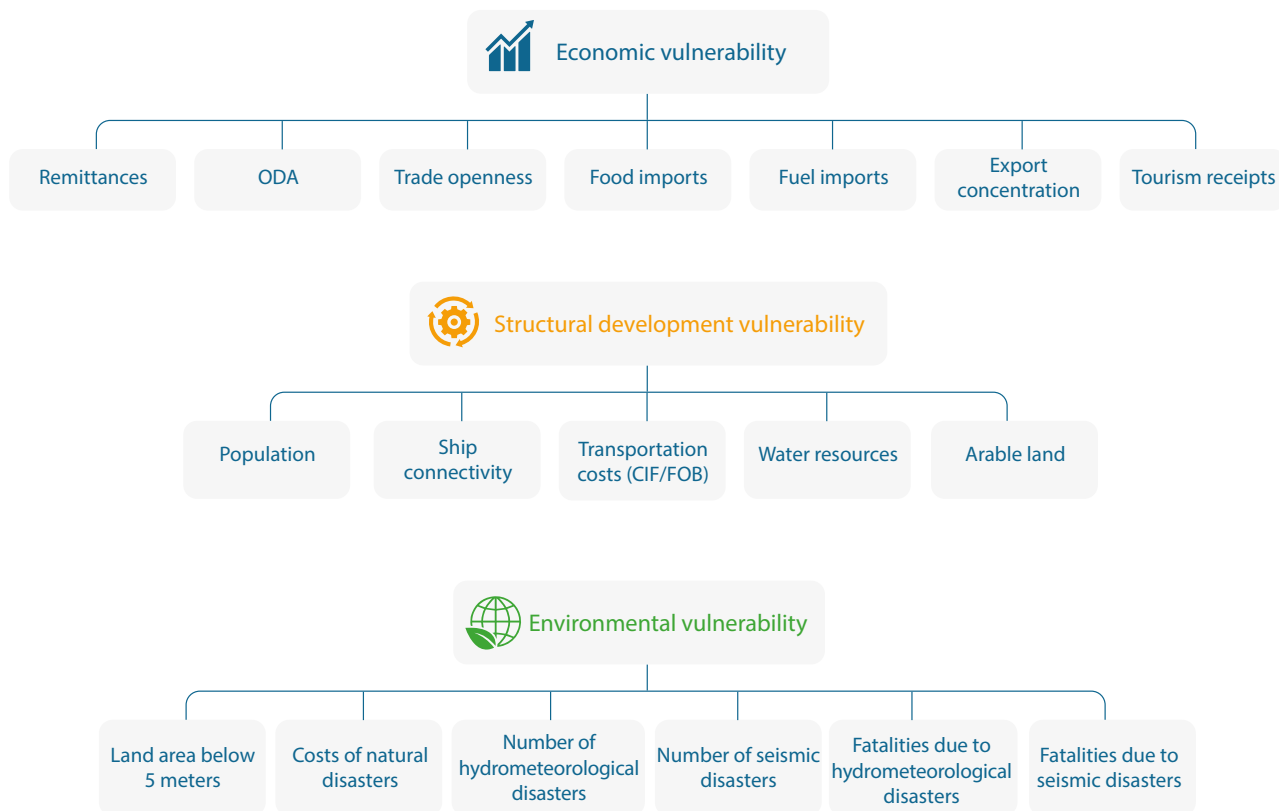
$$x' = \frac{x - \min(x)}{\max(x) - \min(x)} * 100$$

where x is the raw data value; \max and \min denote the upper and lower bounds, respectively; and x' is the normalized value after rescaling.

Step 3 – Aggregation into the MSVI

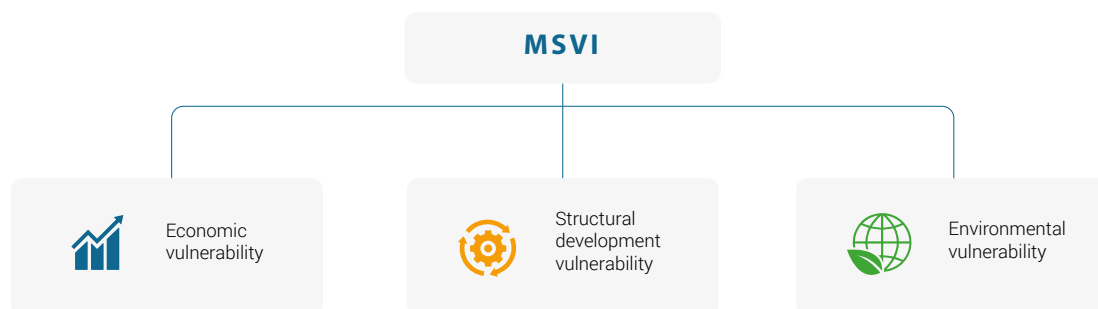
To compute the MSVI scores, we first calculate scores on the three vulnerability subpillars using the arithmetic mean of normalized indicators that compose each subpillar (figure A.2). To obtain the final MSVI scores, we then average the subpillar scores across all three pillars, using equal weights (figure A.3).

Figure A.2. The three subpillars of the MSVI



Source: Authors' elaboration.

Figure A.3. The MSVI and its three subpillars



Source: Authors' elaboration.



Table A.7. Indicators included in the MSVI

Vulnerability pillar	Indicator	Description	Relationship with vulnerability	Lower bound	Upper bound	Source
Economic	Personal remittances received (% GDP)	Personal remittances comprise personal transfers and compensation of employees. Data are the sum of two items defined in the sixth edition of the IMF's Balance-of-Payments Manual: personal transfers and compensation of employees.	ascending	0	15	World Bank
	Official Development Assistance received (% GNI)	Net official development assistance (ODA) consists of disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions and by non-DAC countries, to promote economic development and welfare in countries and territories in the DAC list of ODA recipients.	ascending	0	15	World Bank
	Trade openness (% GDP)	The indicator of trade openness is calculated by summing the exports and the imports of goods and services of the country (expressed in current USD), divided by the GDP, and multiplied by 100.	ascending	26.69	130	World Bank
	Food imports (% merchandise imports)	Food comprises the commodities in SITC sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels).	ascending	5.77	25	World Bank
	Fuel imports (% merchandise imports)	Fuels comprise the commodities in SITC section 3 (mineral fuels, lubricants and related materials).	ascending	1.2	20	World Bank
	Product concentration index for exports (low 0–1 high)	The product concentration index shows to which degree exports of individual economies are concentrated on a few products rather than being distributed in a more homogeneous manner among several products.	ascending	0.07	0.6	UNCTAD
	Tourism receipts (% GDP)	We express tourism receipts as a share of GDP (original data are in current USD). International tourism receipts are expenditures by international inbound visitors, including payments to national carriers for international transport. These receipts include any other prepayment made for goods or services received in the destination country.	ascending	0.1	15	World Tourism Organization
Structural development	Population (total)	Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship.	descending	19.23	11	World Bank
	Liner Shipping Connectivity Index	Countries' access to world markets depends largely on their transport connectivity. The LSCI index indicates a country's integration level into global liner shipping networks. The LSCI is an index set at 100 for the maximum value of country connectivity in the first quarter (Q1) of 2006, which was China. All other indices are in relation to this value.	descending	97.27	5	UNCTAD

Vulnerability pillar	Indicator	Description	Relationship with vulnerability	Lower bound	Upper bound	Source
Structural development	Ratio of cost insurance and freight (CIF) over free on board (FOB)	The ratio of the cost, insurance and freight (in USD) over free on board (in USD) is a proxy to measure transportation costs. The CIF price is the price of a good delivered at the frontier of the importing country before the payment of any import duties or other taxes on imports or trade and transport margins within the country. The FOB value of exports and imports of goods is the value of the goods at the exporter's customs frontier.	ascending	45.45	1000	IMF
	Total internal renewable water resources (cubic meter per inhabitant)	We use the logarithm of the water resources per capita. Internal renewable water resources are expressed as flows and represent the part of the water resources (surface water flows and groundwater) generated from endogenous precipitation.	descending	11.44	5	FAO
	Arable land (hectares per capita)	Arable land relates to land under temporary crops, temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.	descending	0.78	0.02	World Bank
Environmental	Land area where elevation is below 5 meters (% total land area)	The percentage of total land where the elevation is 5 meters or less.	ascending	0	20	CIESIN and CIDR
	Natural disasters costs (% GDP)	We express the total estimated damages from natural disasters (originally in USD) as share of GDP. Natural disasters include geophysical, hydrological, climatological, meteorological, biological and extra-terrestrial disasters.	ascending	0	5	CRED (EM-DAT)
	Number of hydrometeorological disasters adjusted by land area (per million km ²)	The number of hydrometeorological disasters (i.e. drought, flood, storm, extreme temperatures, landslide, wildfire) divided by the country's total land area data from the World Bank (in million km ²)	ascending	0	200	CRED (EM-DAT)
	Number of seismic disasters adjusted by land area (per million km ²)	The number of seismic disasters (i.e. earthquakes, volcanic activity) divided by the country's total land area data from the World Bank (in million km ²)	ascending	0	100	CRED (EM-DAT)
	Total number of deaths due to hydrometeorological natural disasters (per million population)	The number of deaths due to hydrometeorological natural disasters divided by the country's population size and multiplied by one million.	ascending	0	20	CRED (EM-DAT)
	Total number of deaths due to seismic natural disasters (per million population)	The number of deaths due to seismic natural disasters divided by the country's population size and multiplied by one million.	ascending	0	50	CRED (EM-DAT)



REFERENCES

REFERENCES

- Bouhia, Rachid and Emily Wilkinson (2021). Small-Island Developing States need urgent support to avoid debt defaults. 30 March. UNCTAD. Available at: <https://unctad.org/news/small-island-developing-states-need-urgent-support-avoid-debt-defaults>.
- Briguglio, Lino (2000). The Economic Vulnerability of Small Island Developing States. International Conference on Sustainable Development for Island Societies.
- Caribbean Development Bank (2019). Measuring Vulnerability: A Multidimensional Vulnerability Index for the Caribbean. Caribbean Development Bank Working Paper, No. 2019/01. Available at: <https://www.caribank.org/sites/default/files/publication-resources/Measuring%20Vulnerability-A%20Multidimensional%20Vulnerability%20Index%20for%20the%20Caribbean.pdf>.
- Centre for Research on the Epidemiology of Disasters (2023). EM-DAT – International Disaster Database. Available at: <https://public.emdat.be/>.
- Center for International Earth Science Information Network and CUNY Institute for Demographic Research (2021). Low Elevation Coastal Zone (LECZ) Urban-Rural Population and Land Area Estimates Database, Version 3. Available at: <https://data.worldbank.org/indicator/AG.LNDELSM.ZS>.
- The Commonwealth (2021). *The Commonwealth Universal Vulnerability Index. For a Global Consensus on the Definition and Measurement of Vulnerability*. Available at: <https://sdgs.un.org/sites/default/files/2021-09/The%20Commonwealth%20Universal%20Vulnerability%20Index.pdf>.
- Easterly, William, Roumeen Islam and Joseph E. Stiglitz (2000). Explaining Growth Volatility. *Annual World Bank Conference on Development Economics*, No. 28159. World Bank publication. Available at: <https://documents1.worldbank.org/curated/pt/447071468761424497/pdf/28159.pdf>.
- European Commission, Joint Research Centre, and others (2019). *JRC statistical audit of the Sustainable Development Goals index and dashboards*. Publications Office of the European Union. Available at: <https://data.europa.eu/doi/10.2760/723763>.
- Fresnillo, Iolanda and Ilaria Crotti (2022). Riders on the storm - How debt and climate change are threatening the future of small island developing states. Eurodad. Available at: https://www.eurodad.org/debt_in_sids
- GEF LME:LEARN (2020). Small Island Developing States: Addressing SIDS Vulnerabilities Through Regional Cooperation. LME:LEARN Policy Brief, Paris, France. Available at: <https://iwlearn.net/documents/32670>
- Guillaumont, Patrick (2007). Assessing the Economic Vulnerability of Small Island Developing States and the Least Developed Countries. Research Paper No. 2007/40. United Nations University World Institute for Development Economics Research. Available at: <https://www.wider.unu.edu/publication/assessing-economic-vulnerability-small-island-developing-states-and-least-developed>
- Guillaumont, Patrick (2009). An Economic Vulnerability Index: Its Design and Use for International Development Policy. *Oxford Development Studies*, vol. 37, Issue 3, pp. 193–228. Available at: <https://doi.org/10.1080/13600810903089901>.
- Hnatkovska, Viktoria and Friederike N. Köhler-Geib (2018). Sources of Volatility in Small Economies. Policy Research Working Paper No. 8526. Washington, D.C.: World Bank. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3238369#.
- Knutsen, Carl Henrik (2020). A business case for democracy: regime type, growth, and growth volatility. *Democratization*, vol. 28, Issue 8, pp. 1505–1524, May. Available at: <https://doi.org/10.1080/13510347.2021.1940965>.
- Massa, Isabella and Leslie Bermont Díaz (2023). Vulnerability and SDG Financing Gaps: How much additional financing is needed for the SDGs in vulnerable countries? *Global Solutions Journal*, Issue 9, May. pp.188-197. Available at: https://www.global-solutions-initiative.org/wp-content/uploads/2023/05/GSJ9_Summit-2023-Edition.pdf
- Massa, Isabella, and others (2022). How do structural vulnerabilities impede progress toward achieving SDG 4 (Quality Education) in SIDS? Policy Brief. Sustainable Development Solutions Network and the United Nations. Available at: <https://www.unsdsn.org/how-do-structural-vulnerabilities-impede-progress-towards-achieving-sdg-4-quality-education-in-sids>.
- Massa, Isabella, and UN RCs (2021). Food security challenges and vulnerability in Small Island Developing States. Policy Brief. Sustainable Development Solutions Network and the United Nations. Available at: <https://www.unsdsn.org/more-vulnerable-sids-face-more-difficulties-to-achieve-the-sdg-2-zero-hunger>.
- Organisation for Economic Co-operation and Development (2018). *Making Development Co-operation Work for Small Island Developing States*. April 2018. Paris. Available at: <https://www.oecd.org/dac/making-development-co-operation-work-for-small-island-developing-states-9789264287648-en.htm>
- _____ (2020). *FACTSHEET. External financing to Small Island Developing States (SIDS): where we stand*. Paris.



_____ (2021). *Managing Climate Risks, Facing up to Losses and Damages*. Paris: Organisation for Economic Cooperation and Development. Available at: <https://doi.org/10.1787/55ea1cc9-en>

Organisation for Economic Co-operation and Development, and others (2016). *Green Bonds: country experiences, barriers and options*. Input paper prepared as a contribution to the G20 Green Finance Study Group (GFSG).

Organisation for Economic Co-operation and Development and Joint Research Centre (2008). *Handbook on Constructing Composite Indicators*. Paris. Available at: <https://www.oecd.org/sdd/42495745.pdf>.

United Nations Department of Economic and Social Affairs (2020). *The Sustainable Development Goals Report 2020*. Available at: <https://unstats.un.org/sdgs/report/2020/#>

Sachs, Jeffrey, and others (2023a). *The Case for Long-Term SDG Financing*. Sustainable Development Solutions Network Reflection Paper. Available at: <https://www.unsdsn.org/just-released-the-case-for-long-term-sdg-financing-an-sdsn-reflection-paper>.

Sachs, J.D., and others (2023b). *Implementing the SDG Stimulus*. Sustainable Development Report 2023. Paris: Sustainable Development Solutions Network. Dublin: Dublin University Press. DOI: 10.25546/102924.

Sachs, Jeffrey, and others (2021). *The Decade of Action and Small Island Developing States: Measuring and addressing SIDS' vulnerabilities to accelerate SDG progress*. Working Paper, 12 July 2021. Paris: Sustainable Development Solutions Network. Available at: <https://resources.unsdsn.org/the-decade-of-action-and-small-island-developing-states>

Sachs, Jeffrey, and Isabella Massa (2021). *The Rich World's Debt to Island States*. Project Syndicate, 15 July. Available at: <https://www.project-syndicate.org/commentary/climate-threat-to-small-island-developing-states-by-jeffrey-d-sachs-and-isabella-massa-2021-07>

Sachs, Jeffrey, and others (2022). *Adaptation, Loss and Damage: The Case for Climate Justice*. SDSN Joint Paper, 4 November 2022. Paris: Sustainable Development Solutions Network. Available at: <https://www.unsdsn.org/adaptation-loss-and-damage-the-case-for-climate-justice>

Sachs, Jeffrey, and others (2021). *Sustainable Development Report 2020: The Sustainable Development Goals and Covid-19 Includes the SDG Index and Dashboards*. Cambridge: Cambridge University Press. Available at: <https://doi.org/10.1017/9781108992411>.

Schmidt-Traub, Guido, and others (2017). *National baselines for the Sustainable Development Goals assessed in the SDG Index and Dashboards*. Nature Geoscience, vol. 10, pp. 547-555. Available at: <https://doi.org/10.1038/ngeo2985>.

Sword-Daniels, Victoria, and others (2014). *Consequences of long-term volcanic activity for essential services in Montserrat: challenges, adaptations and resilience*. *Geological Society*, vol. 39, pp. 471-488. Available at: <https://doi.org/10.1144/M39.26>.

Tateno, Yusuke, Nyintob Norbu and Channarith Meng (2022). *Financing a sustainable recovery from covid-19 and beyond in small islands developing states: A glance at climate finance*. Policy Brief. Bangkok: United Nations Economic and Social Commission for Asia and the Pacific. Available at: <https://repository.unescap.org/handle/20.500.12870/5191>

Tiedemann, Johanna, and others (2021). *Meeting the Sustainable Development Goals in Small Developing States with Climate Vulnerabilities: Cost and Financing*. Working Paper WP/21/62. Washington D.C.: International Monetary Fund.

United Nations (2023), "United Nations Secretary-General's SDG Stimulus to Deliver Agenda 2030", February 2023, New York, USA. Available at: <https://digitallibrary.un.org/record/4005810>.

United Nations Secretary-General (2023). *Our Common Agenda. Policy Brief 4. Valuing What Counts: Framework to Progress Beyond Gross Domestic Product*. May 2023. Available at: <https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-beyond-gross-domestic-product-en.pdf>

United Nations Conference on Trade and Development (2023). *World Investment Report 2023*. Geneva: United Nations Conference on Trade and Development. Available at: <https://unctad.org/publication/world-investment-report-2023>

_____ (2023). UNCTADStat database – Maritime transport. Available at: <https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>.

United Nations Department of Economic and Social Affairs (2022). *Moving Beyond GDP and Achieving Our Common Agenda with Natural Capital Accounting*. Policy Brief No. 144. New York: United Nations Department of Economic and Social Affairs. Available at: <https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-no-144-moving-beyond-gdp-and-achieving-our-common-agenda-with-natural-capital-accounting/>

REFERENCES

United Nations Development Programme (2021). Towards a Multidimensional Vulnerability Index. Discussion Paper. New York: United Nations Development Programme. Available at:

<https://www.undp.org/publications/towards-multidimensional-vulnerability-index>.

United Nations Development Programme and United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (2015). Financing for Development and Small Island Developing States: A Snapshot and Ways Forward. Discussion Paper, June 2015. UNDP and UN-OHRLS. Available at:

<https://www.undp.org/publications/financing-development-and-small-island-developing-states-snapshot-and-ways-forward>

United Nations Development Programme and Pacific Islands Forum (2022). Demystifying green and blue bonds for the Pacific Region. Available at:

<https://www.undp.org/pacific/publications/demystifying-green-and-blue-bonds-pacific-region>

United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (2023). Financing for development for small island developing states. New York: Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States. Available at:

<https://www.un.org/ohrls/news/finance-development-small-island-developing-states-report-advance-unedited>

Wilkinson, Emily, and others (2023). A fair share of resilience finance for Small Island Developing States. Overseas Development Institute Report. London: ODI. Available at:

<https://odi.org/en/publications/a-fair-share-of-resilience-finance/>

Wilkinson, Emily (2015). Beyond the volcanic crisis: co-governance of risk in Montserrat. Journal of Applied Volcanology, vol 4, article No. 3. Available at:

<https://doi.org/10.1186/s13617-014-0021-7>.

World Bank (2022a). World Development Indicators database. Available at:

<https://data.worldbank.org/indicator>.

World Bank (2022b). World Bank country and lending groups. Available at:

<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.

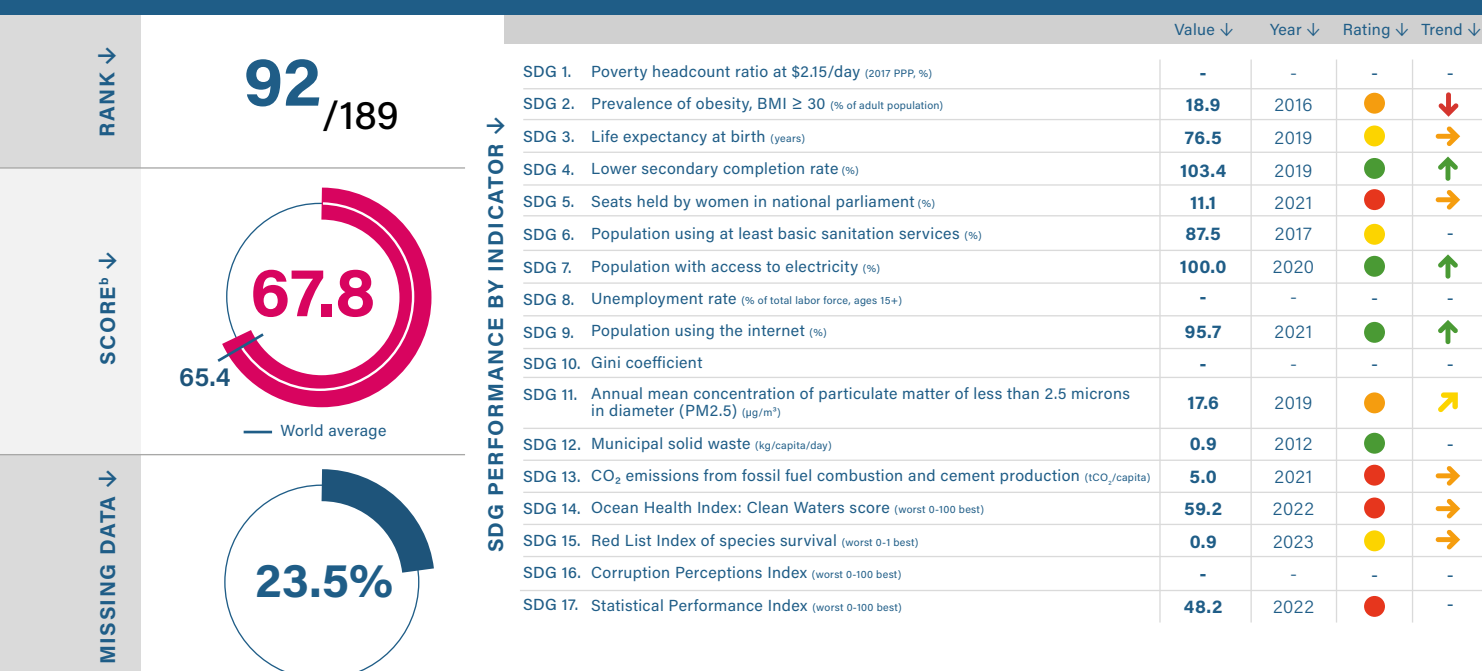
World Tourism Organization (2021). Yearbook of Tourism Statistics, Compendium of Tourism Statistics and database. Available at:

<https://data.worldbank.org/indicator/ST.INT.RCPT.CD>.

MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



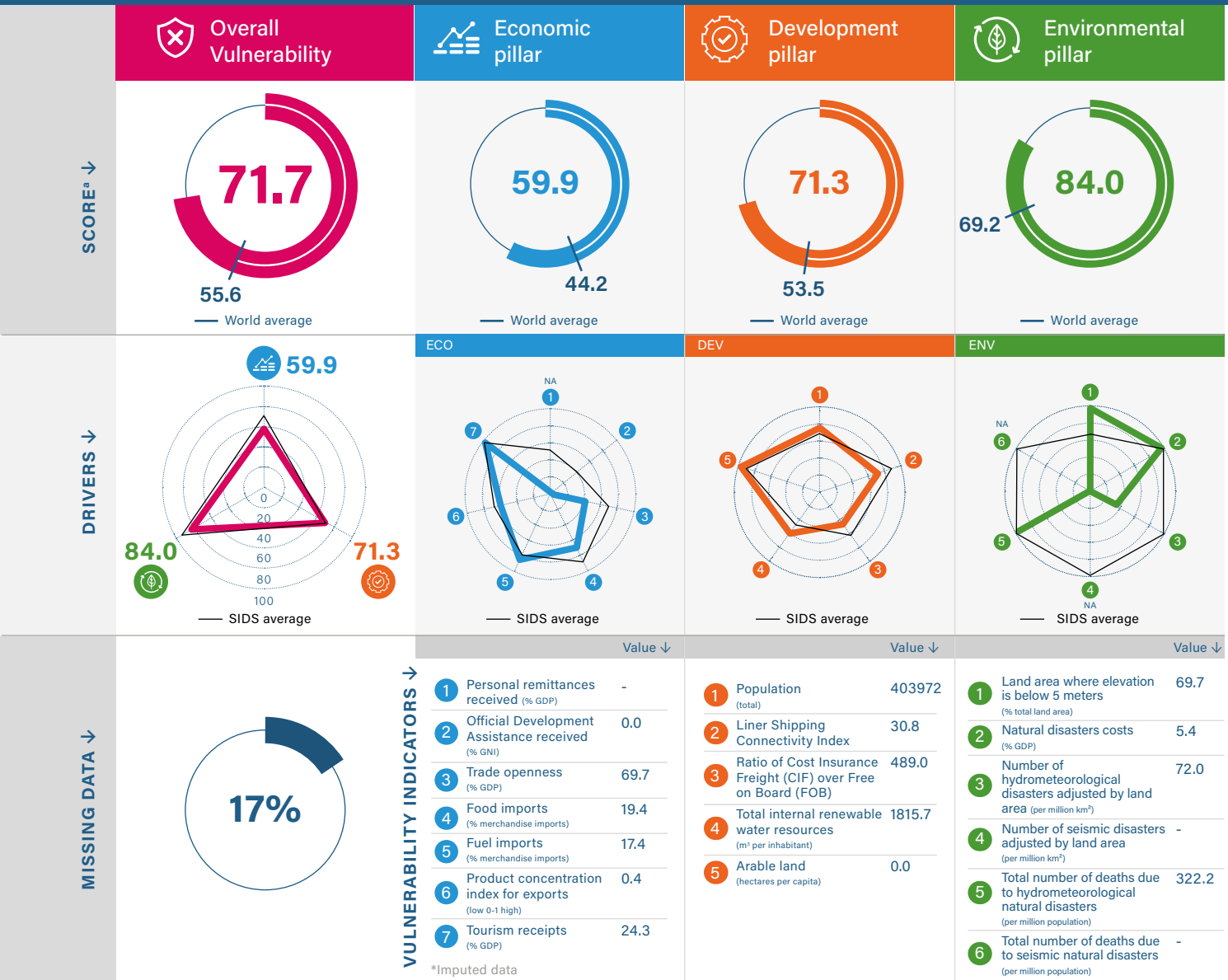
SDG INDEX FOR SIDS ↓



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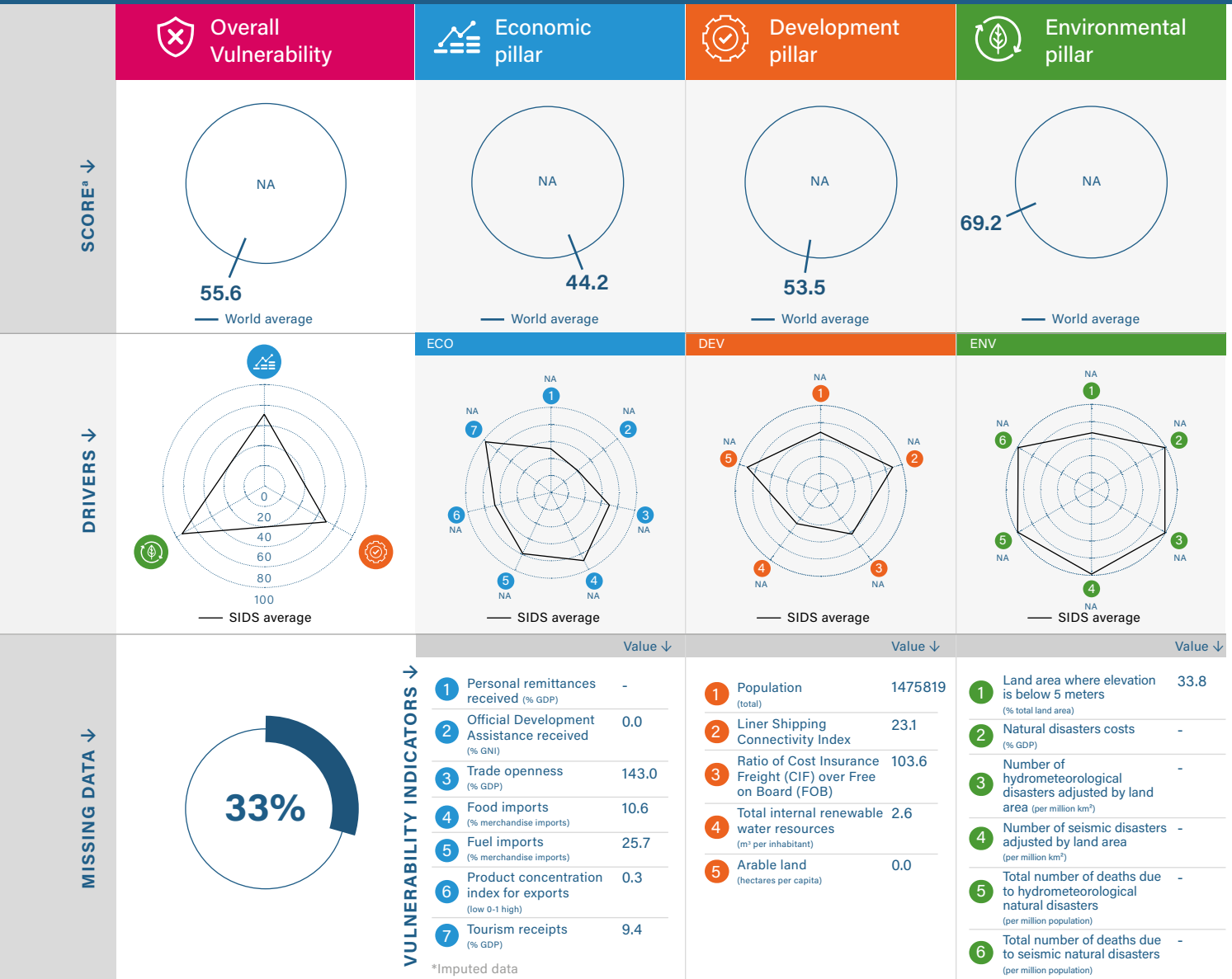
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	RANK ↓	SCORE ^b ↓	MISSING DATA ↓	SDG PERFORMANCE BY INDICATOR ↓	Value ↓	Year ↓	Rating ↓	Trend ↓																																																																																																						
	115 / 189	<p>63.6 65.4 — World average</p>	<p>11.8%</p>	<table border="1"> <tr><td>SDG 1.</td><td>Poverty headcount ratio at \$2.15/day (2017 PPP, %)</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>SDG 2.</td><td>Prevalence of obesity, BMI ≥ 30 (% of adult population)</td><td>31.6</td><td>2016</td><td>●</td><td>↓</td></tr> <tr><td>SDG 3.</td><td>Life expectancy at birth (years)</td><td>73.2</td><td>2019</td><td>●</td><td>→</td></tr> <tr><td>SDG 4.</td><td>Lower secondary completion rate (%)</td><td>92.2</td><td>2010</td><td>●</td><td>-</td></tr> <tr><td>SDG 5.</td><td>Seats held by women in national parliament (%)</td><td>17.9</td><td>2021</td><td>●</td><td>→</td></tr> <tr><td>SDG 6.</td><td>Population using at least basic sanitation services (%)</td><td>94.9</td><td>2019</td><td>●</td><td>→</td></tr> <tr><td>SDG 7.</td><td>Population with access to electricity (%)</td><td>100.0</td><td>2020</td><td>●</td><td>↑</td></tr> <tr><td>SDG 8.</td><td>Unemployment rate (% of total labor force, ages 15+)</td><td>9.6</td><td>2023</td><td>●</td><td>↗</td></tr> <tr><td>SDG 9.</td><td>Population using the internet (%)</td><td>94.3</td><td>2021</td><td>●</td><td>↑</td></tr> <tr><td>SDG 10.</td><td>Gini coefficient</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>SDG 11.</td><td>Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m³)</td><td>16.3</td><td>2019</td><td>●</td><td>↑</td></tr> <tr><td>SDG 12.</td><td>Municipal solid waste (kg/capita/day)</td><td>1.9</td><td>2015</td><td>●</td><td>-</td></tr> <tr><td>SDG 13.</td><td>CO₂ emissions from fossil fuel combustion and cement production (tCO₂/capita)</td><td>5.9</td><td>2021</td><td>●</td><td>→</td></tr> <tr><td>SDG 14.</td><td>Ocean Health Index: Clean Waters score (worst 0-100 best)</td><td>62.3</td><td>2022</td><td>●</td><td>→</td></tr> <tr><td>SDG 15.</td><td>Red List Index of species survival (worst 0-1 best)</td><td>0.7</td><td>2023</td><td>●</td><td>↓</td></tr> <tr><td>SDG 16.</td><td>Corruption Perceptions Index (worst 0-100 best)</td><td>64.0</td><td>2022</td><td>●</td><td>→</td></tr> <tr><td>SDG 17.</td><td>Statistical Performance Index (worst 0-100 best)</td><td>54.1</td><td>2022</td><td>●</td><td>↗</td></tr> </table>	SDG 1.	Poverty headcount ratio at \$2.15/day (2017 PPP, %)	-	-	-	-	SDG 2.	Prevalence of obesity, BMI ≥ 30 (% of adult population)	31.6	2016	●	↓	SDG 3.	Life expectancy at birth (years)	73.2	2019	●	→	SDG 4.	Lower secondary completion rate (%)	92.2	2010	●	-	SDG 5.	Seats held by women in national parliament (%)	17.9	2021	●	→	SDG 6.	Population using at least basic sanitation services (%)	94.9	2019	●	→	SDG 7.	Population with access to electricity (%)	100.0	2020	●	↑	SDG 8.	Unemployment rate (% of total labor force, ages 15+)	9.6	2023	●	↗	SDG 9.	Population using the internet (%)	94.3	2021	●	↑	SDG 10.	Gini coefficient	-	-	-	-	SDG 11.	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m ³)	16.3	2019	●	↑	SDG 12.	Municipal solid waste (kg/capita/day)	1.9	2015	●	-	SDG 13.	CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	5.9	2021	●	→	SDG 14.	Ocean Health Index: Clean Waters score (worst 0-100 best)	62.3	2022	●	→	SDG 15.	Red List Index of species survival (worst 0-1 best)	0.7	2023	●	↓	SDG 16.	Corruption Perceptions Index (worst 0-100 best)	64.0	2022	●	→	SDG 17.	Statistical Performance Index (worst 0-100 best)	54.1	2022	●	↗				
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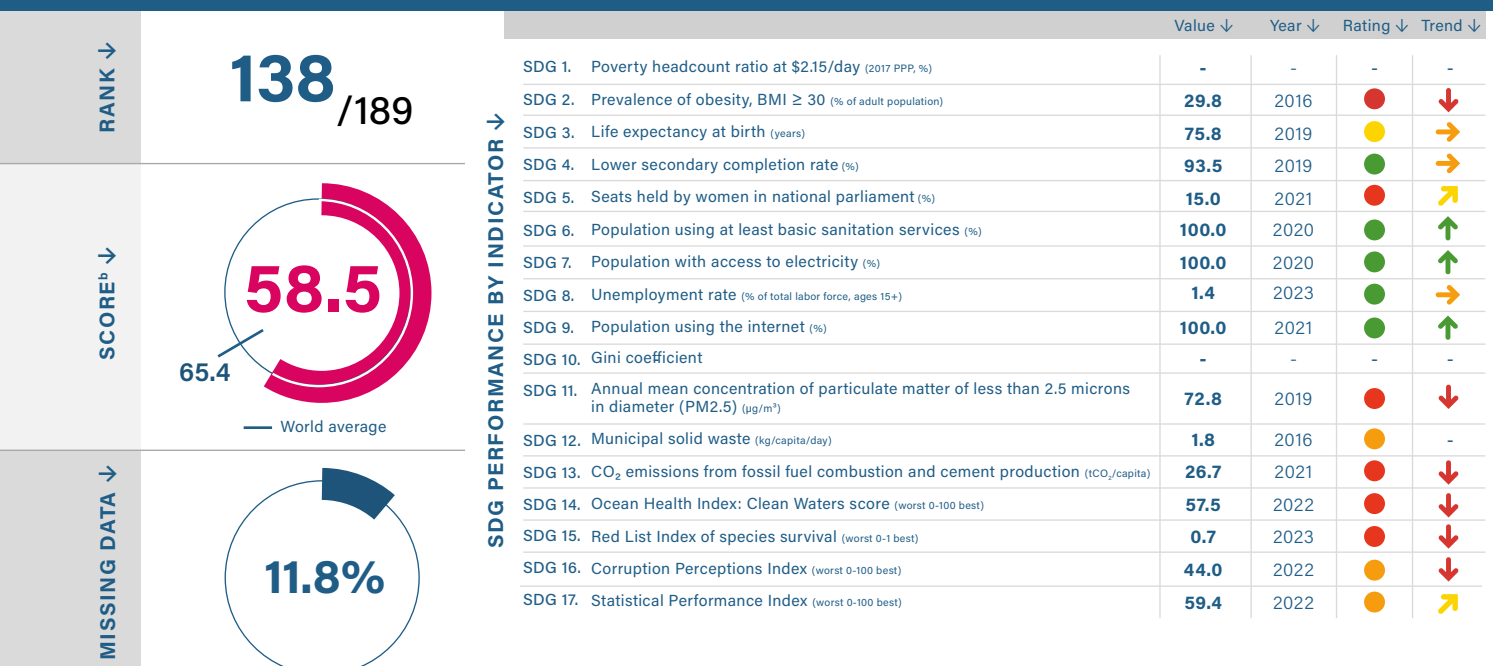
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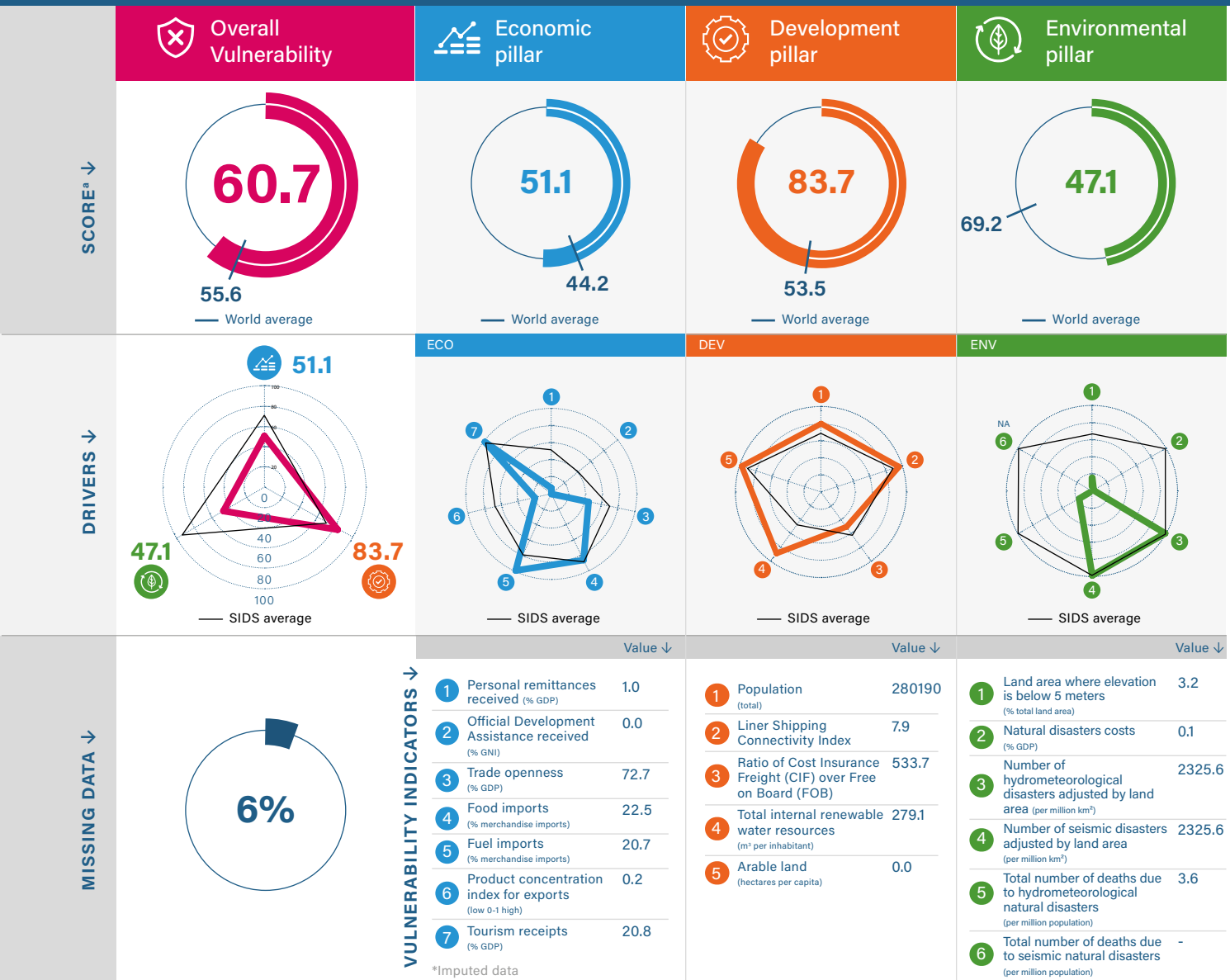
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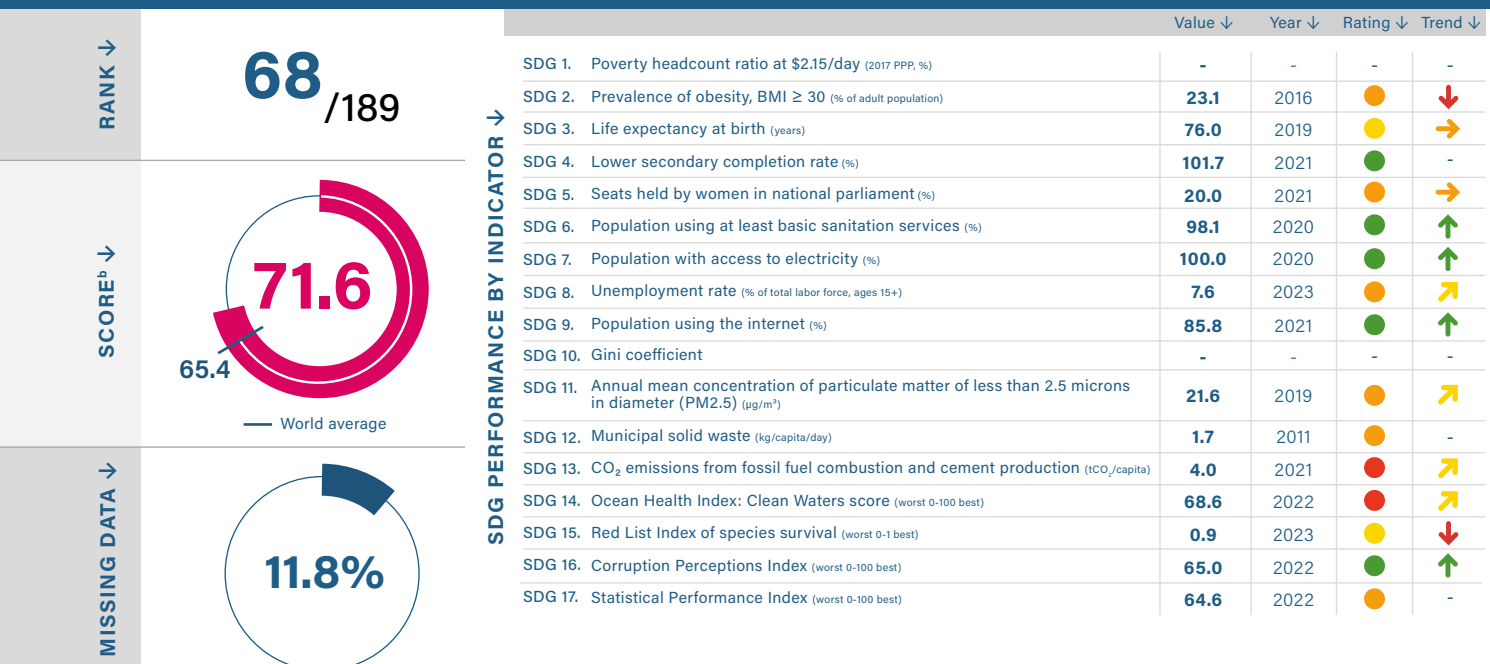
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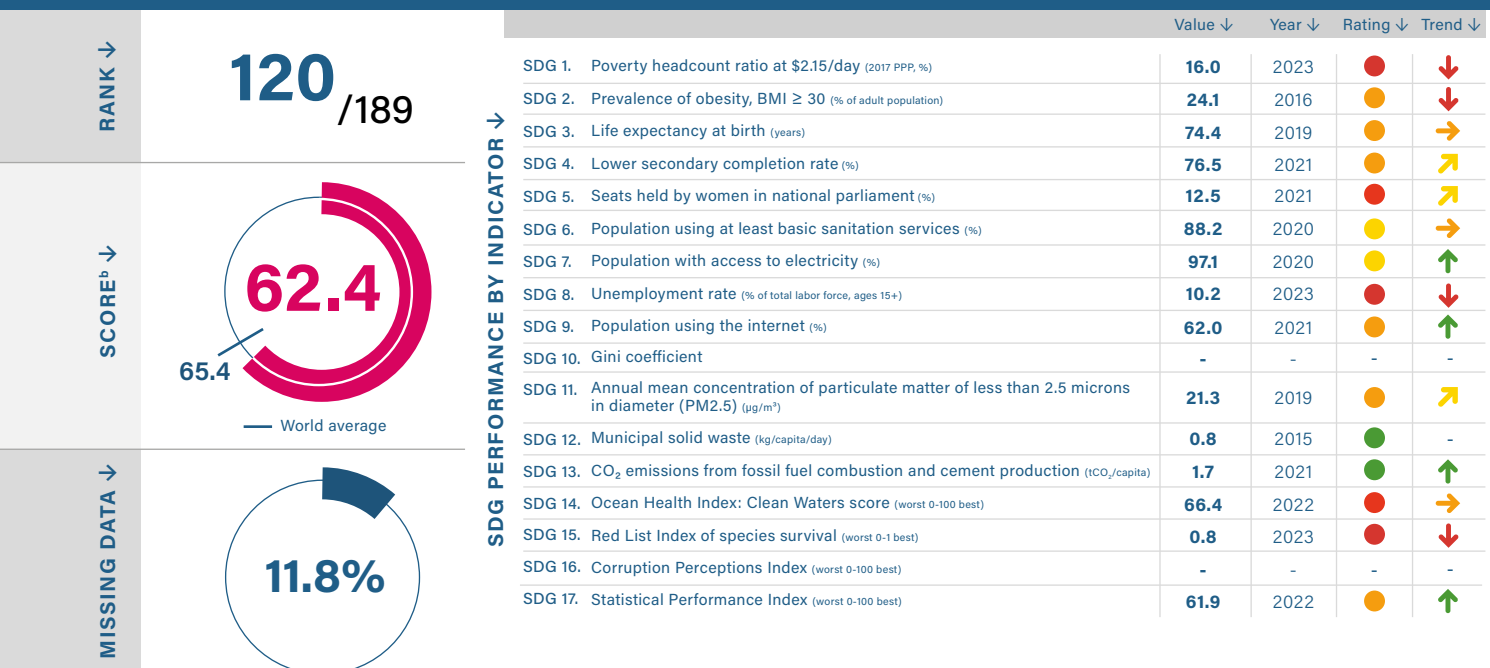
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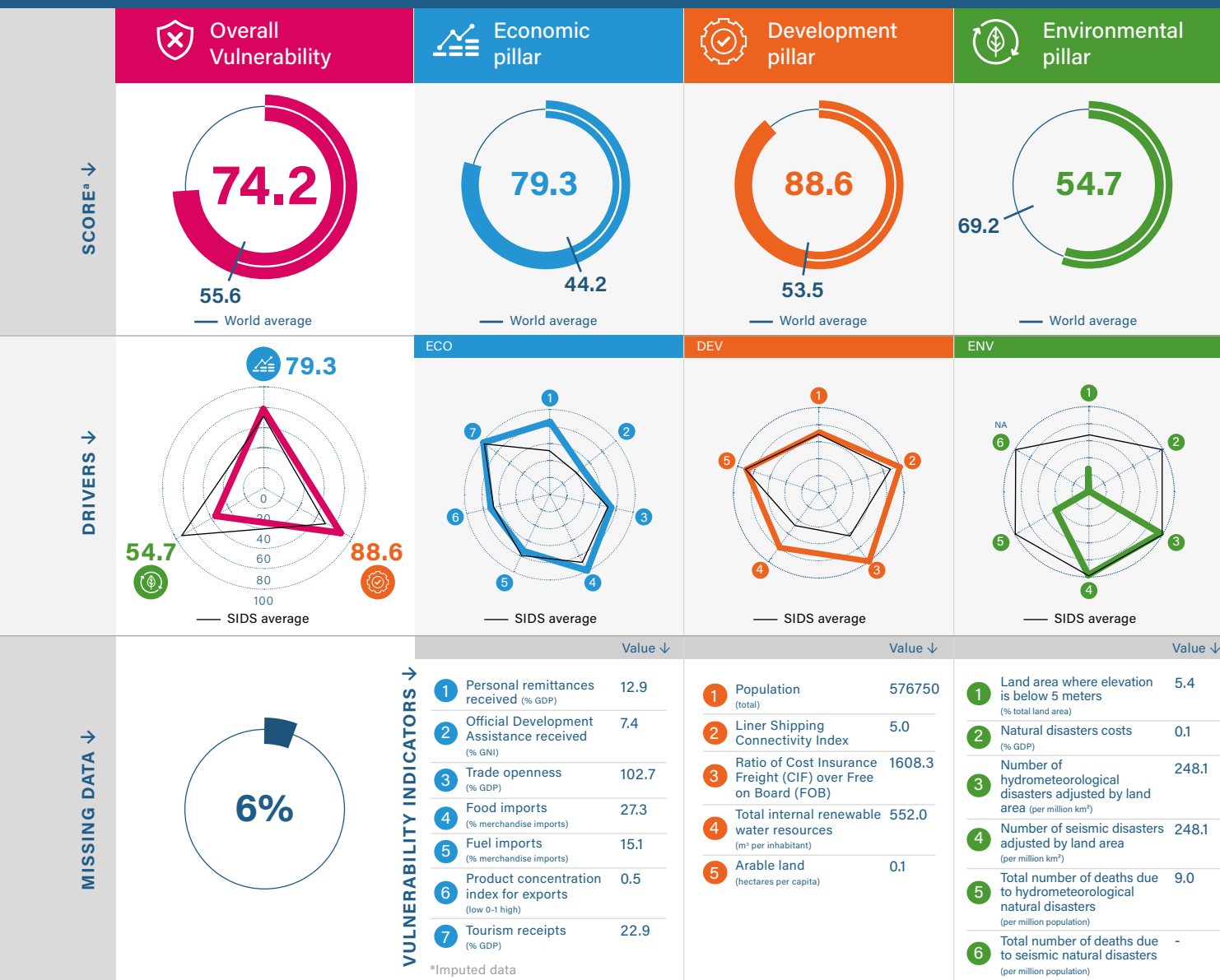
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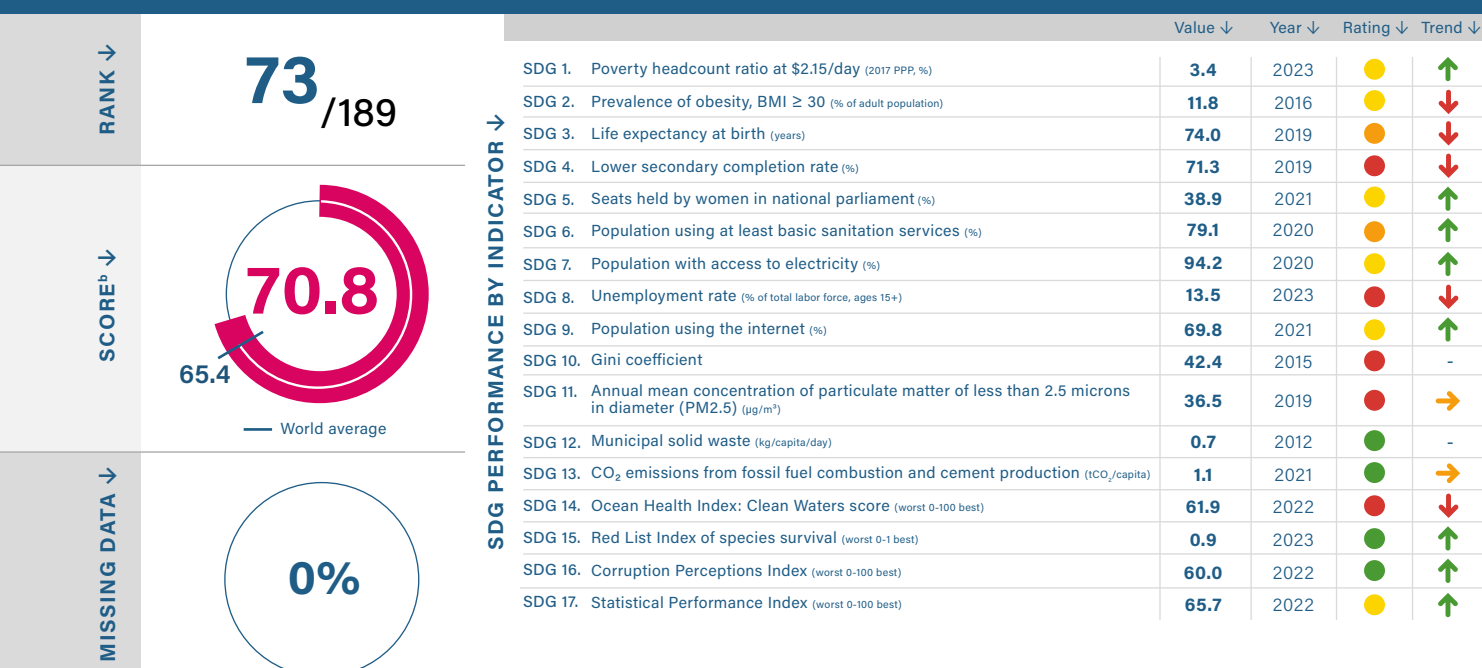
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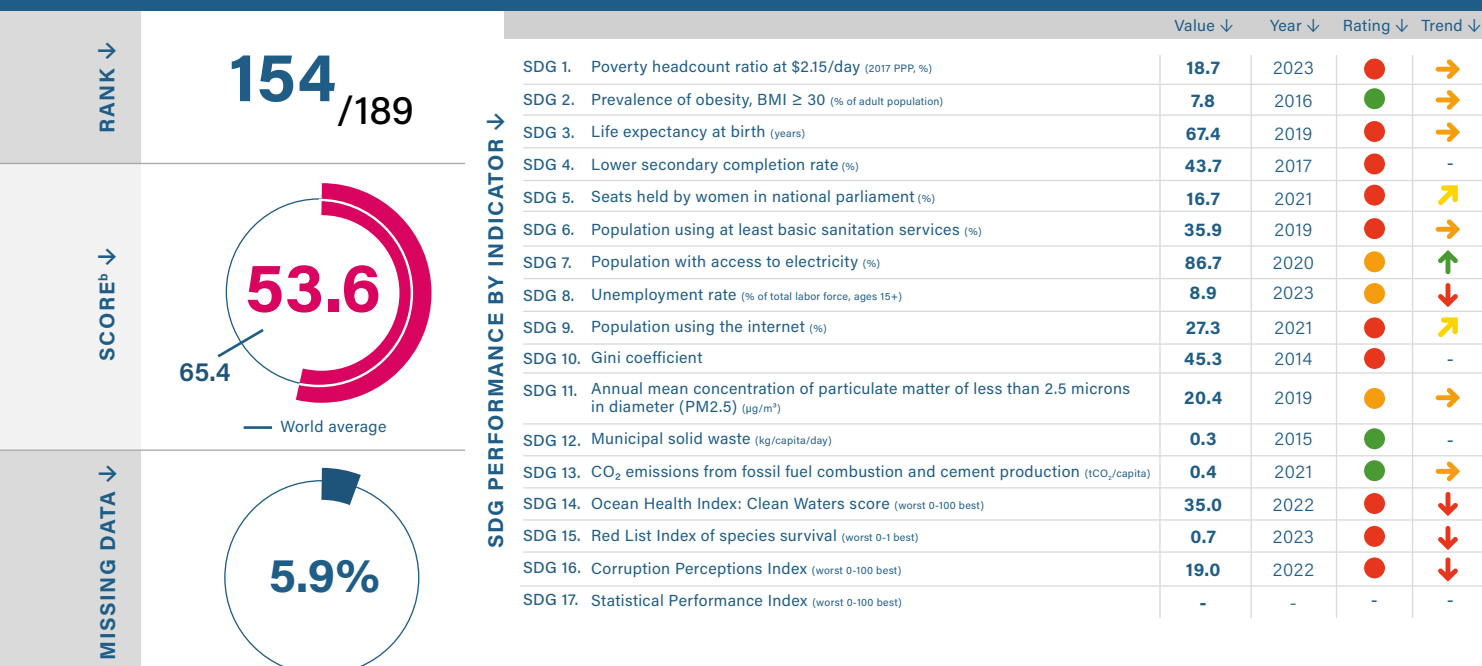
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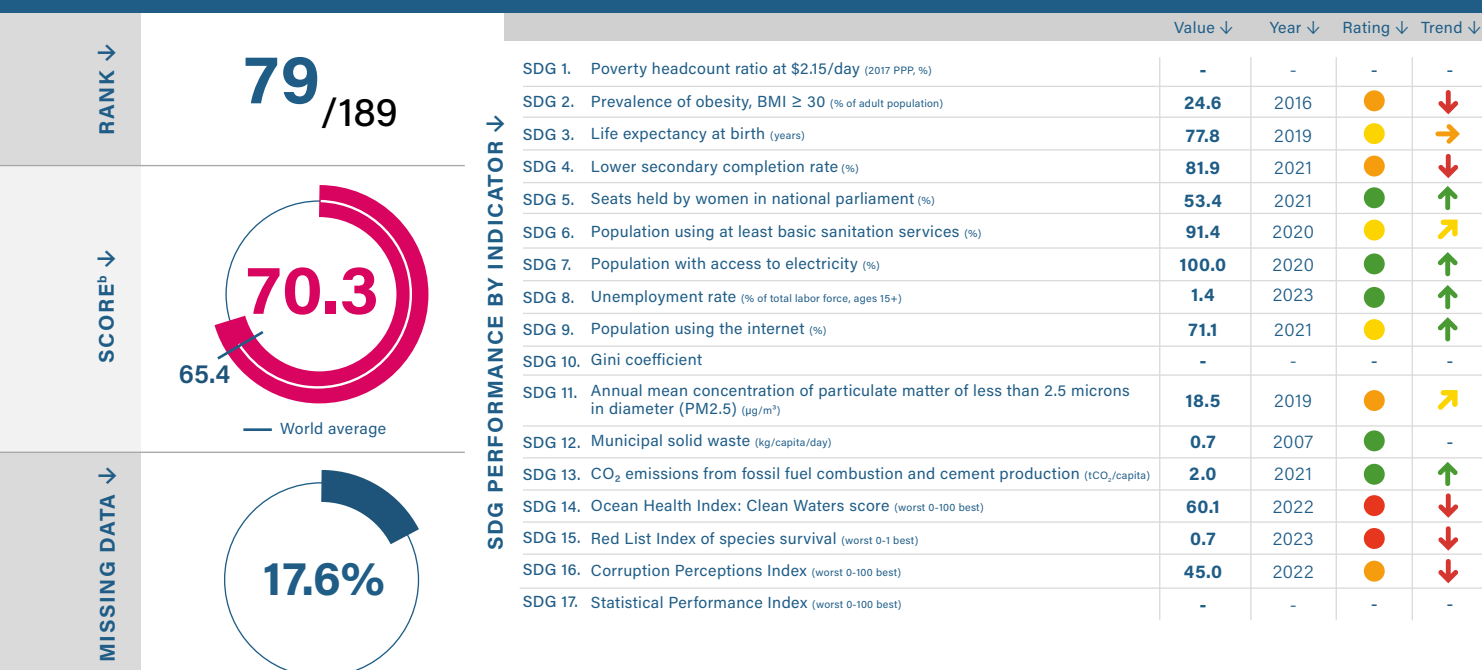
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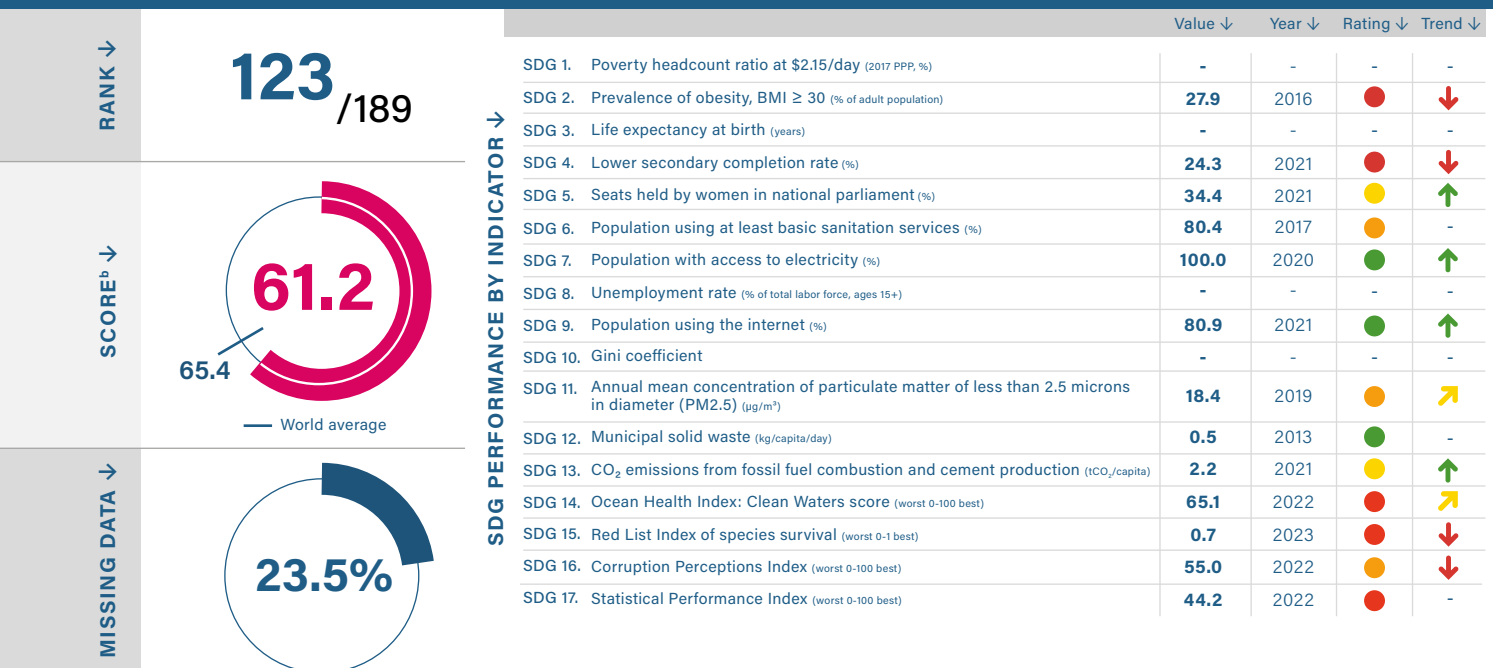
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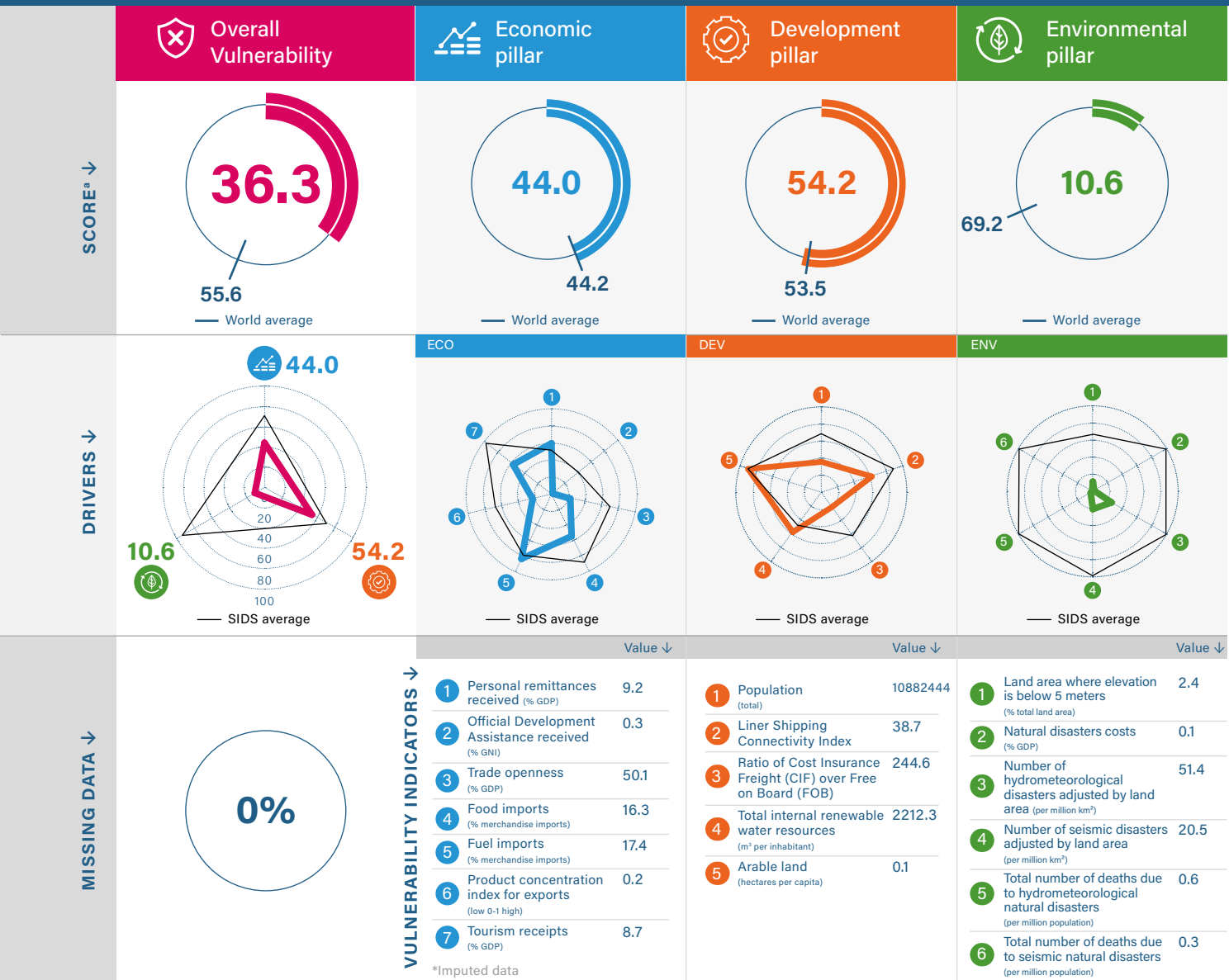
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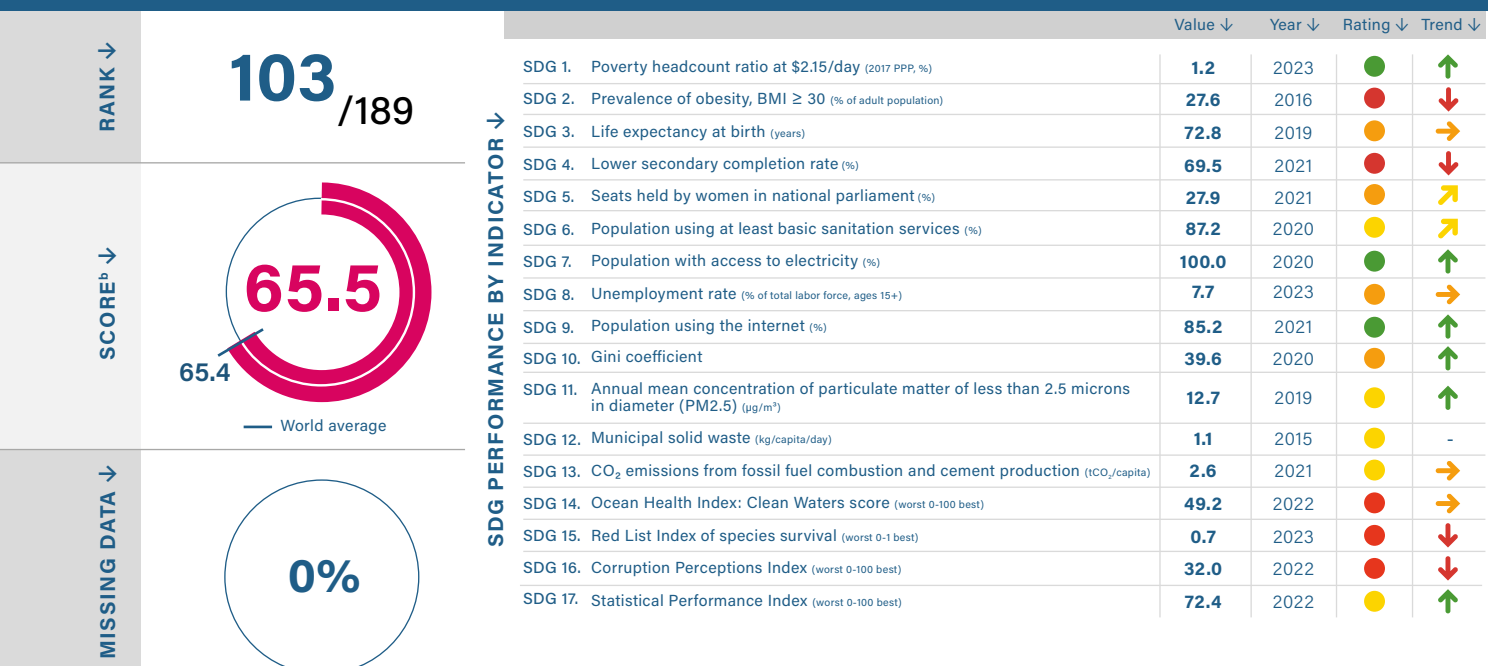
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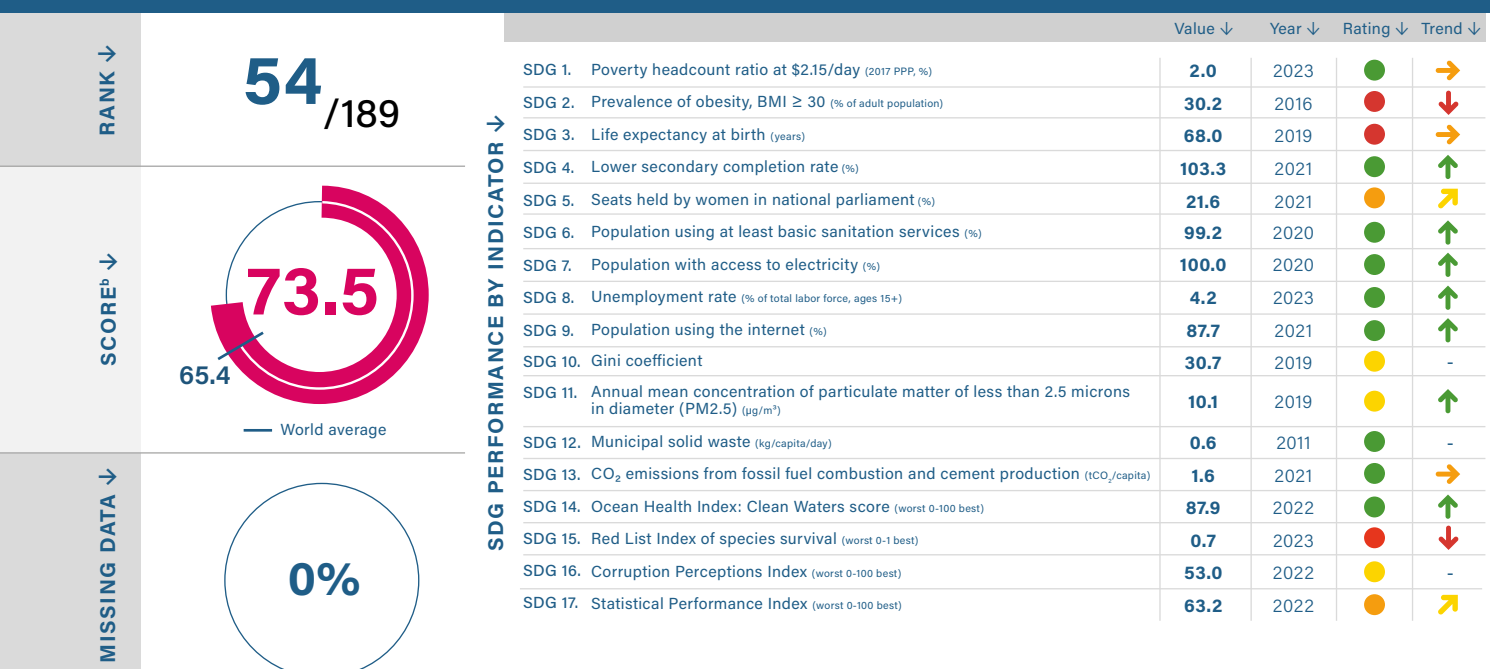
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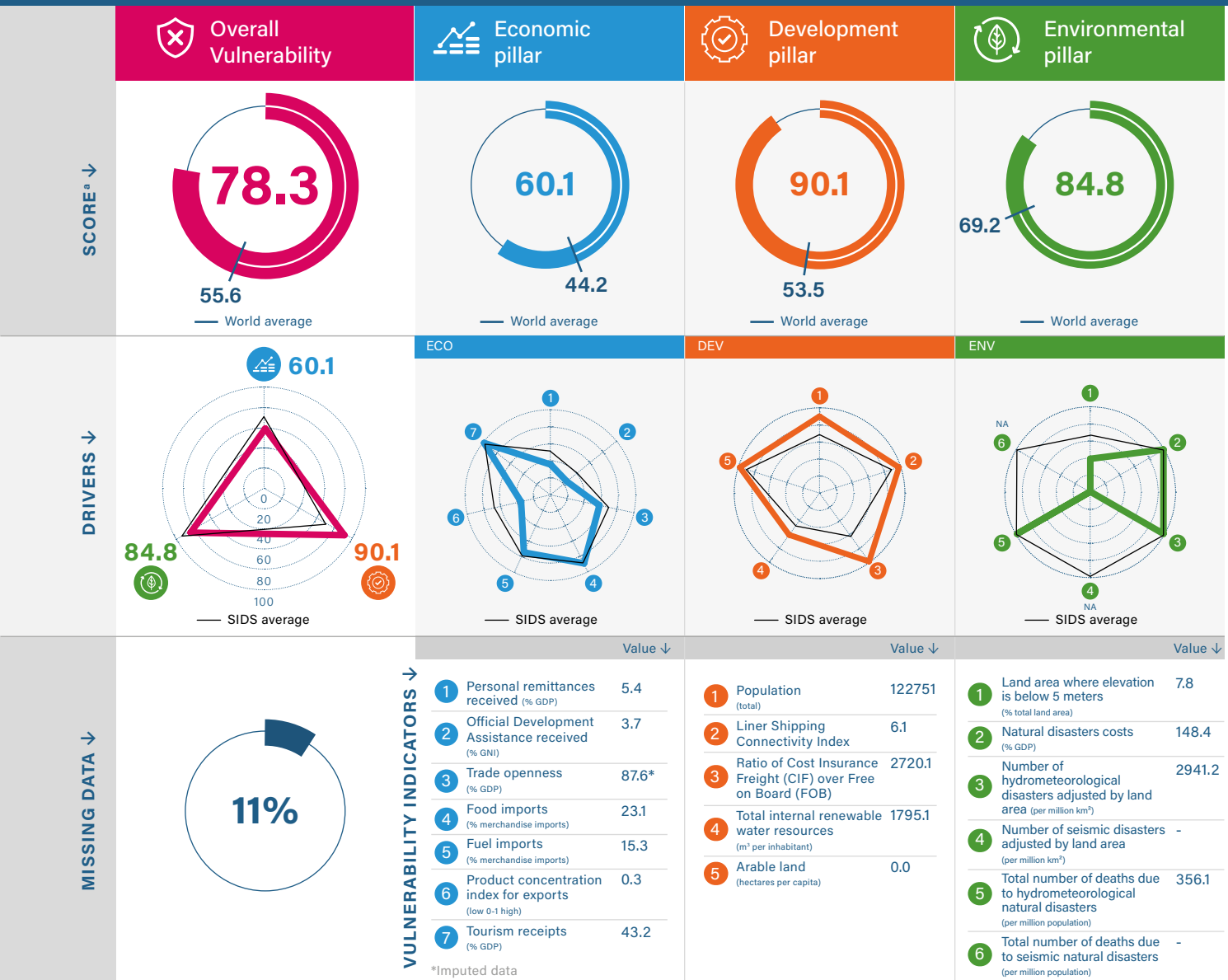
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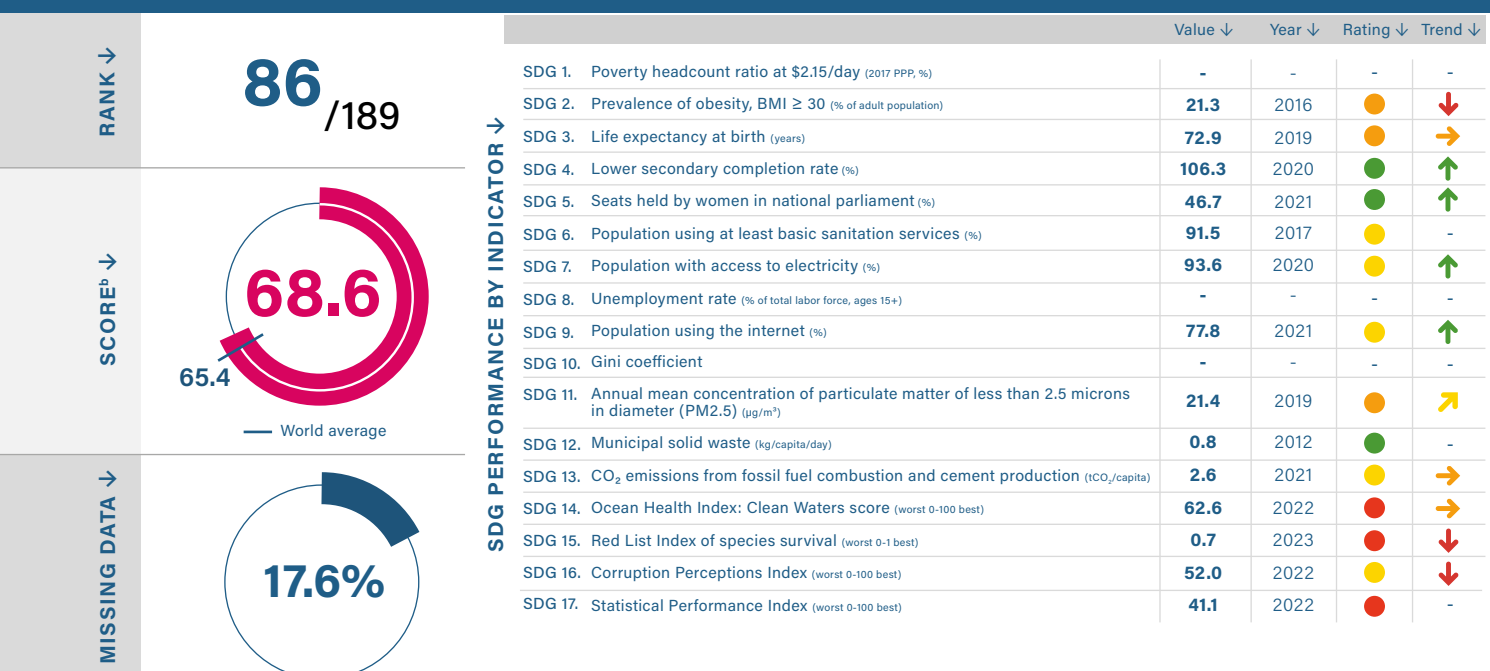
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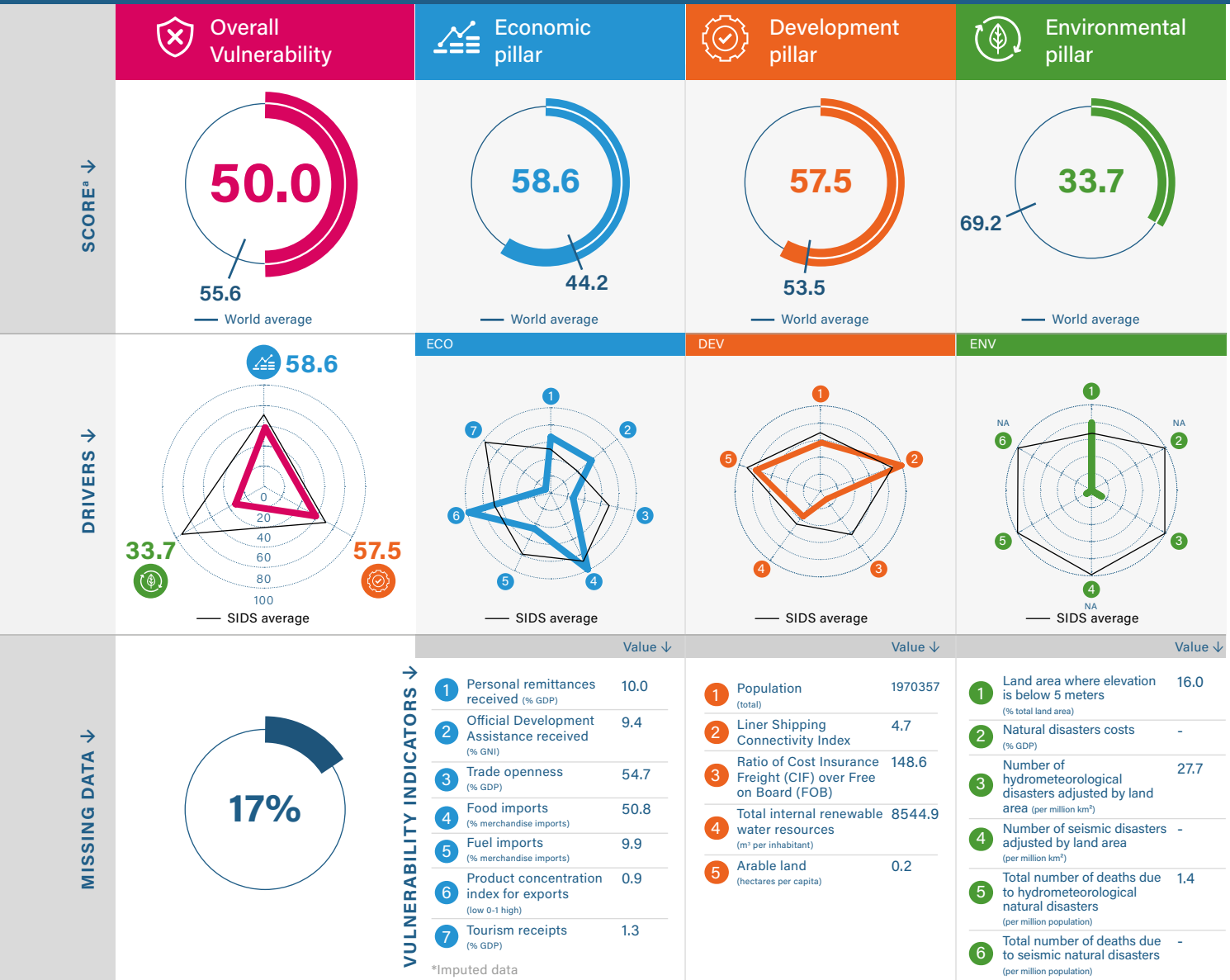
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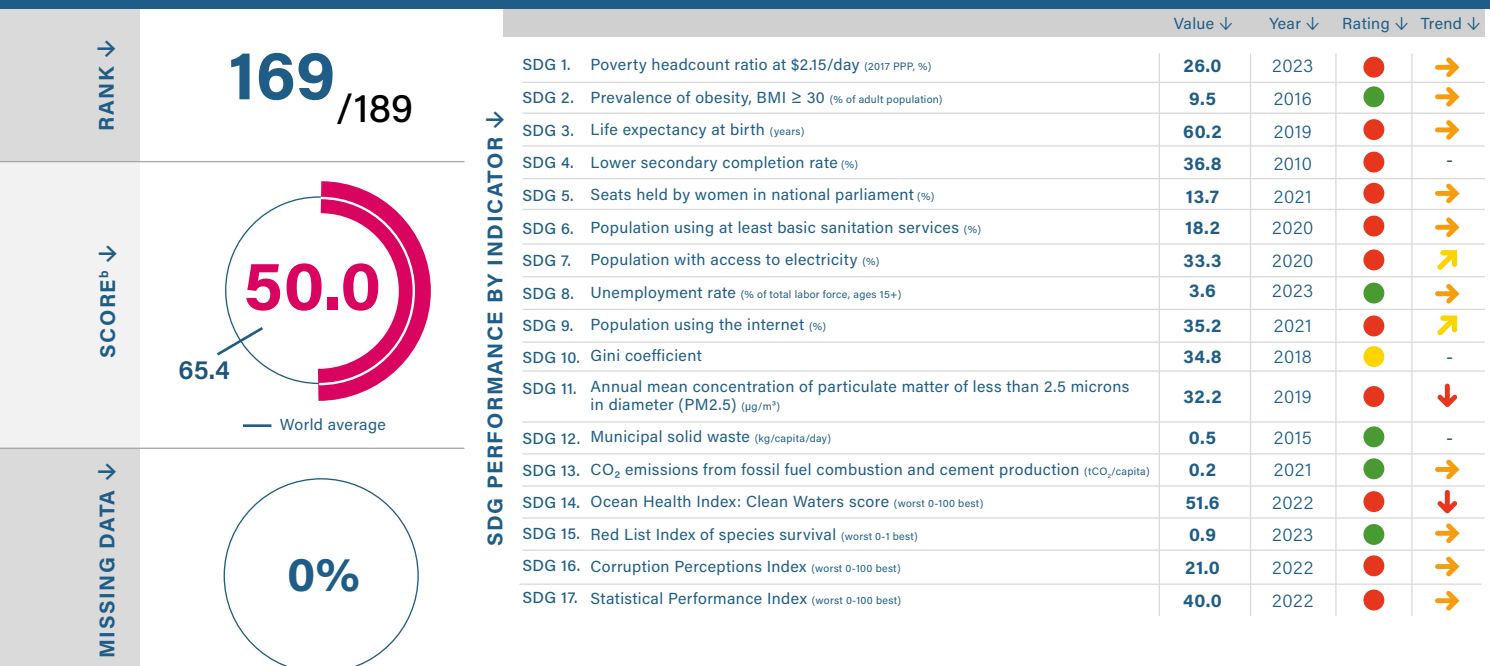
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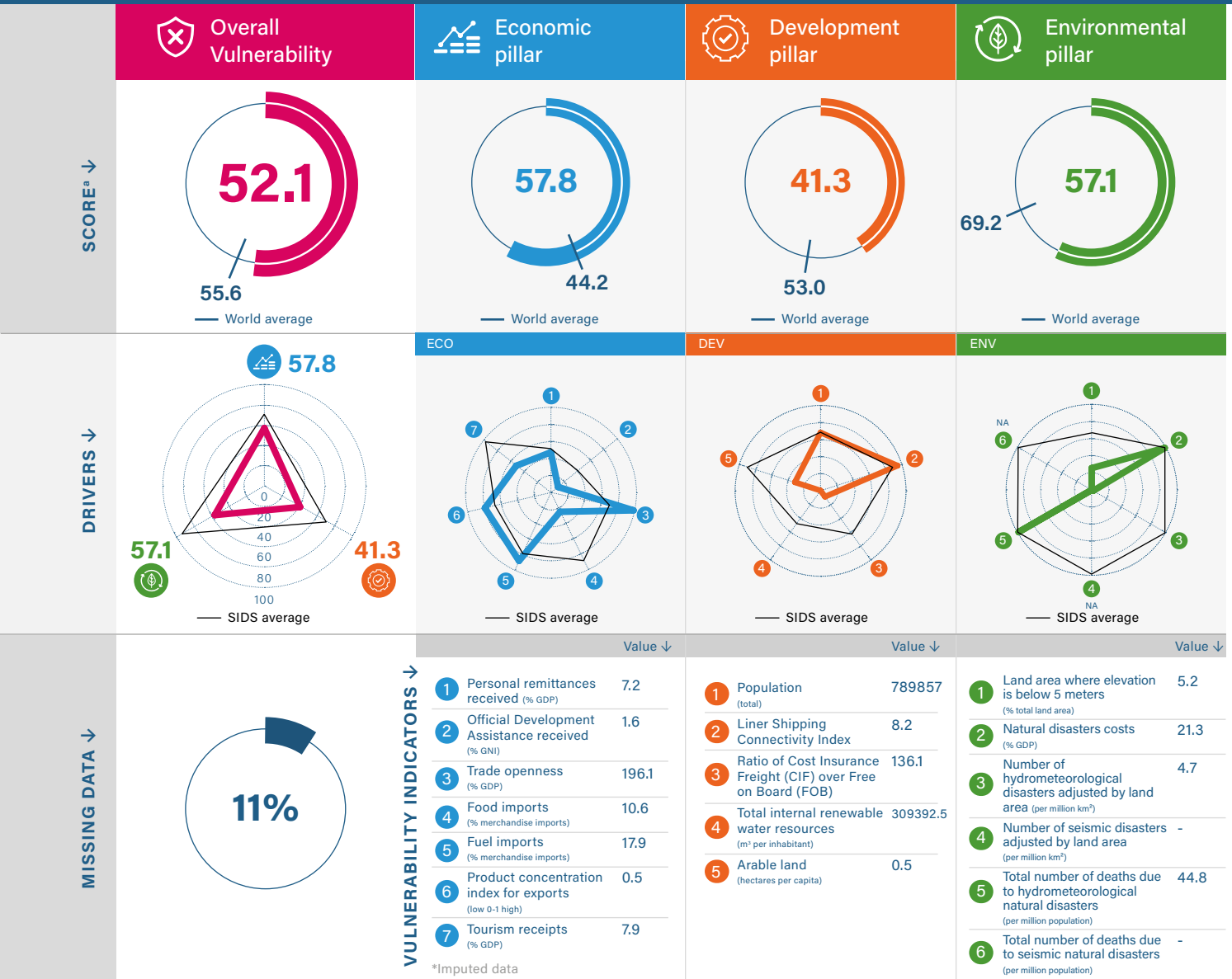
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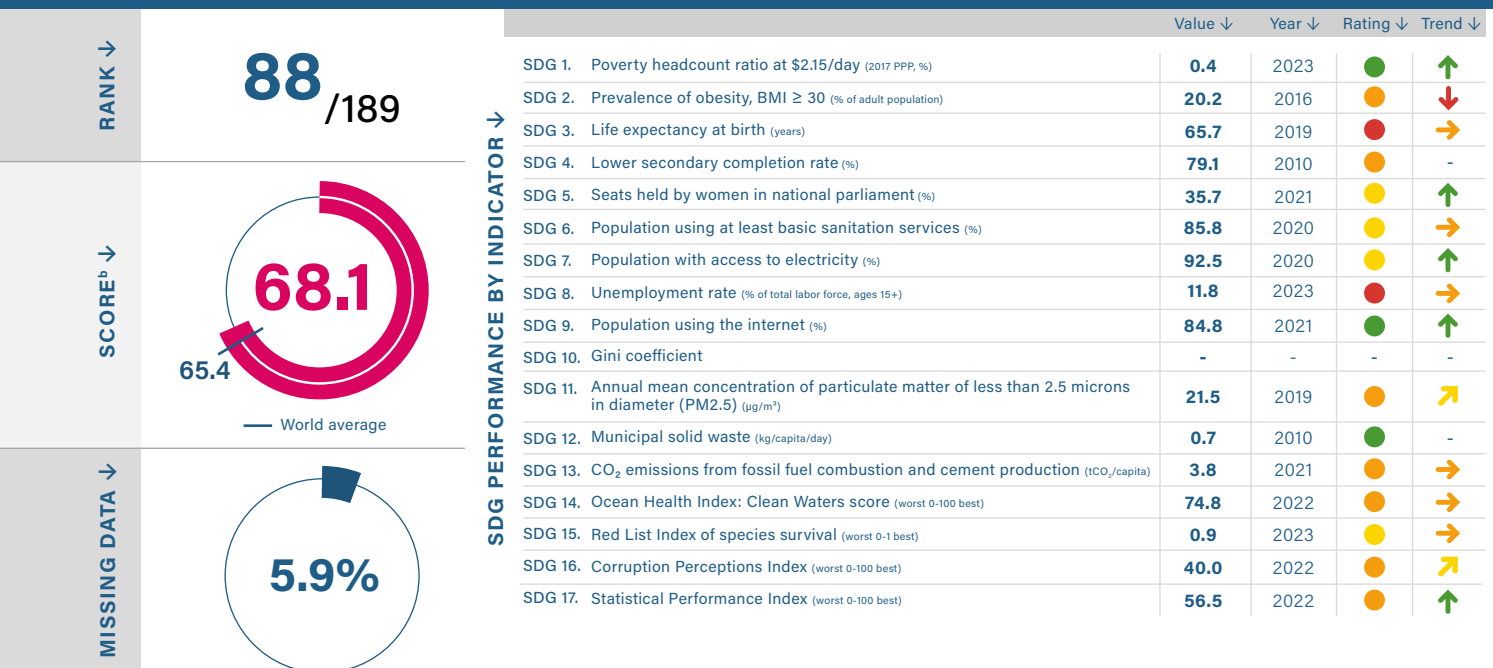
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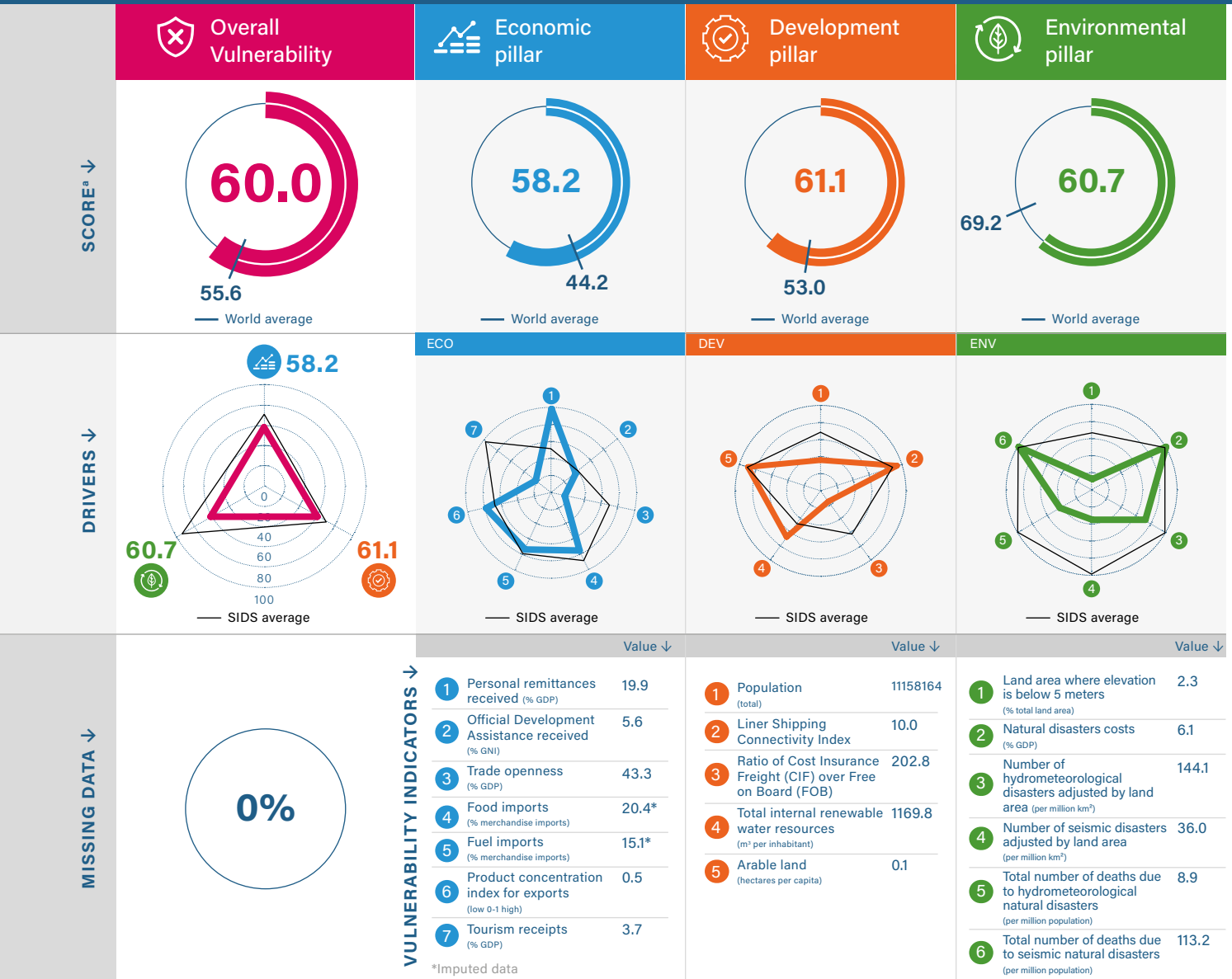
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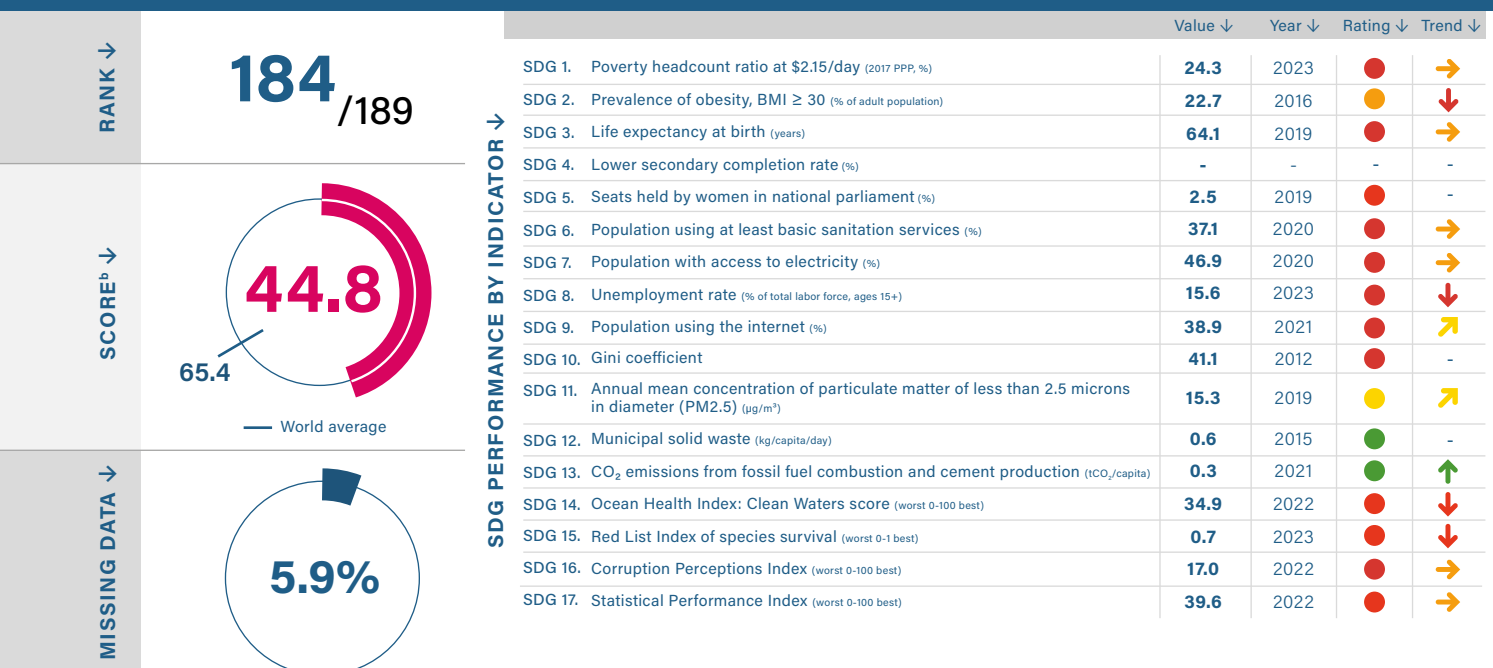
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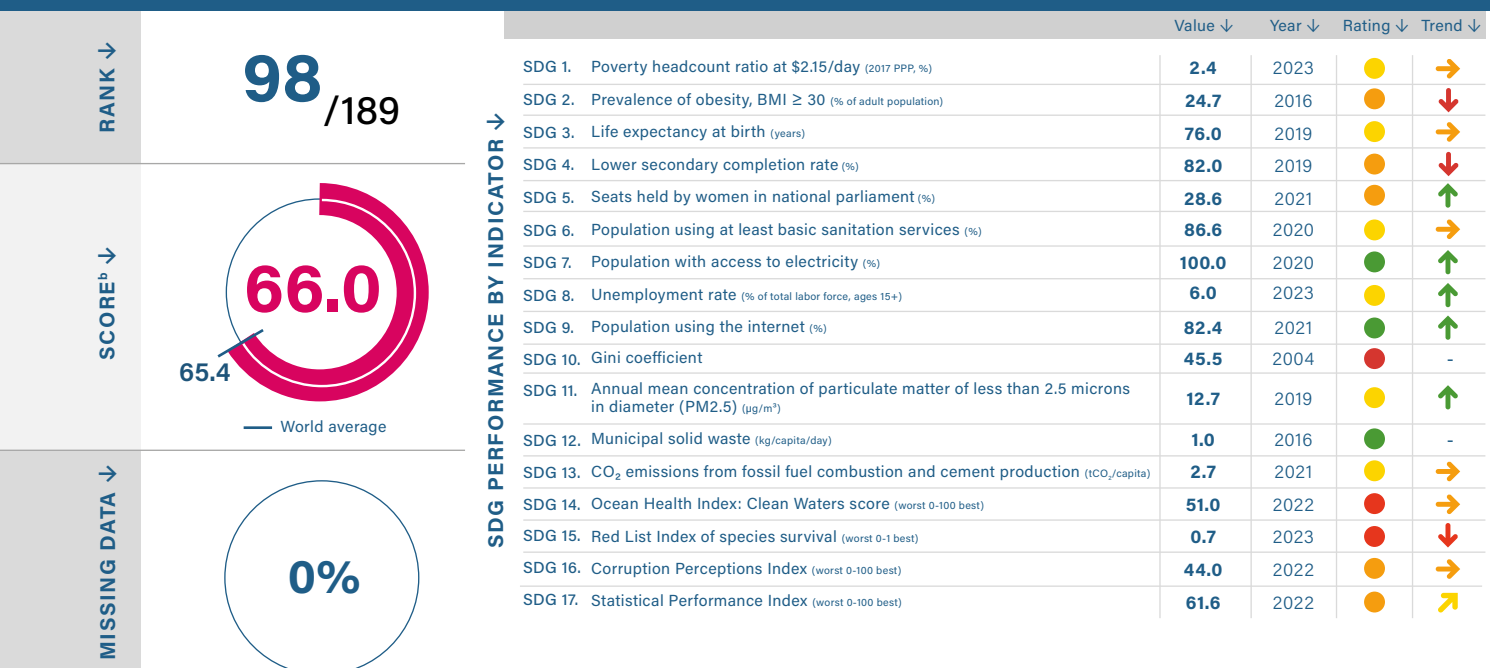
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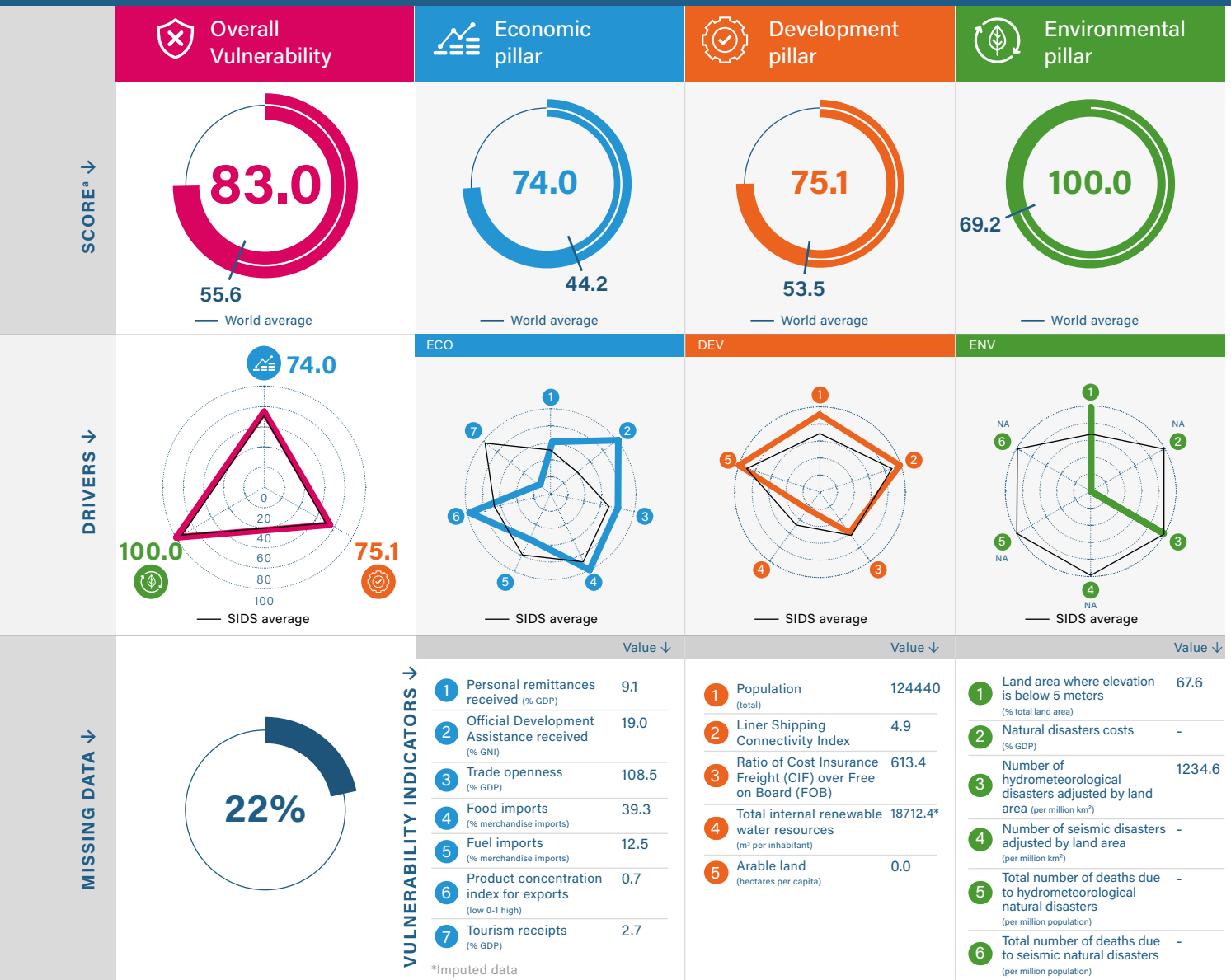


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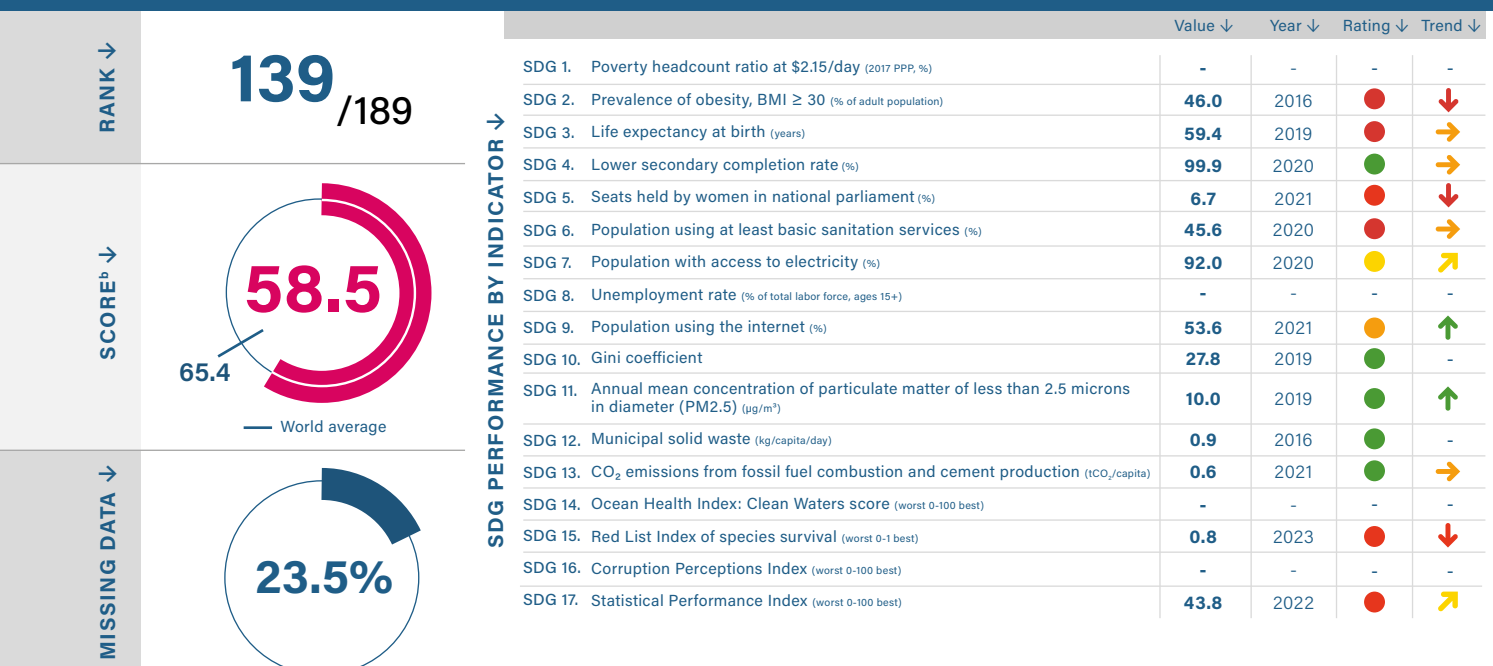
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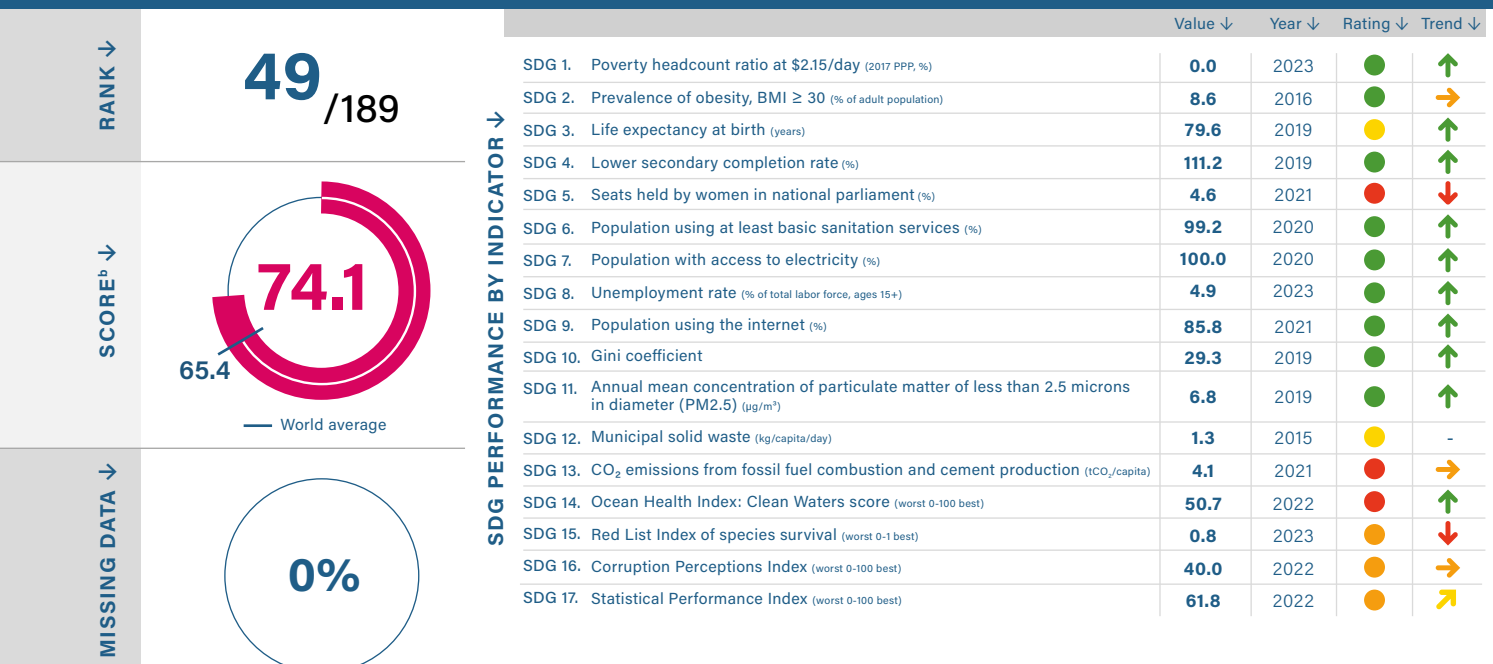
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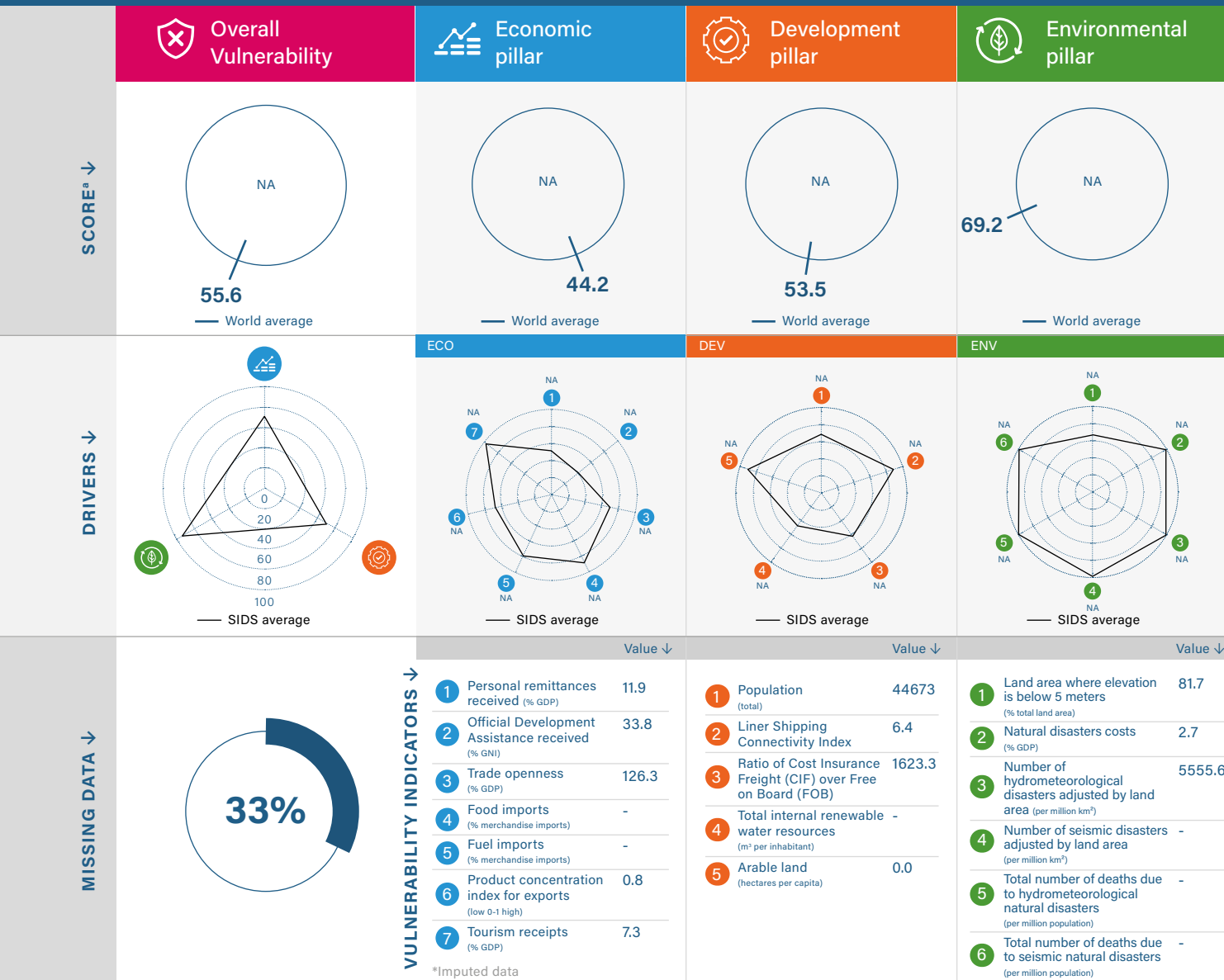


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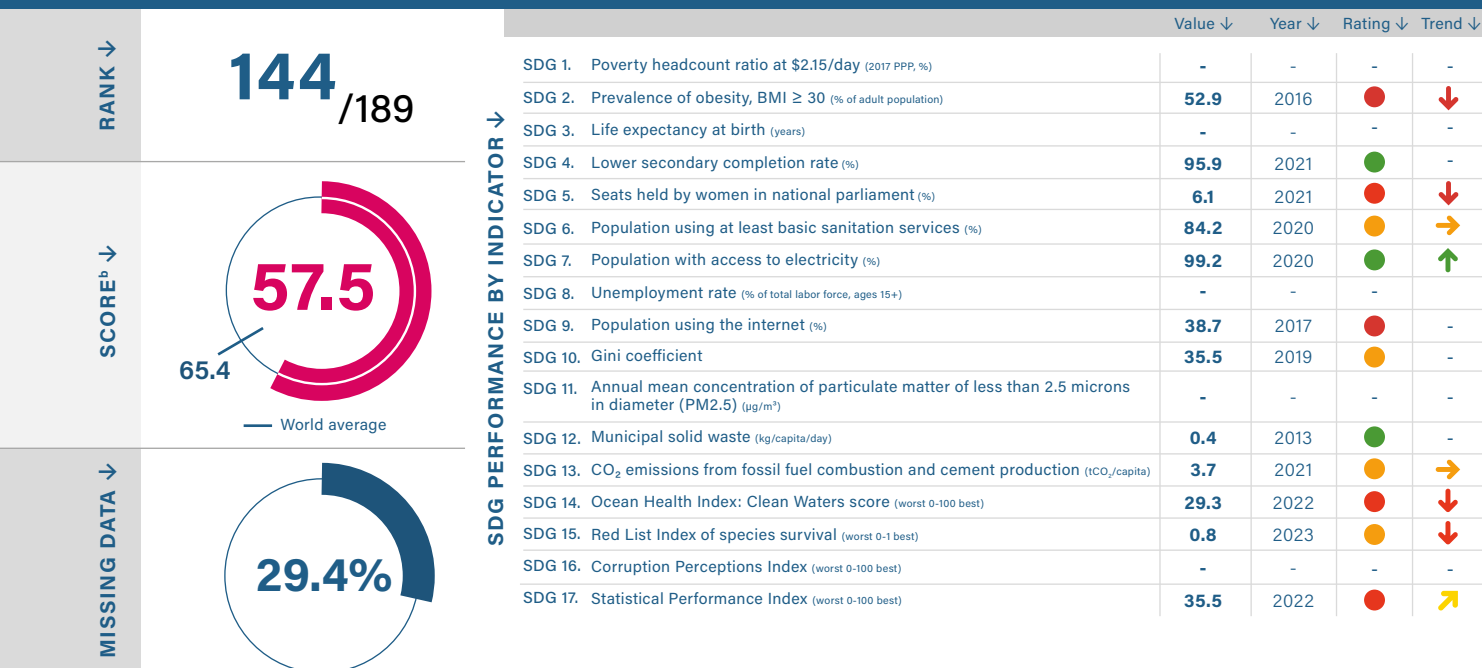
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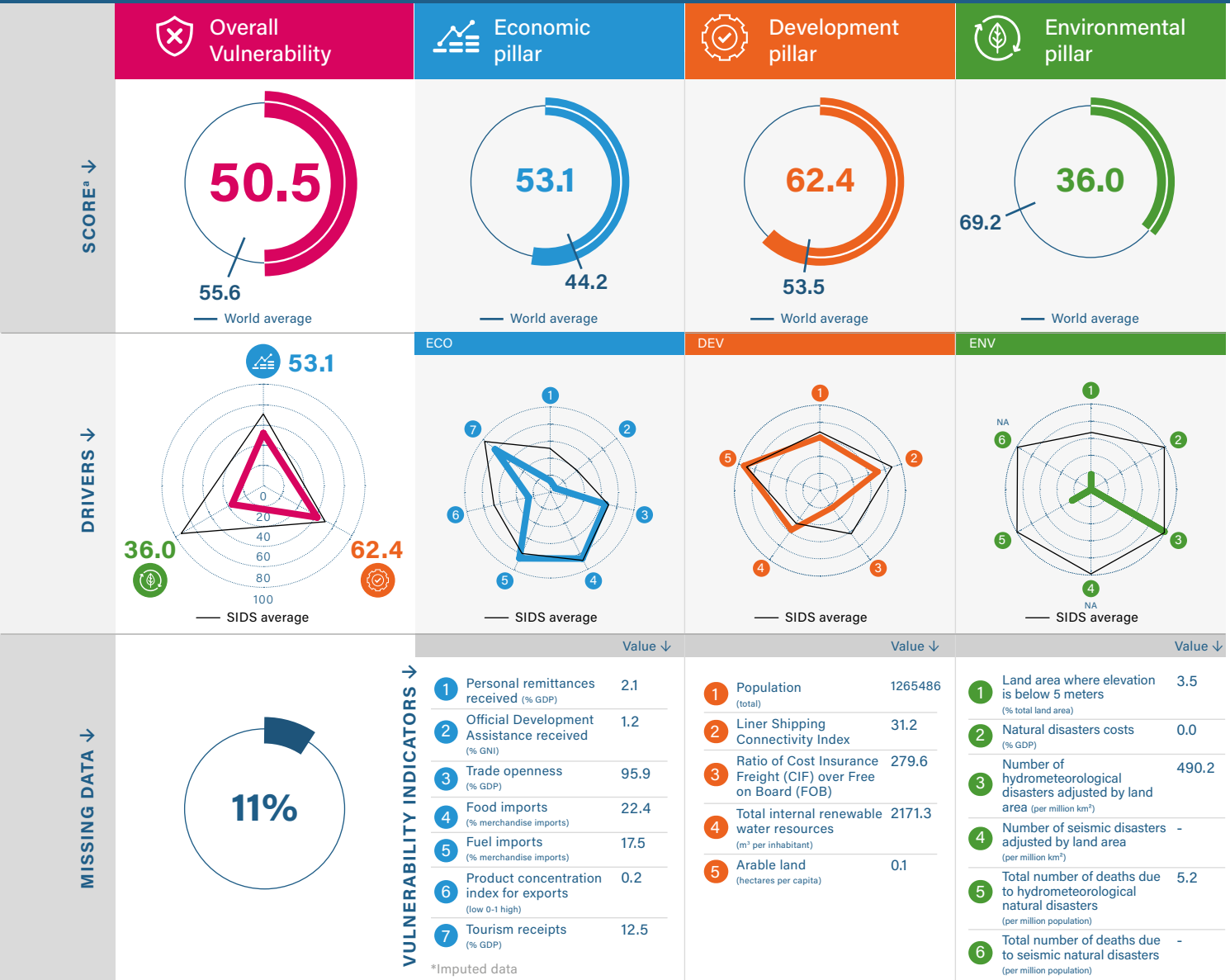
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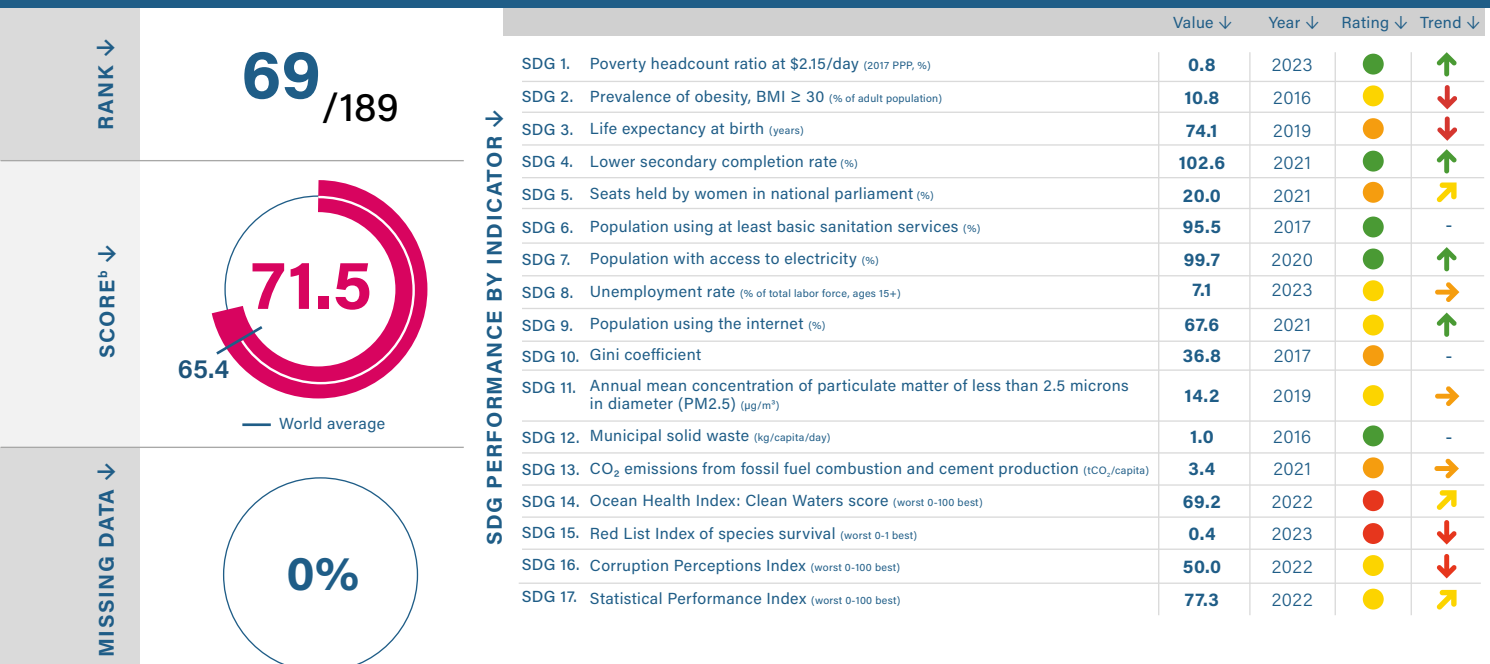
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^bThe SDG Index ranges from 0 to 100, the higher the score, the closer to SDG achievement.

MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



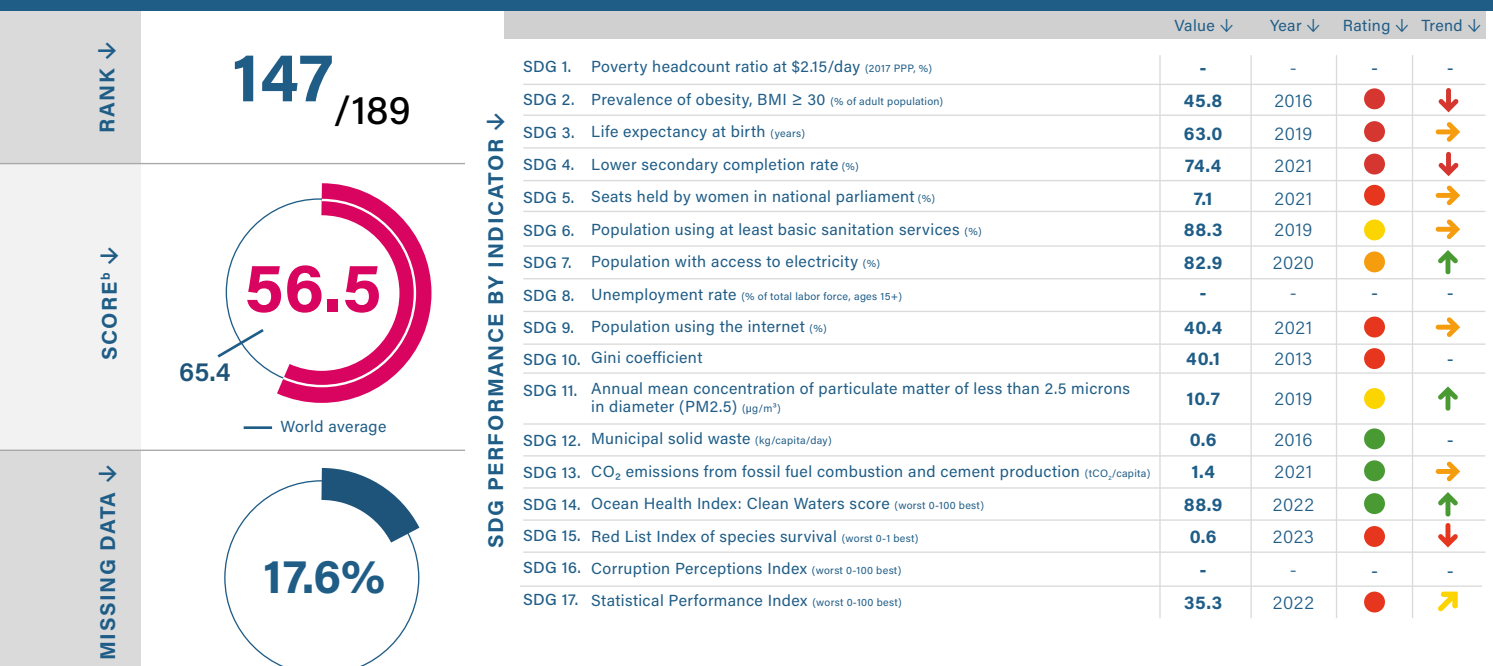
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



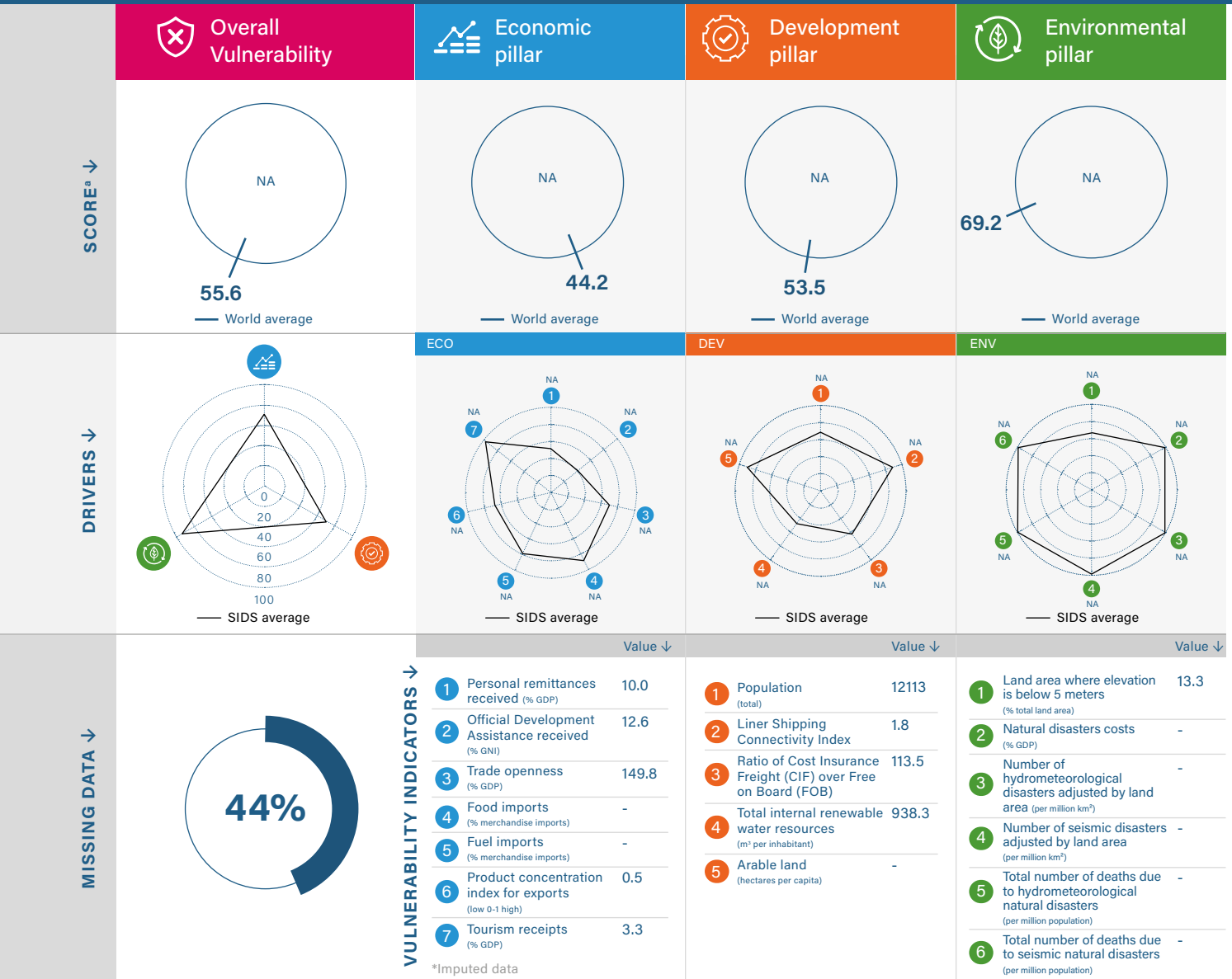
SDG INDEX FOR SIDS ↓



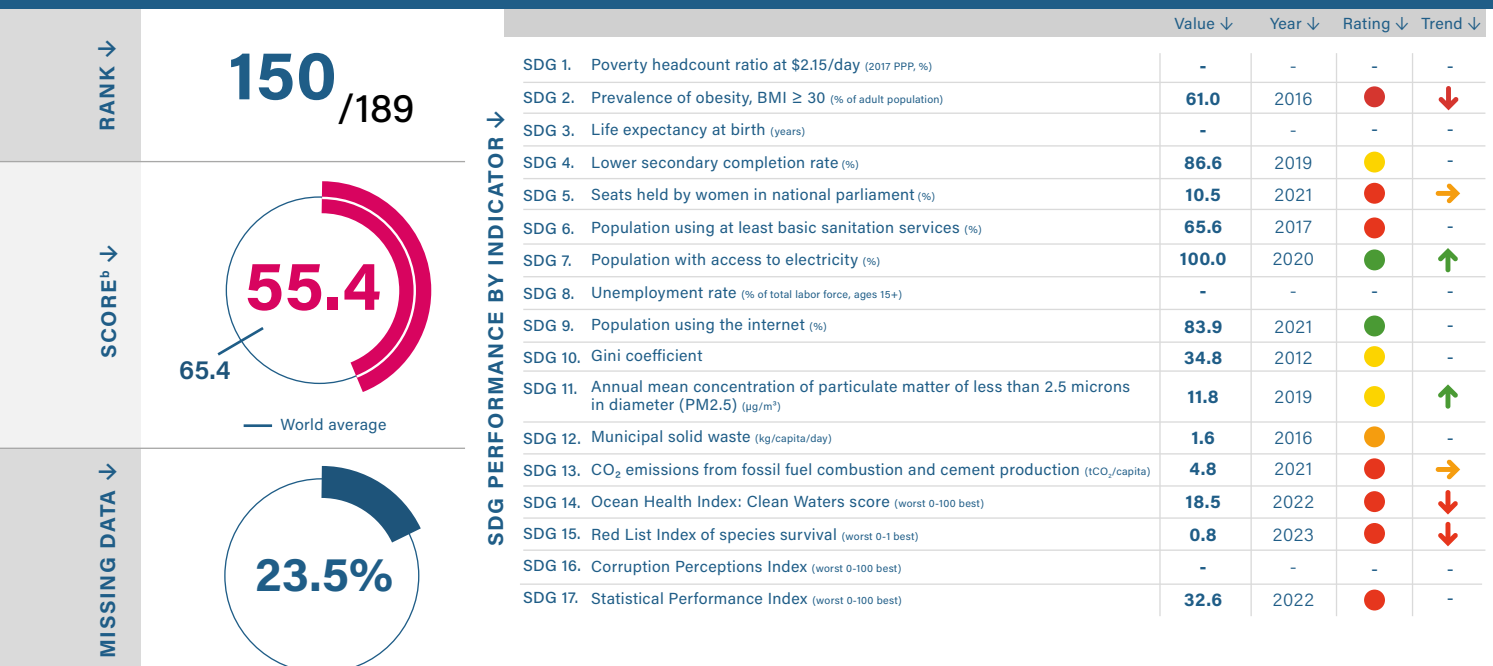
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



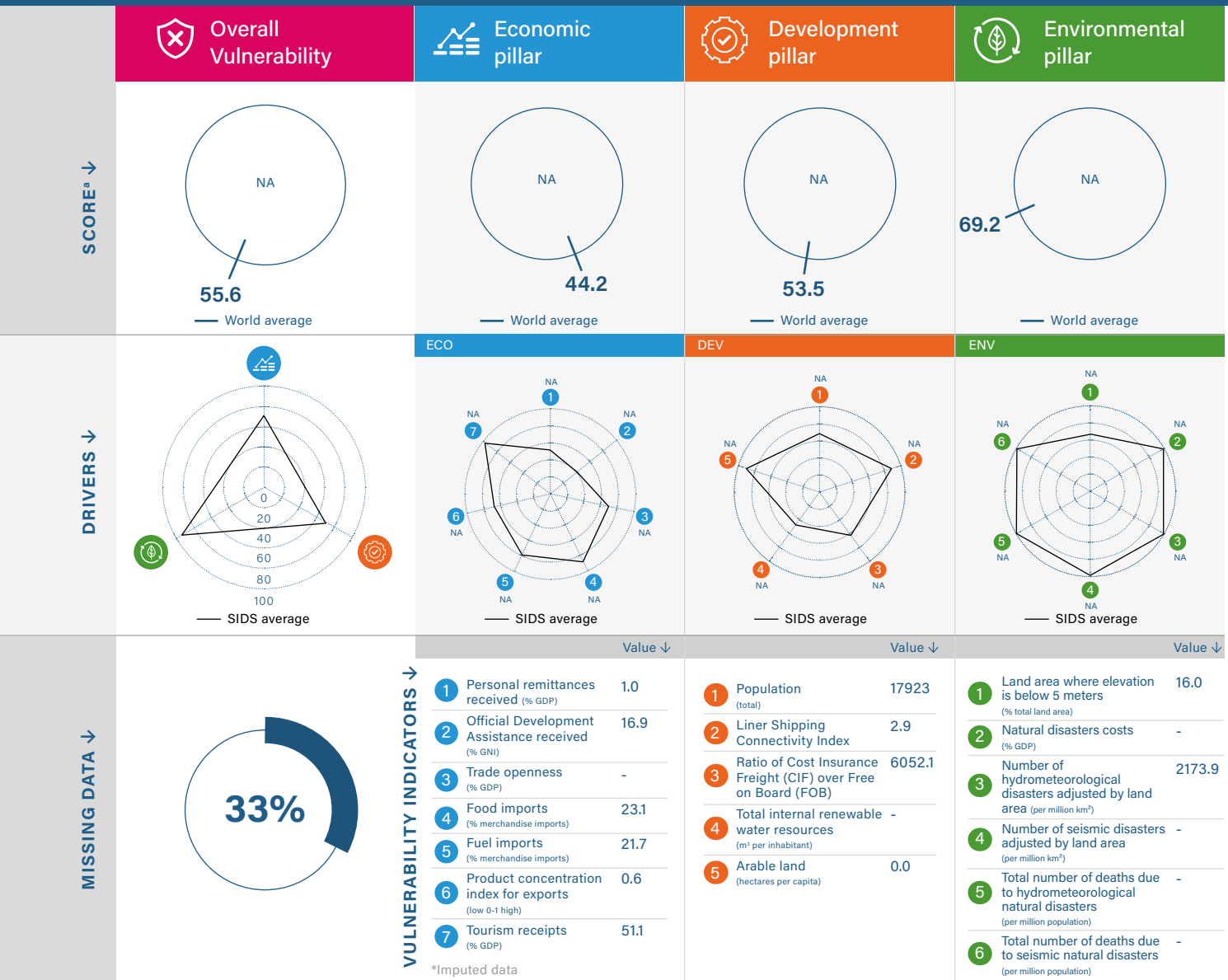
SDG INDEX FOR SIDS ↓



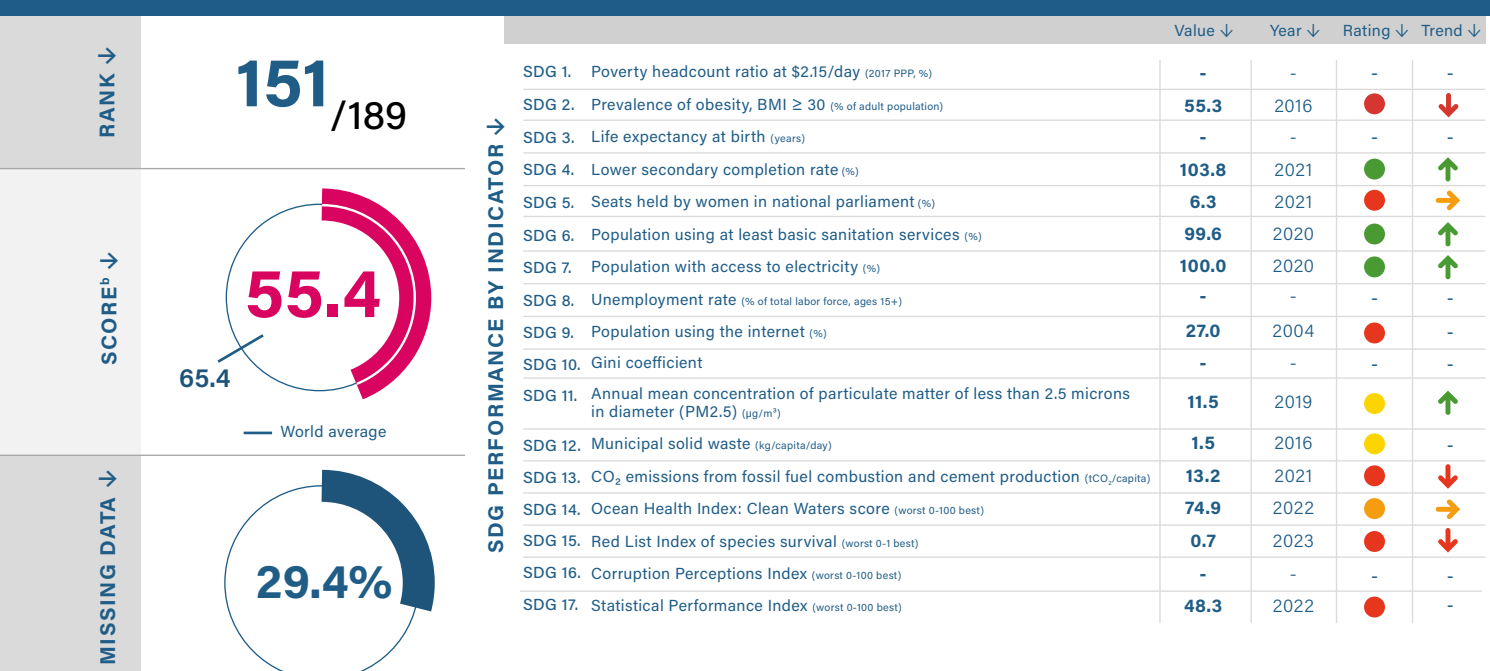
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



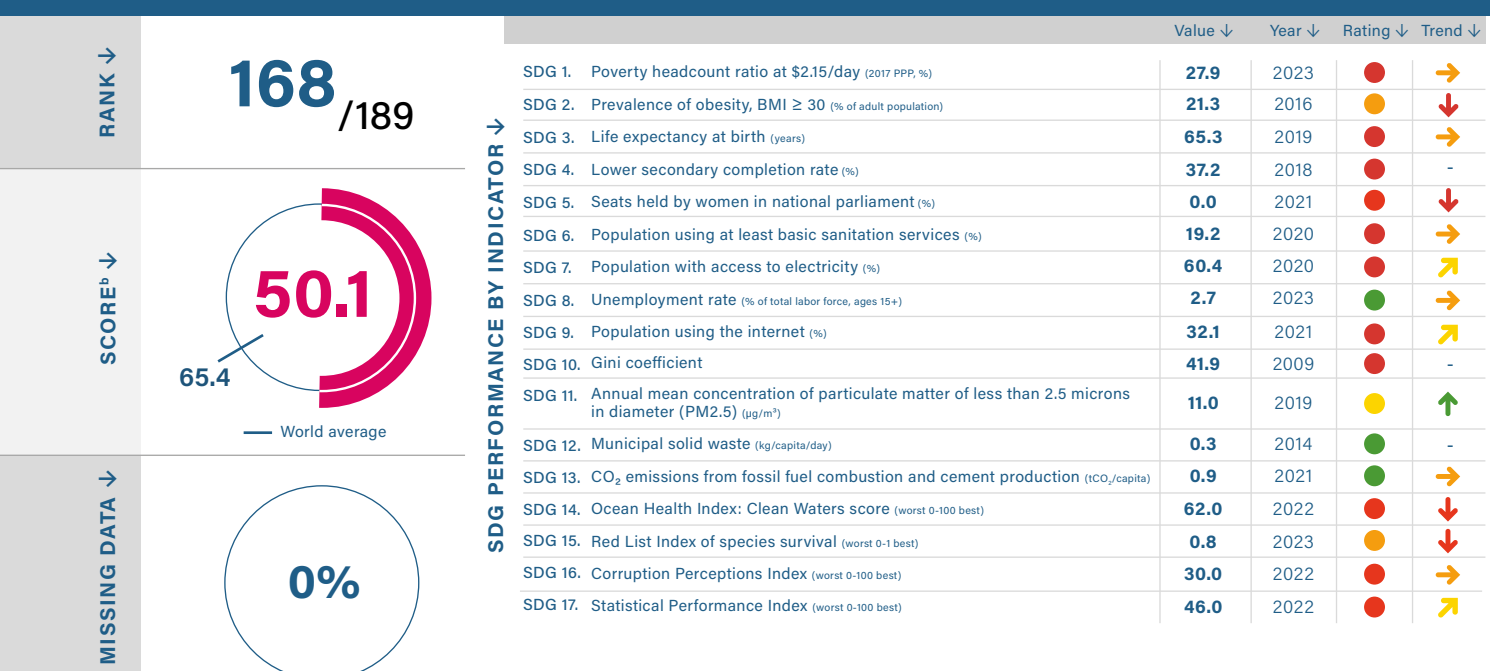
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



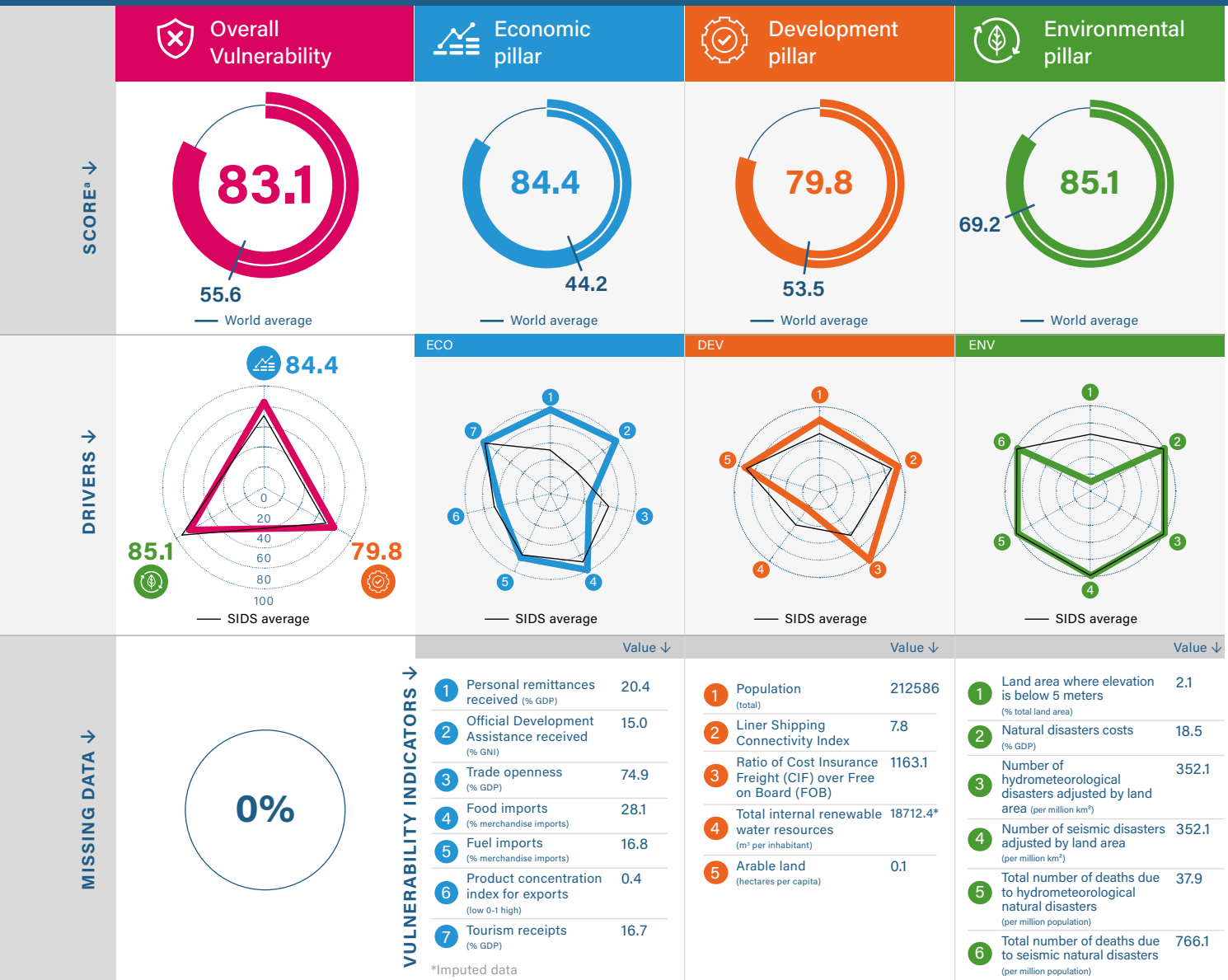
SDG INDEX FOR SIDS ↓



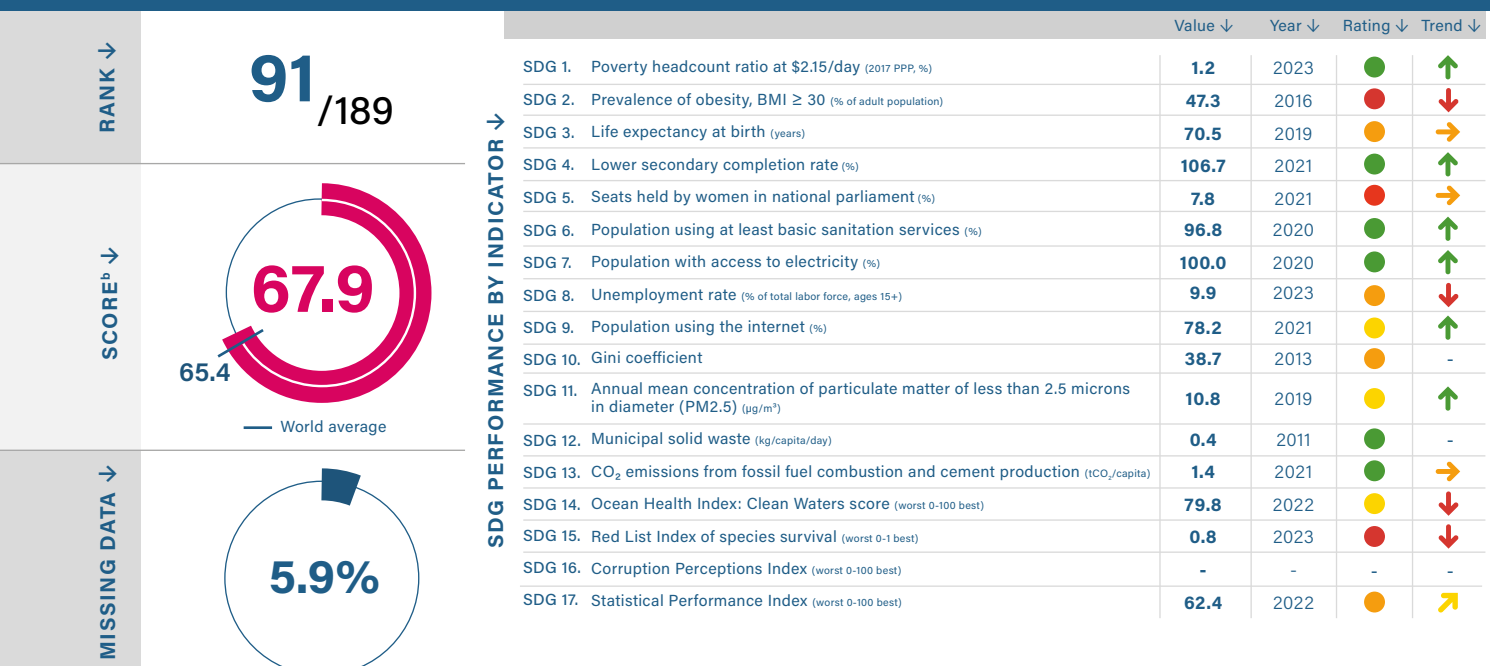
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



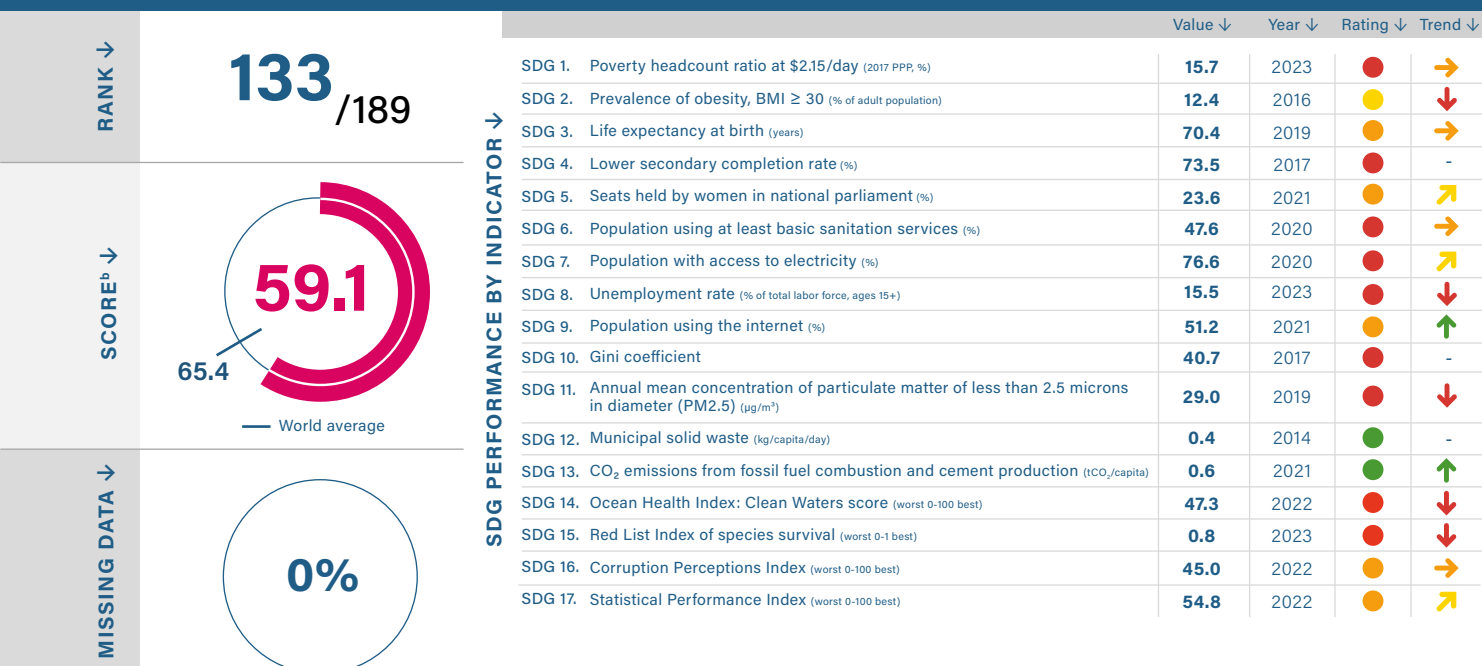
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



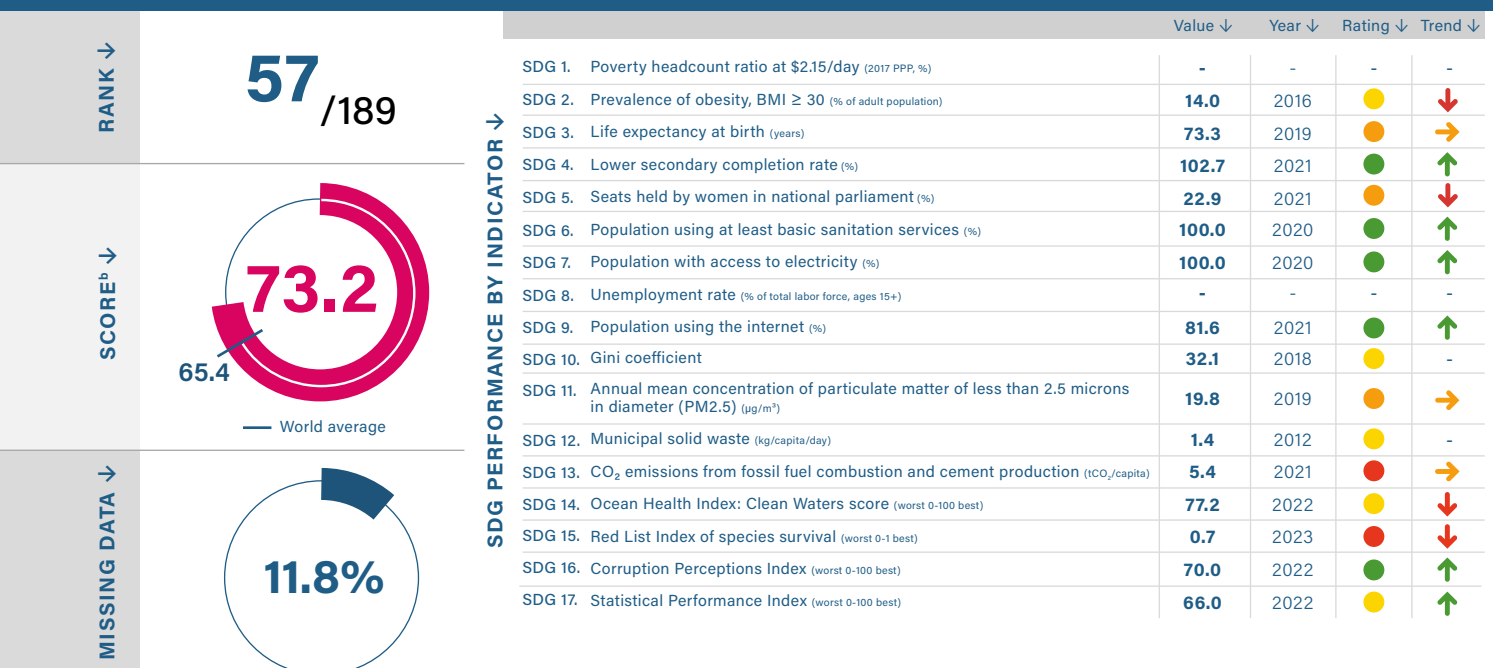
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



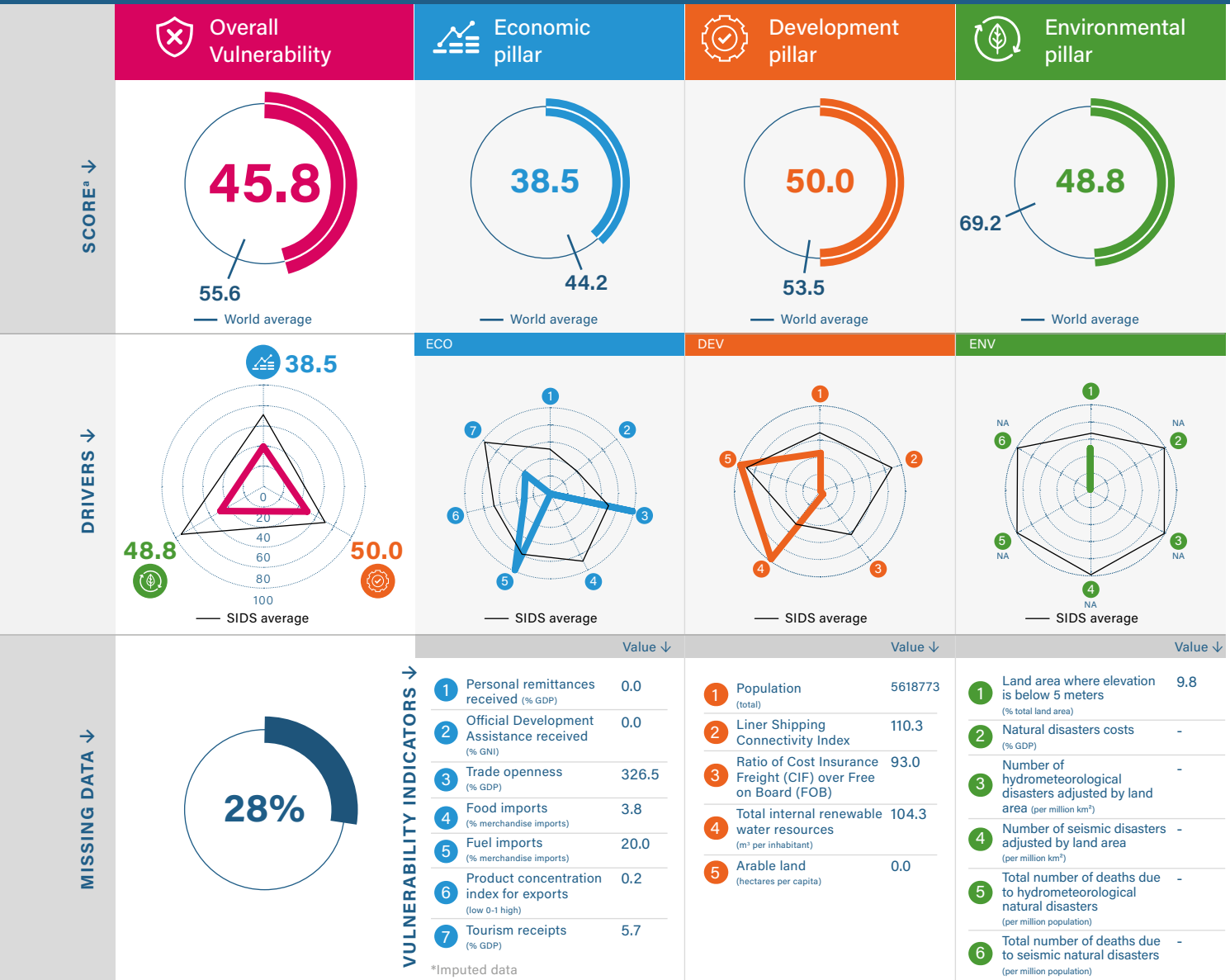
SDG INDEX FOR SIDS ↓



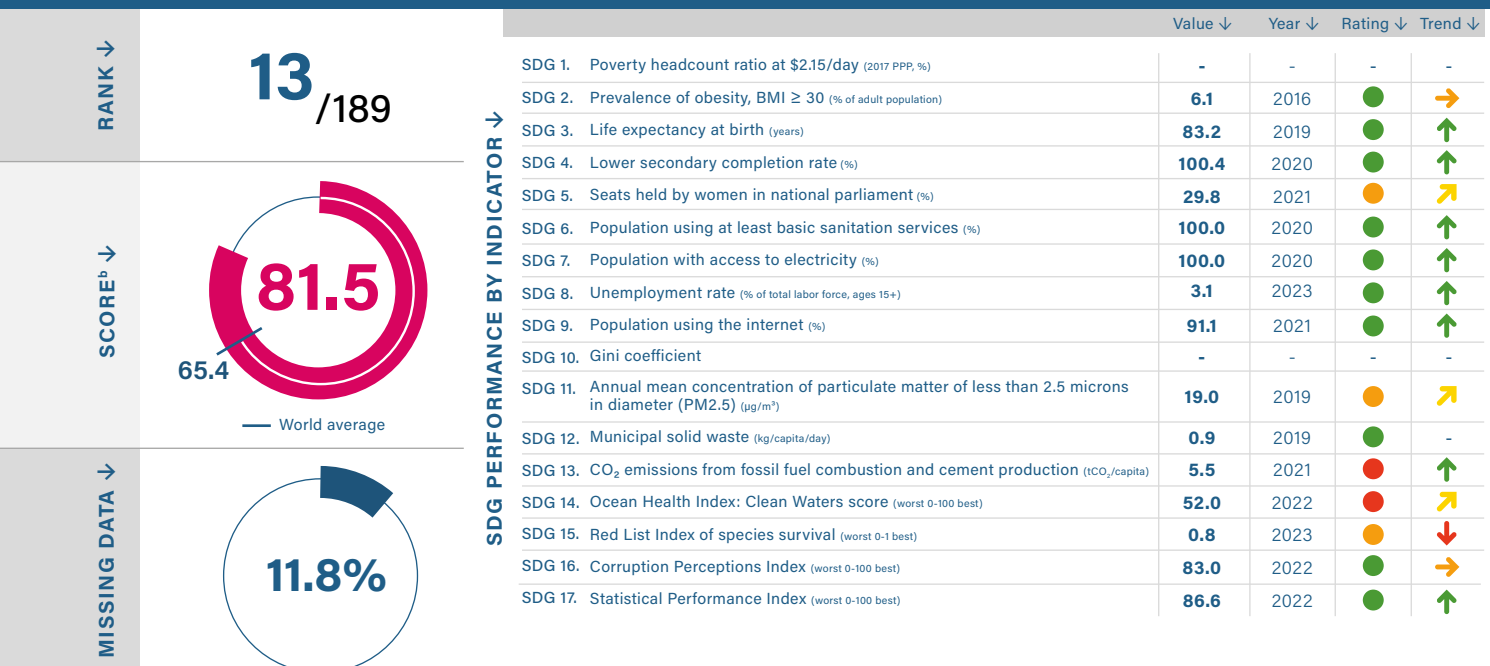
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



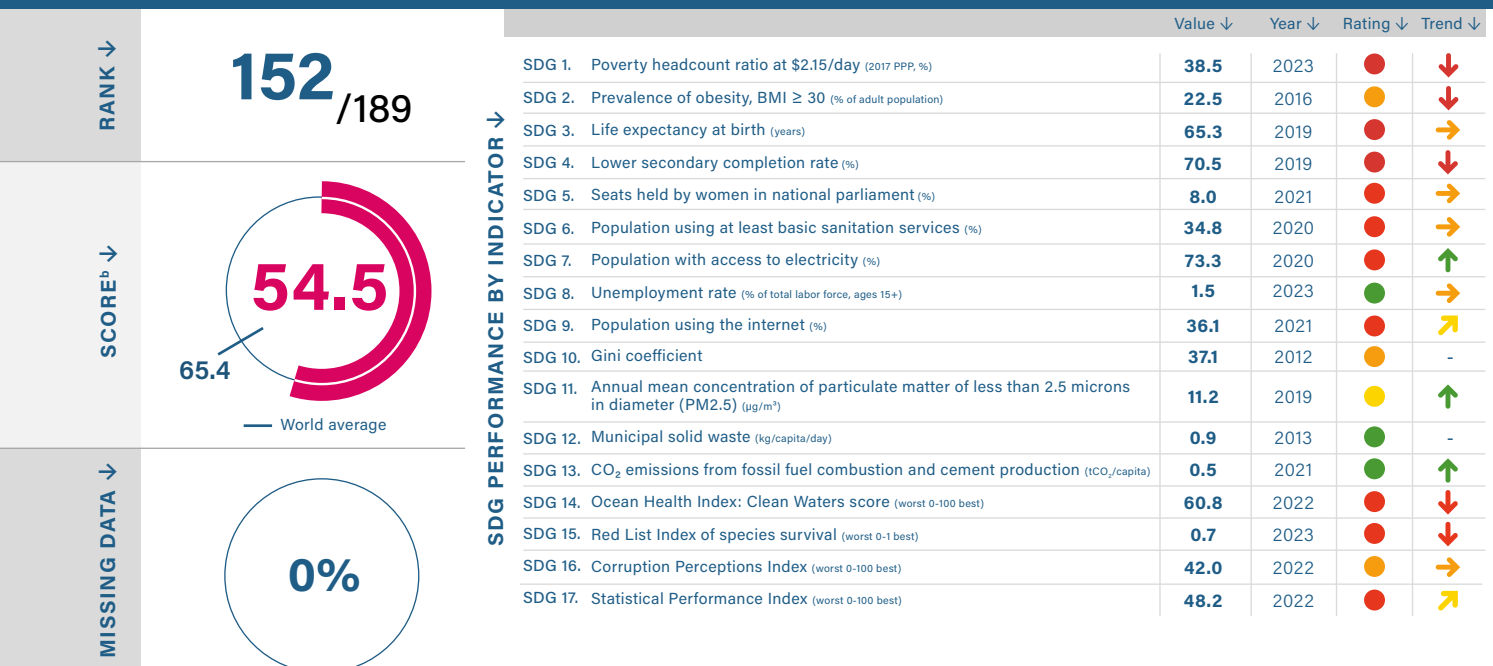
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



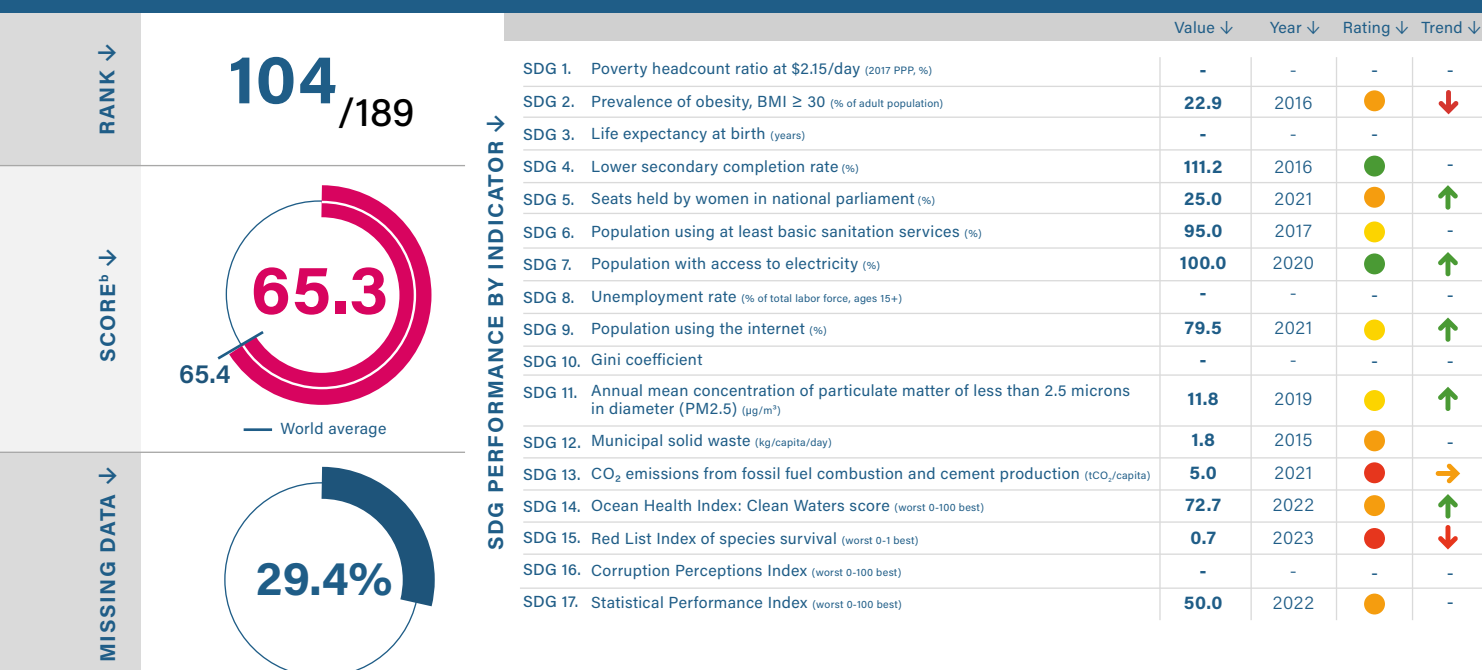
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓

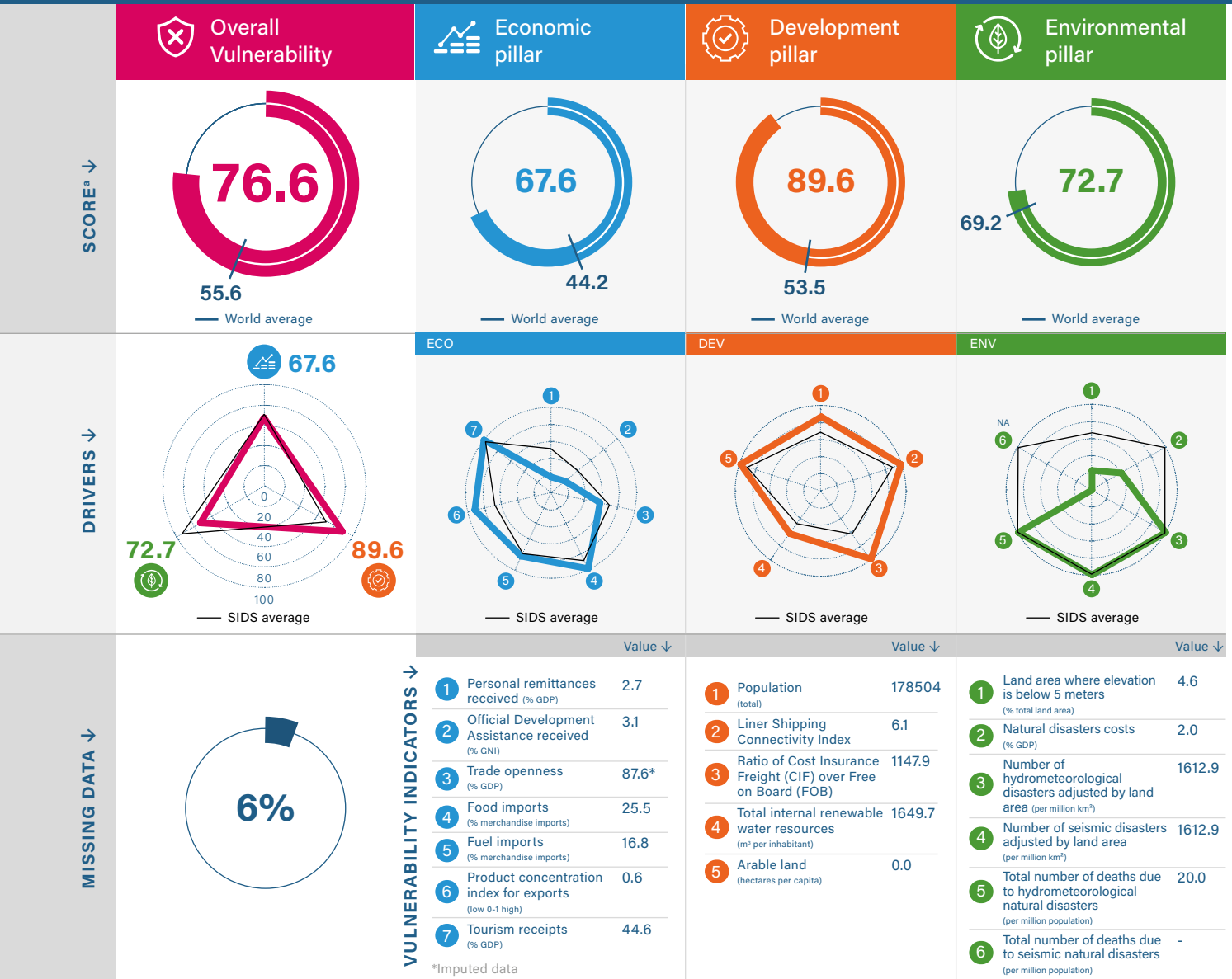


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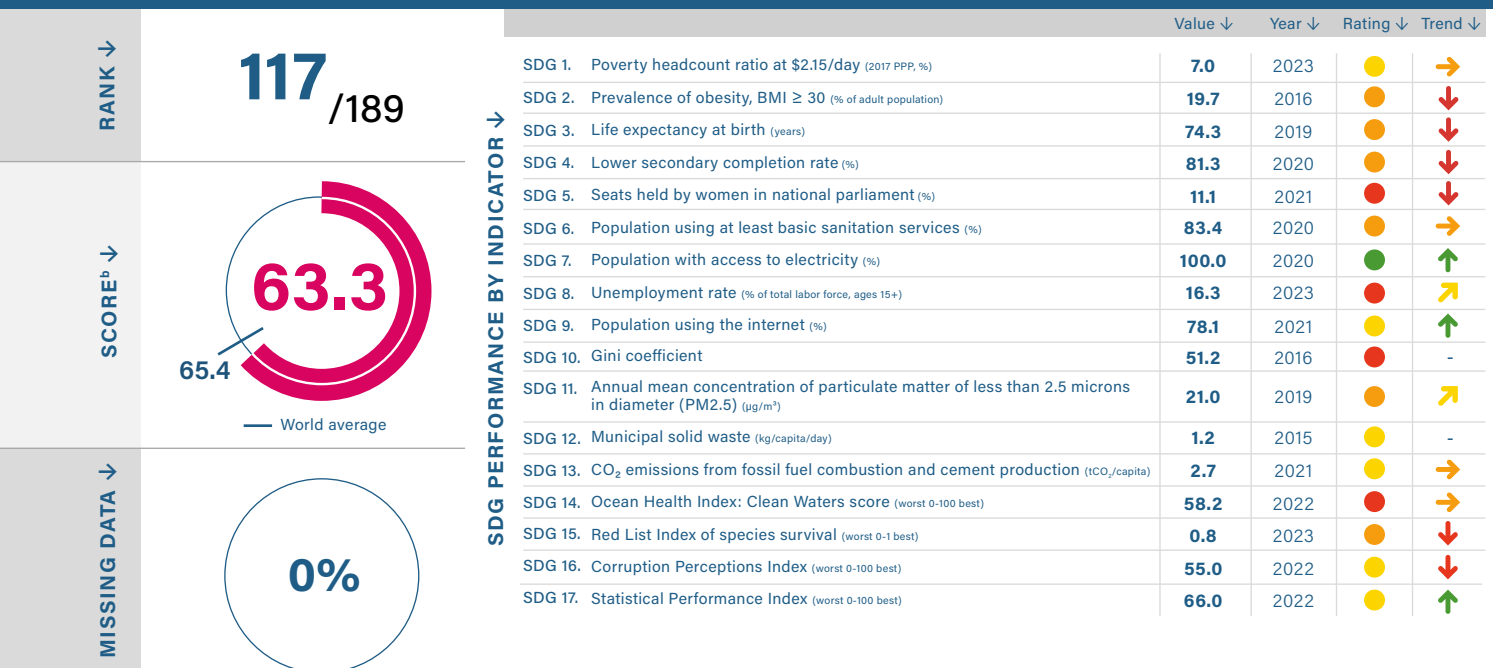
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓

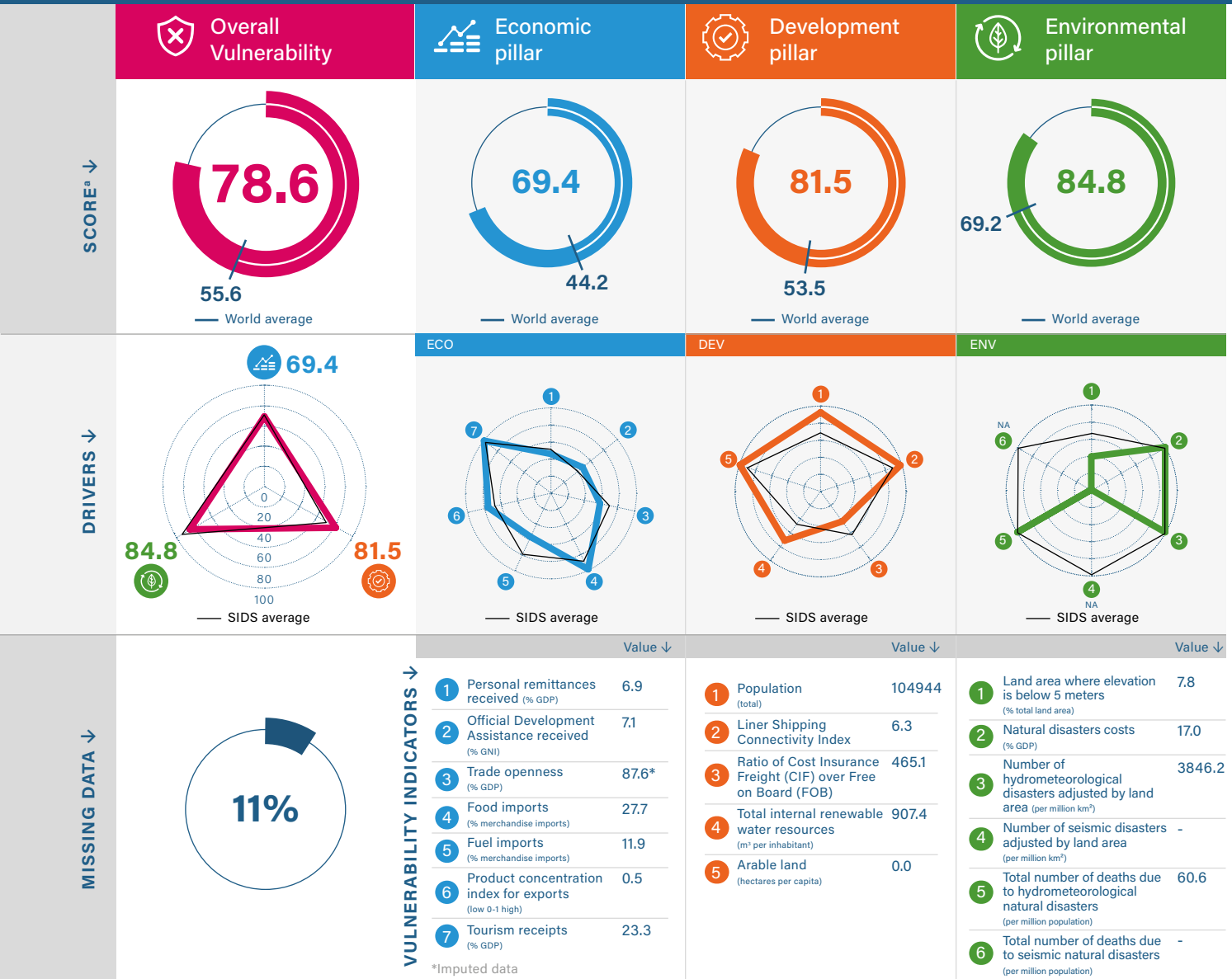


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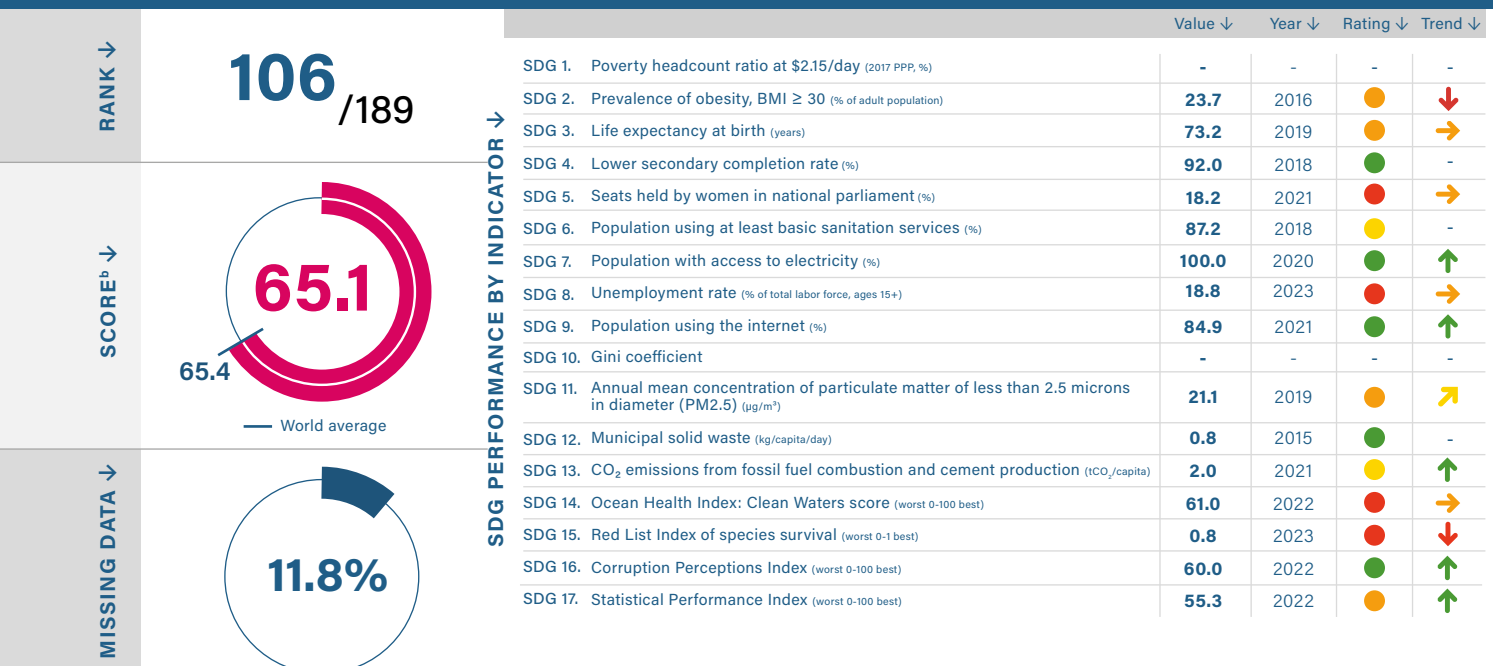
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓

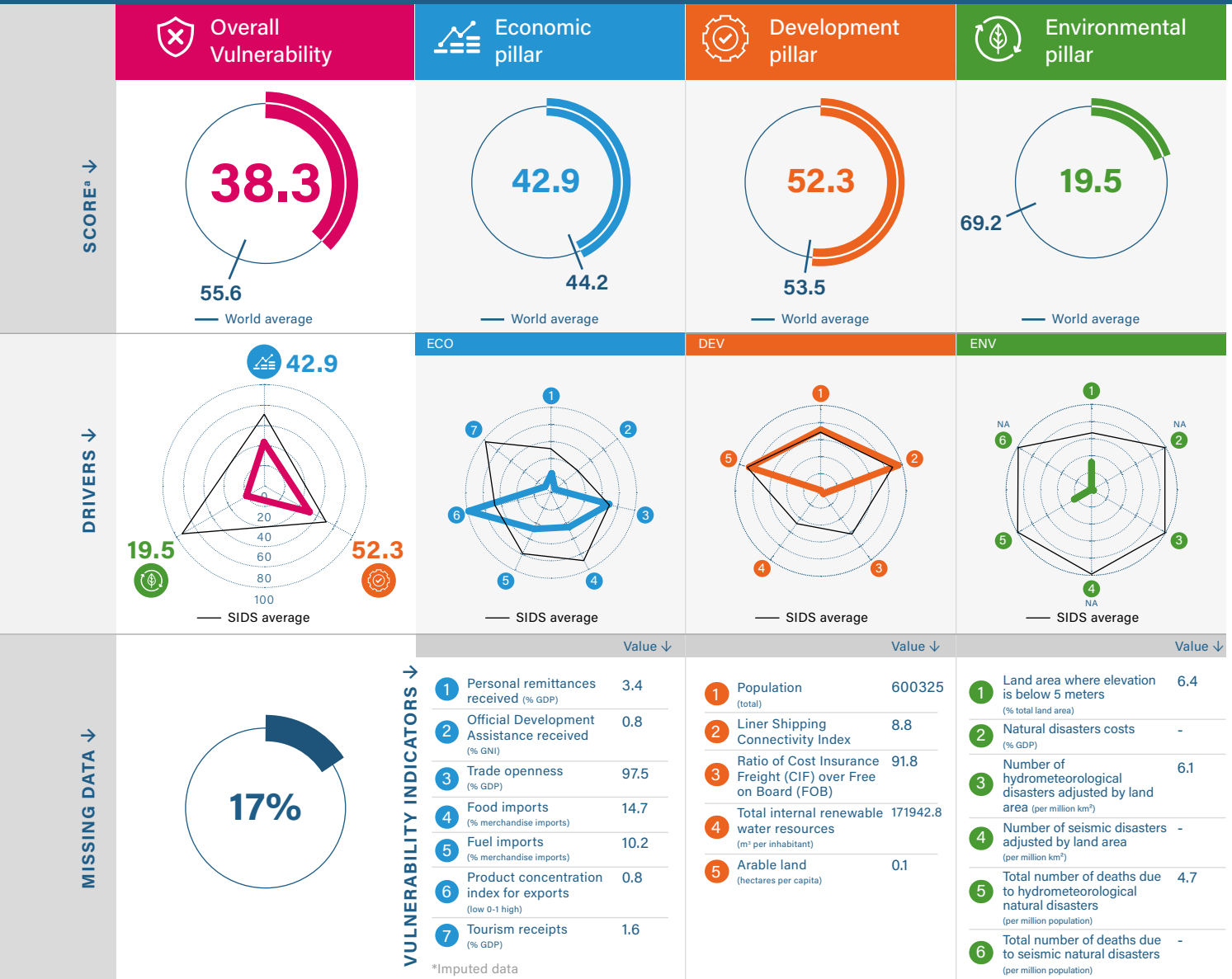


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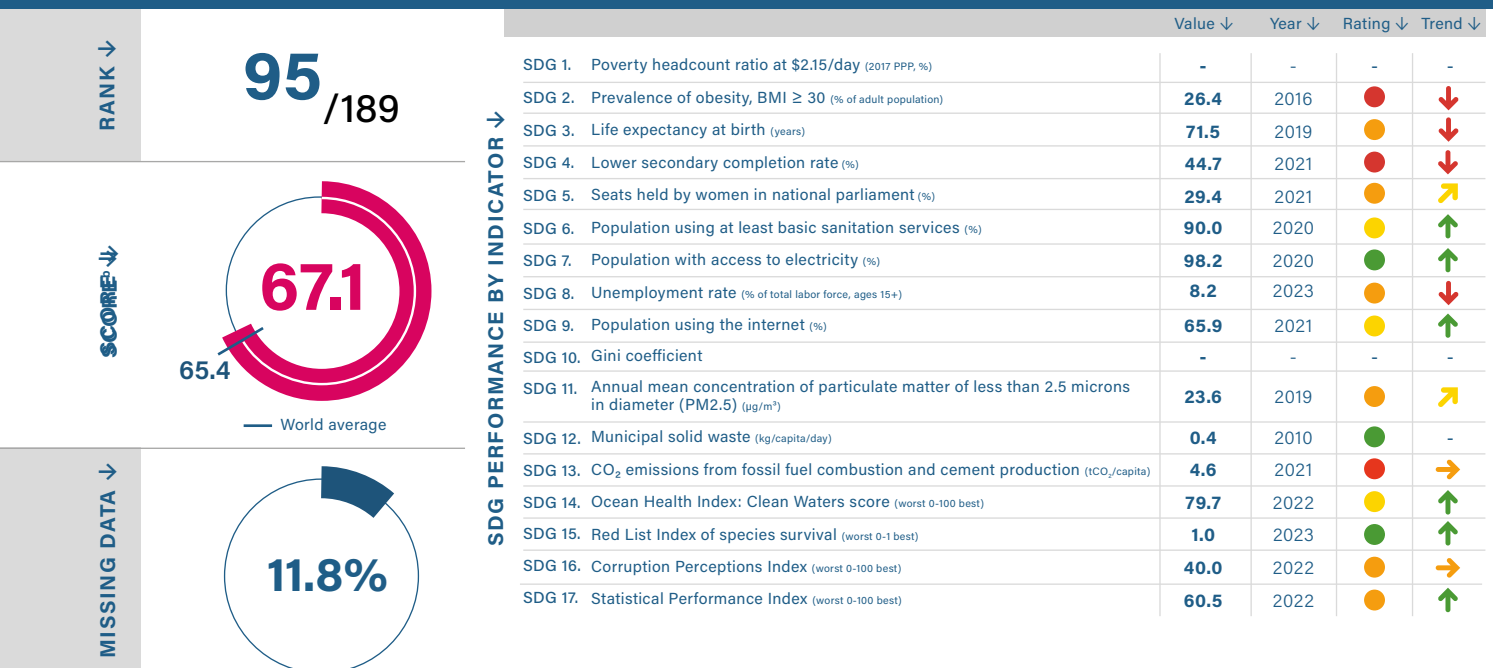
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



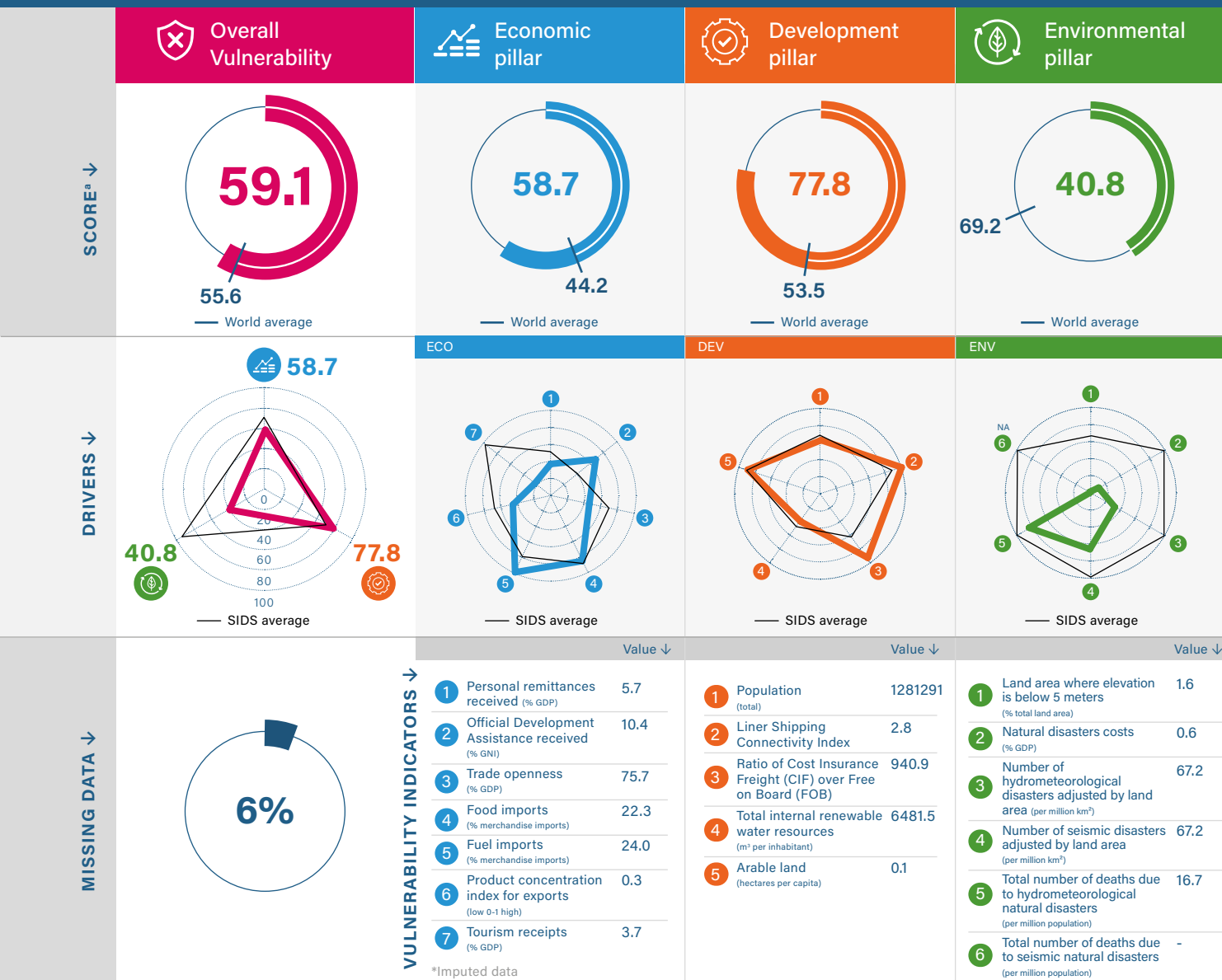
SDG INDEX FOR SIDS ↓



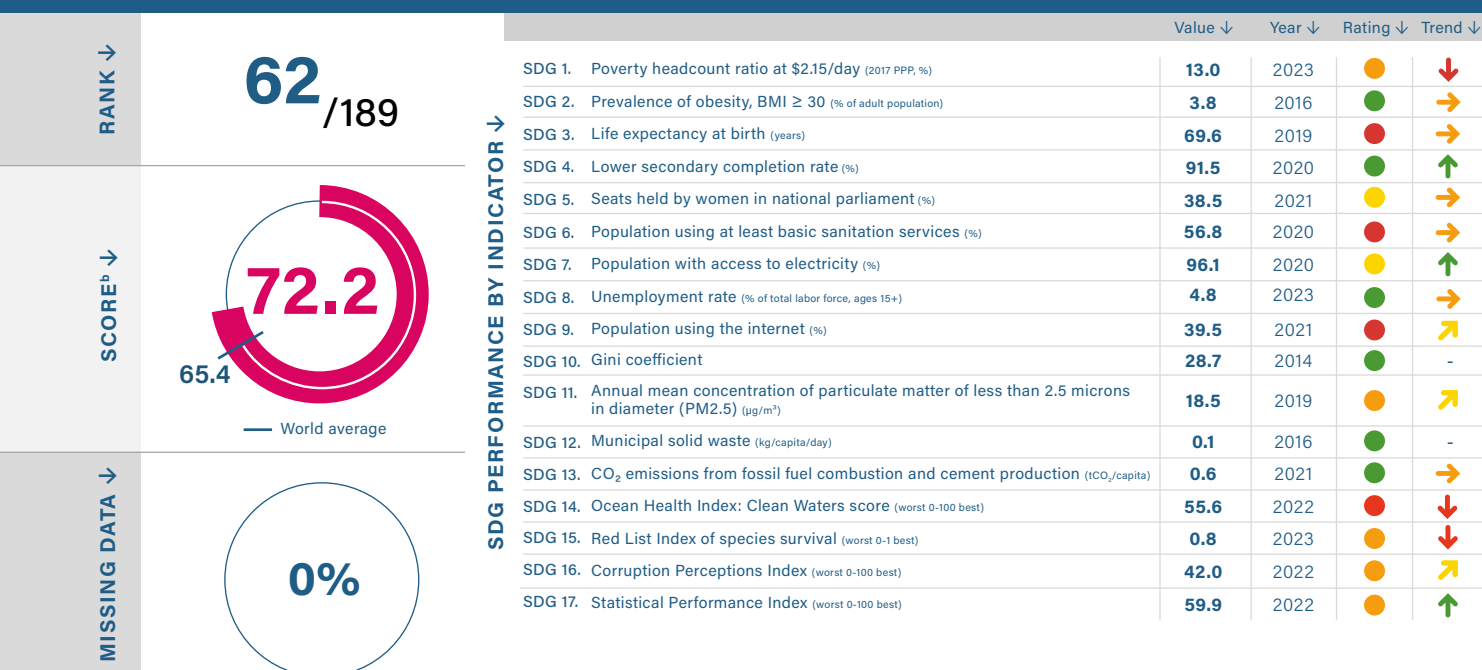
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓

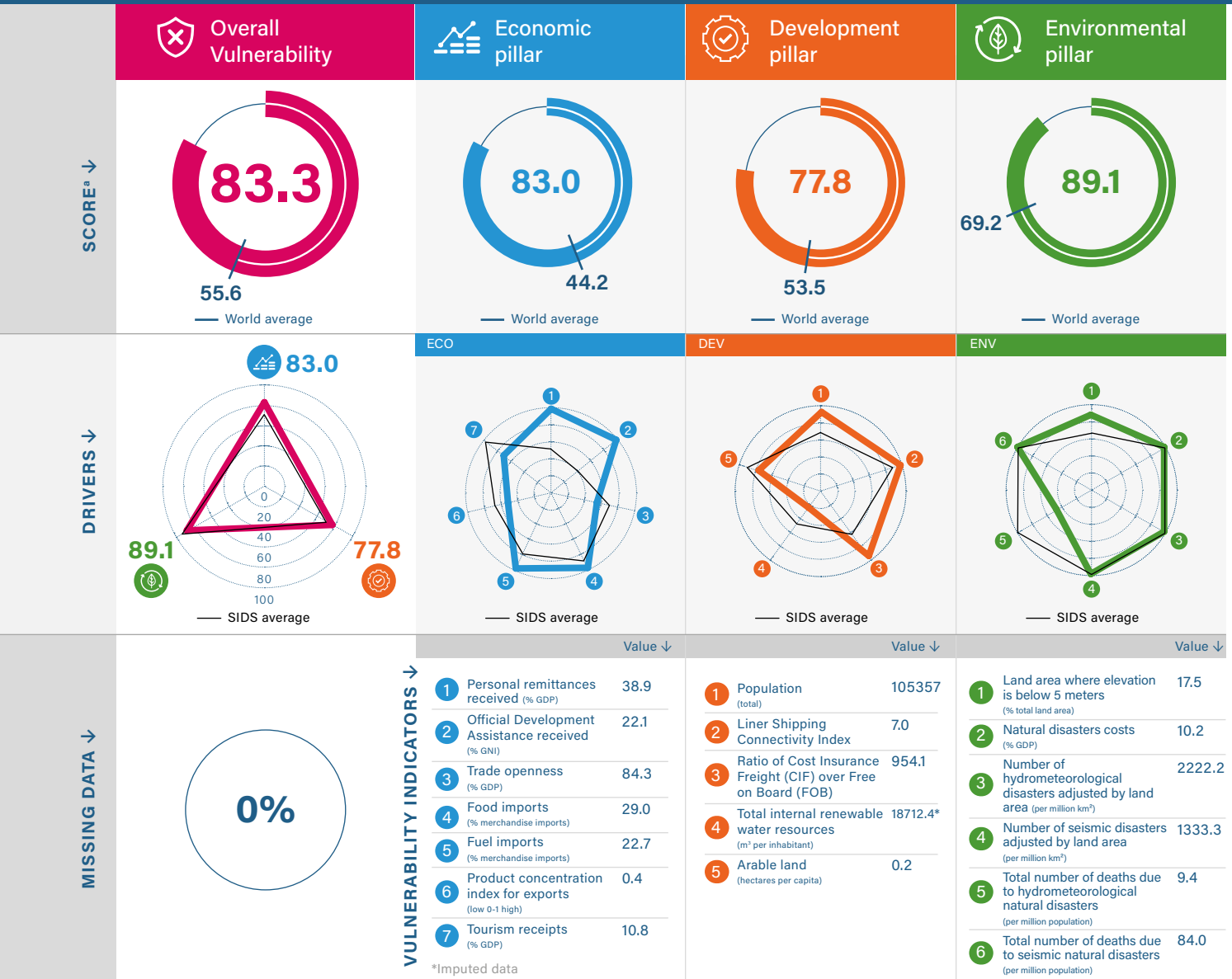


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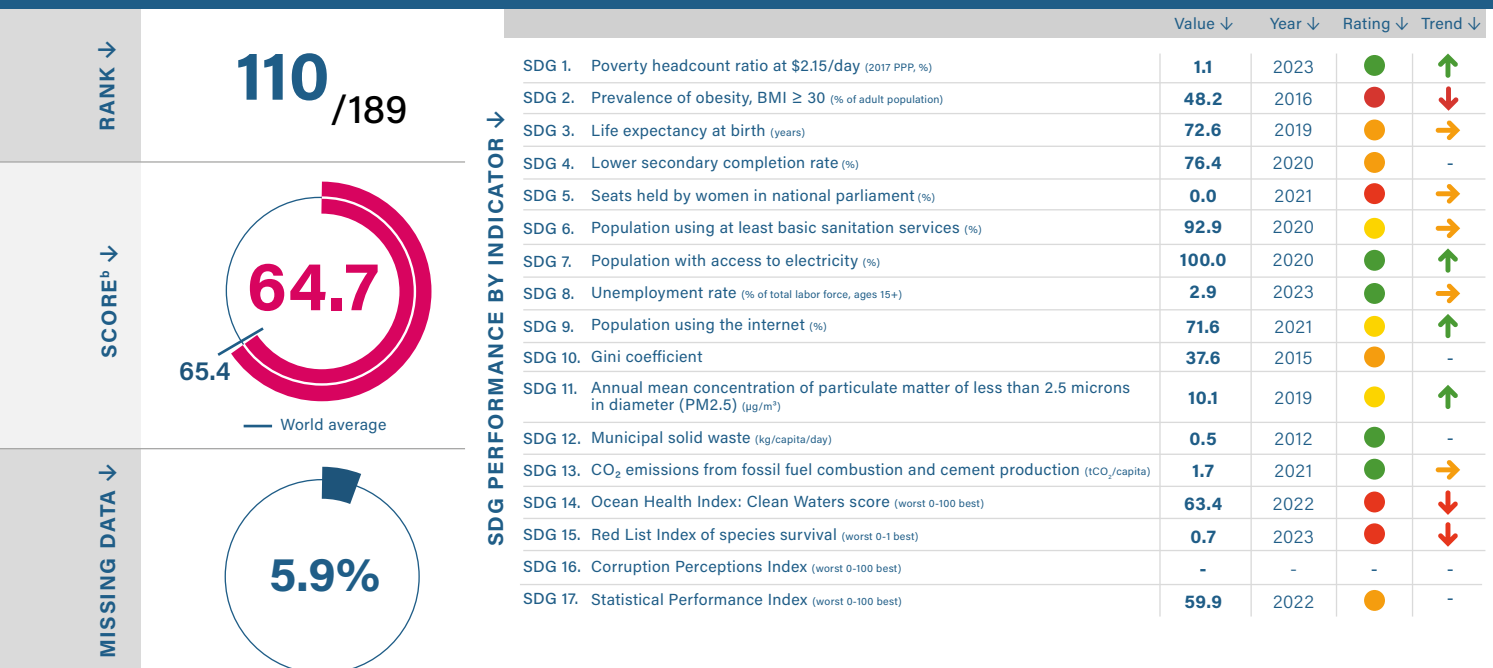
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



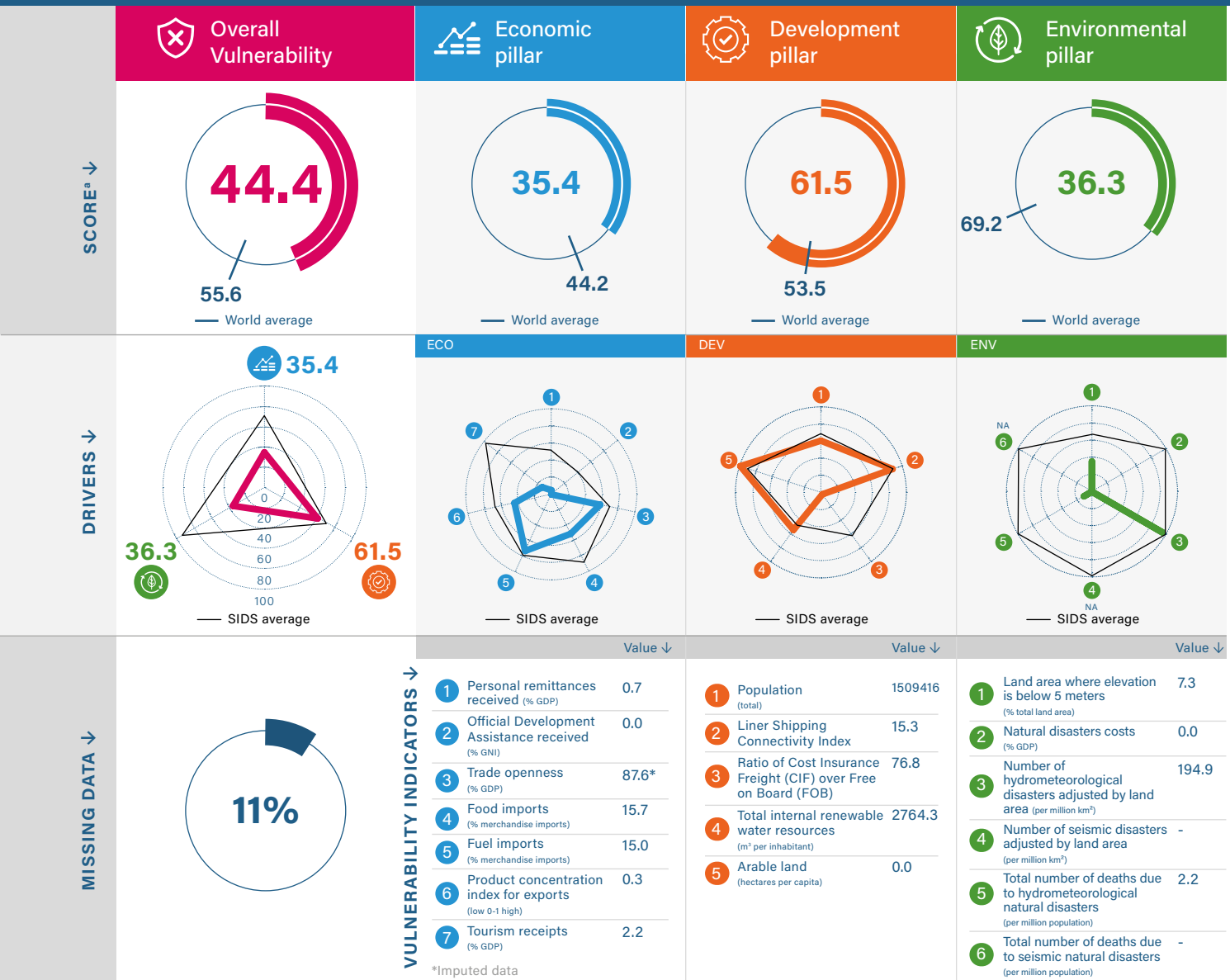
SDG INDEX FOR SIDS ↓



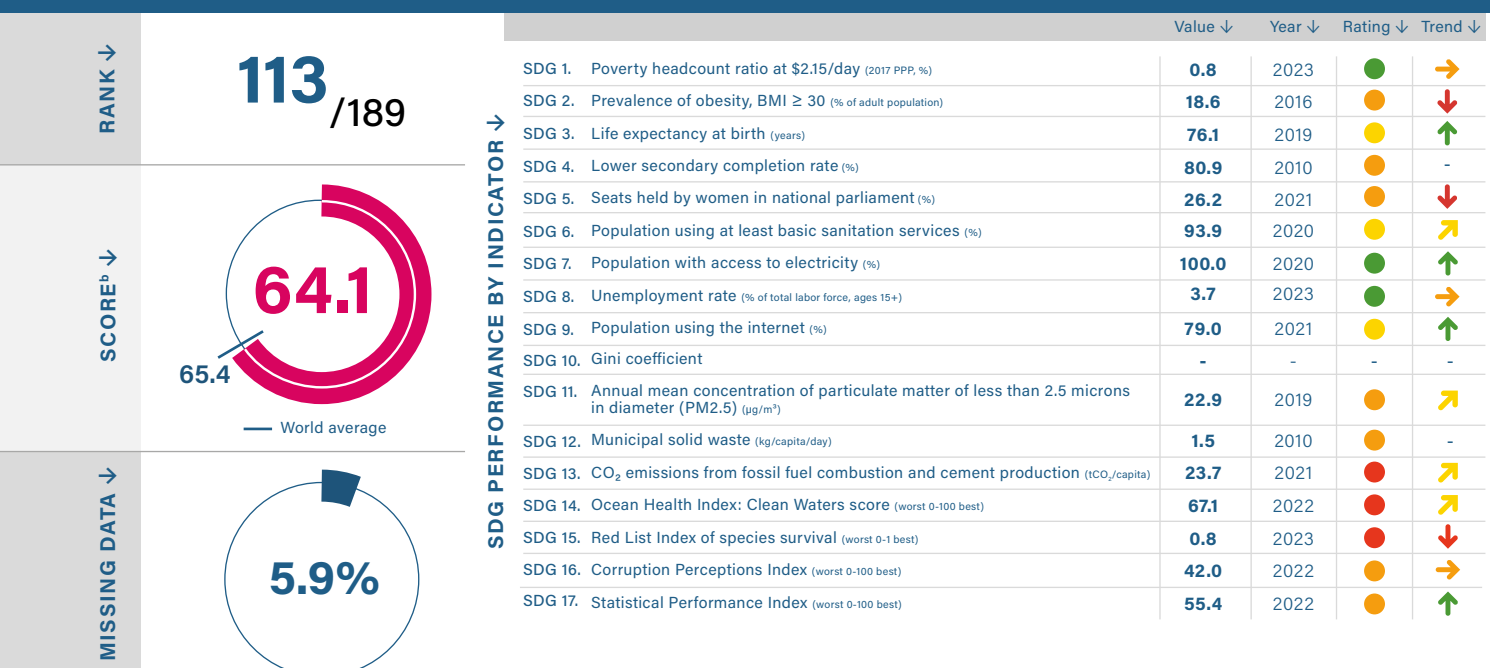
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓

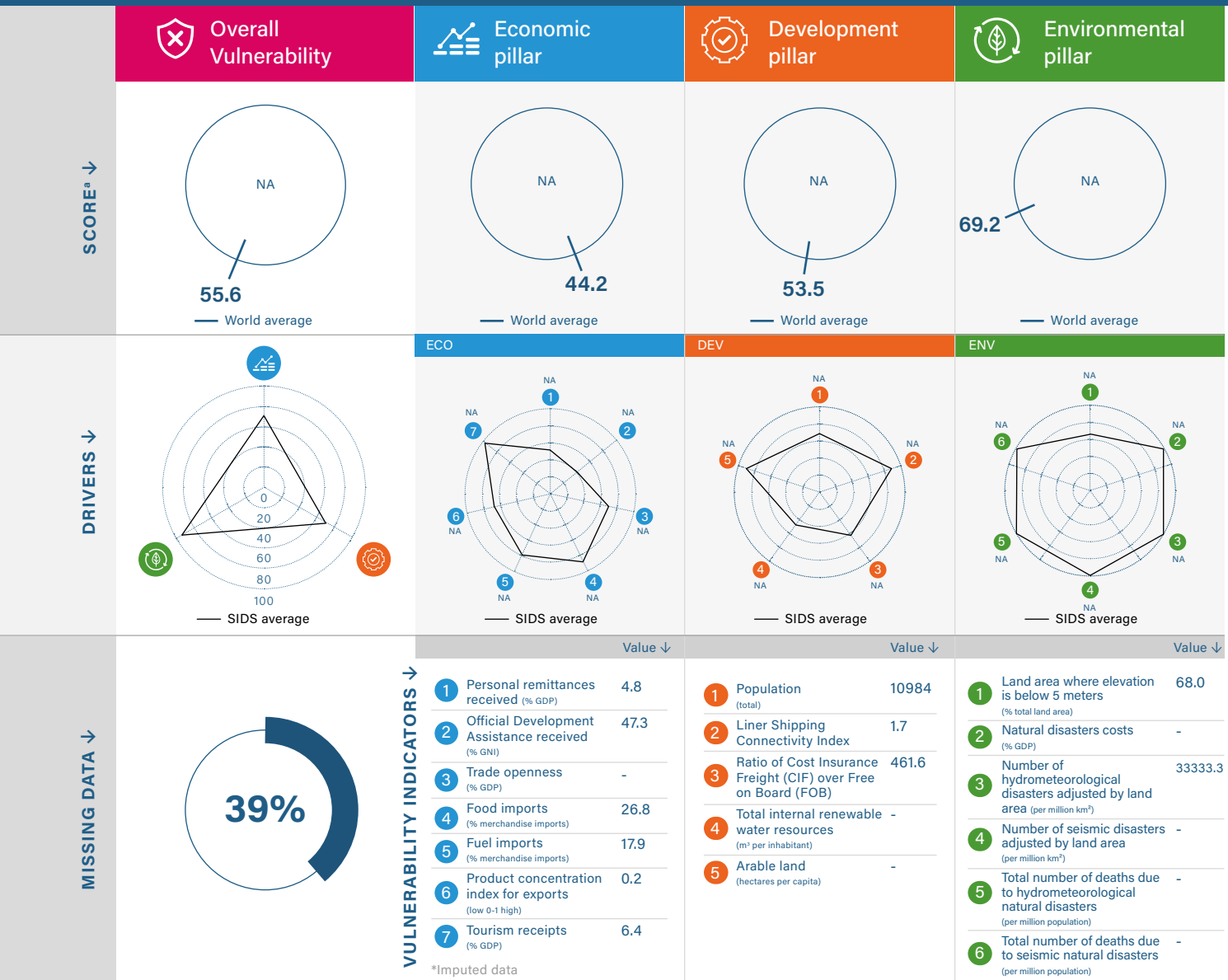


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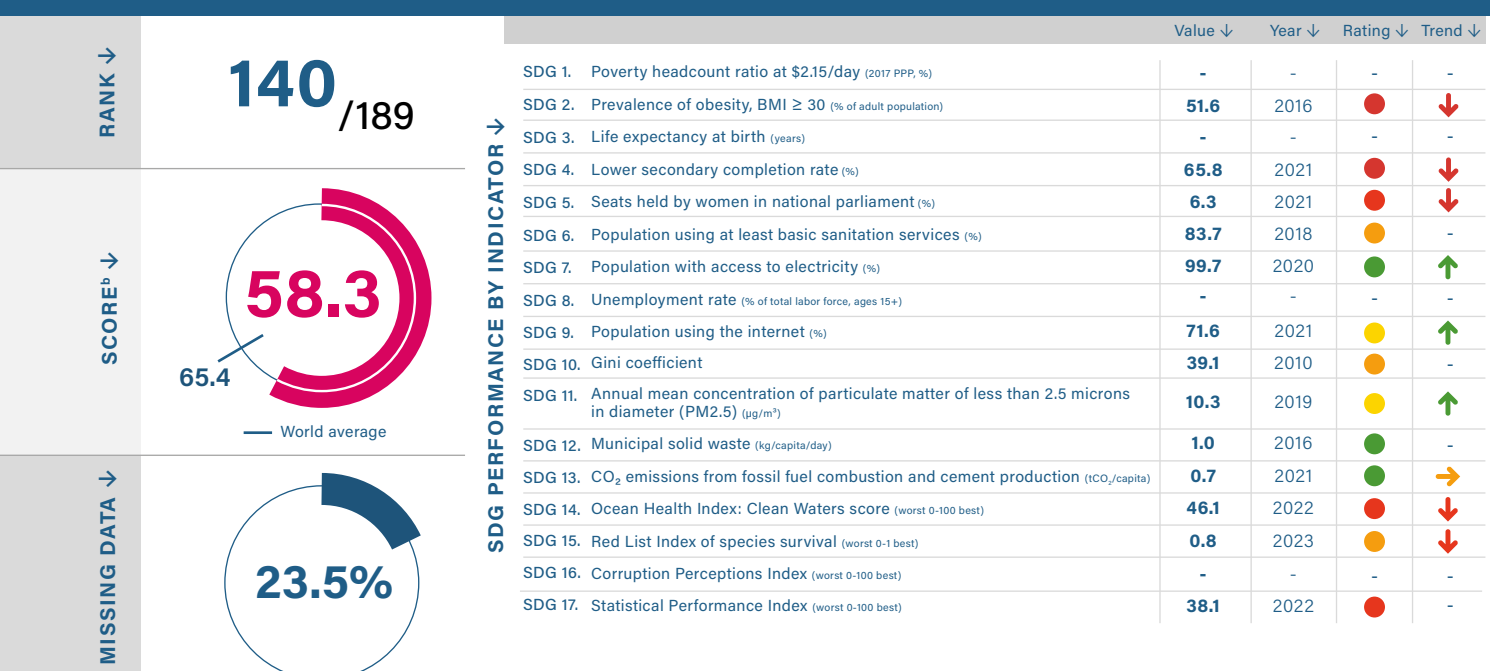
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



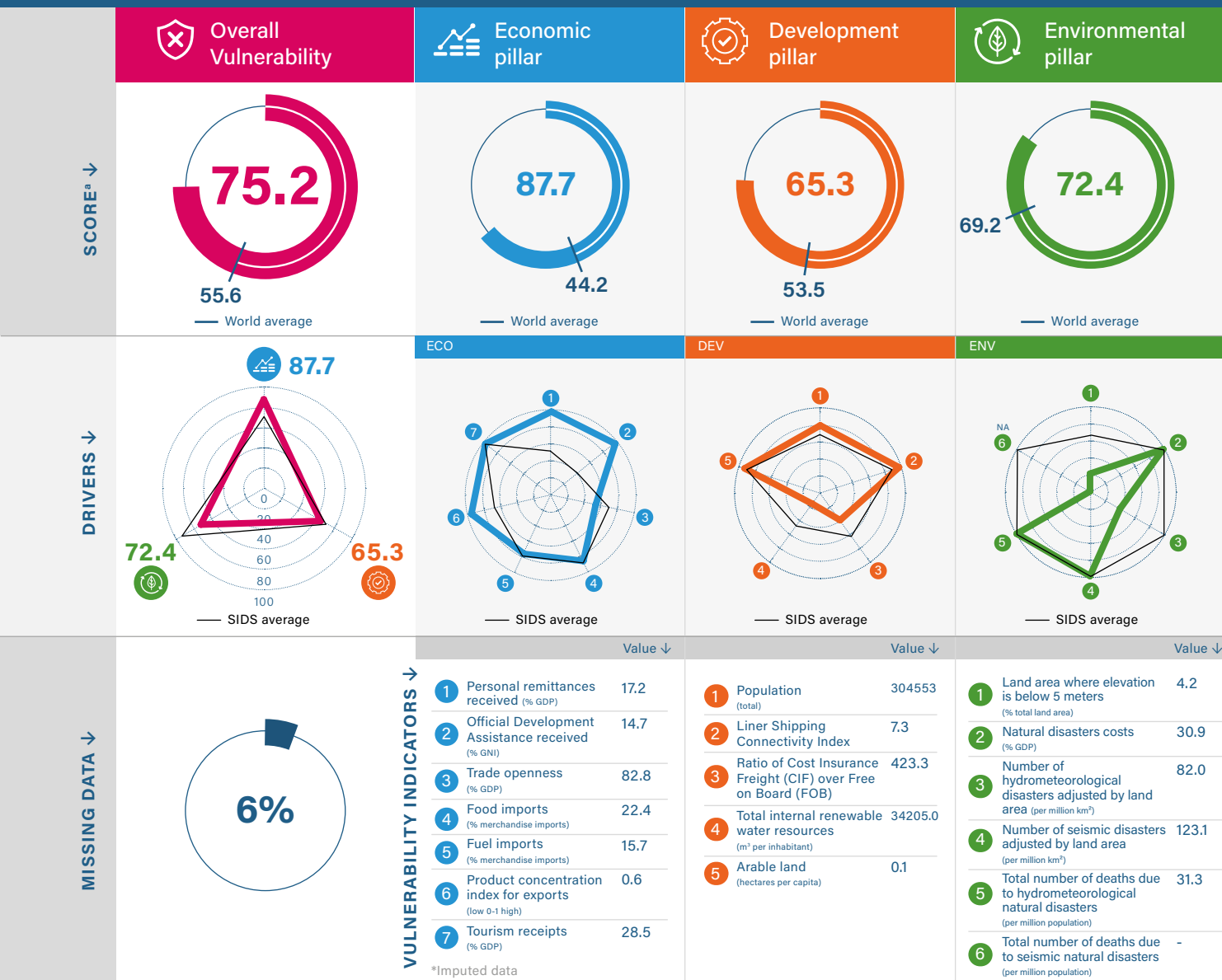
SDG INDEX FOR SIDS ↓



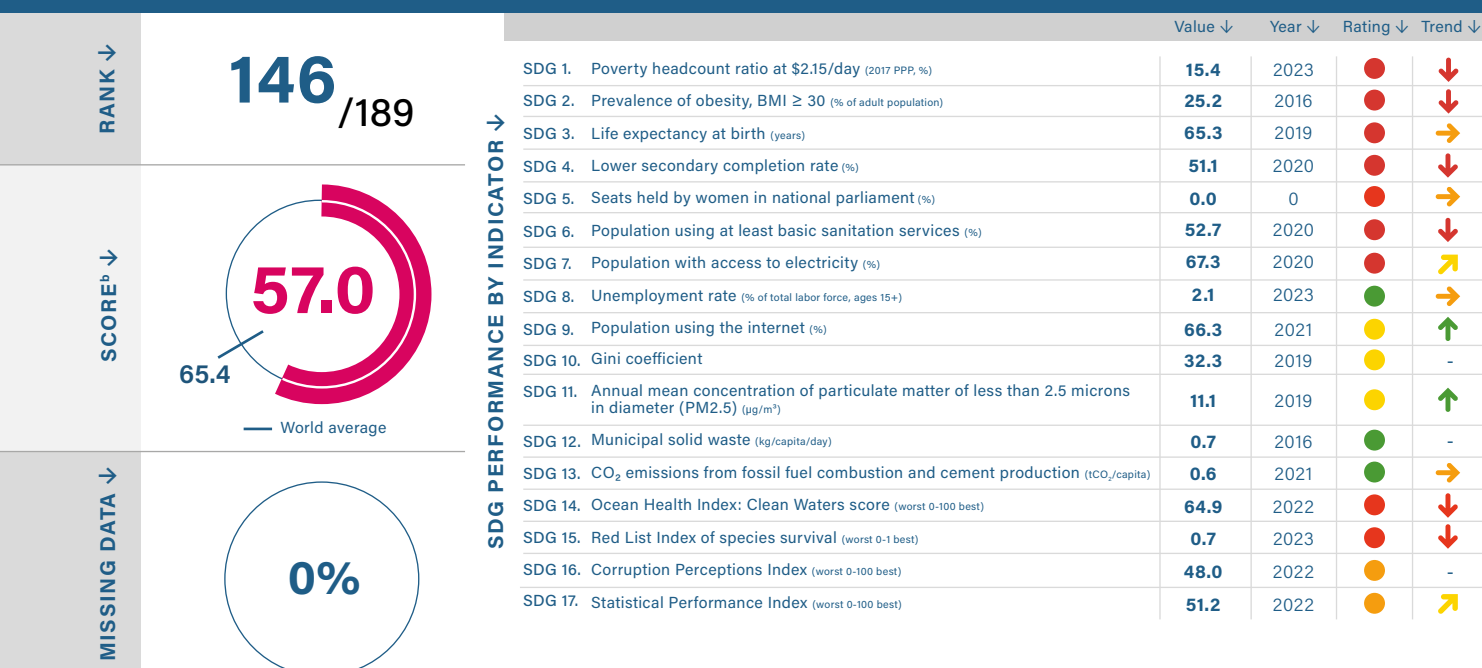
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SDG INDEX FOR SIDS ↓



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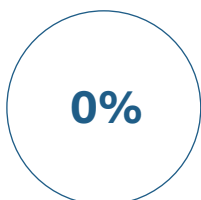
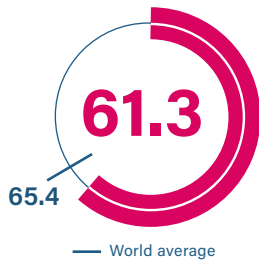
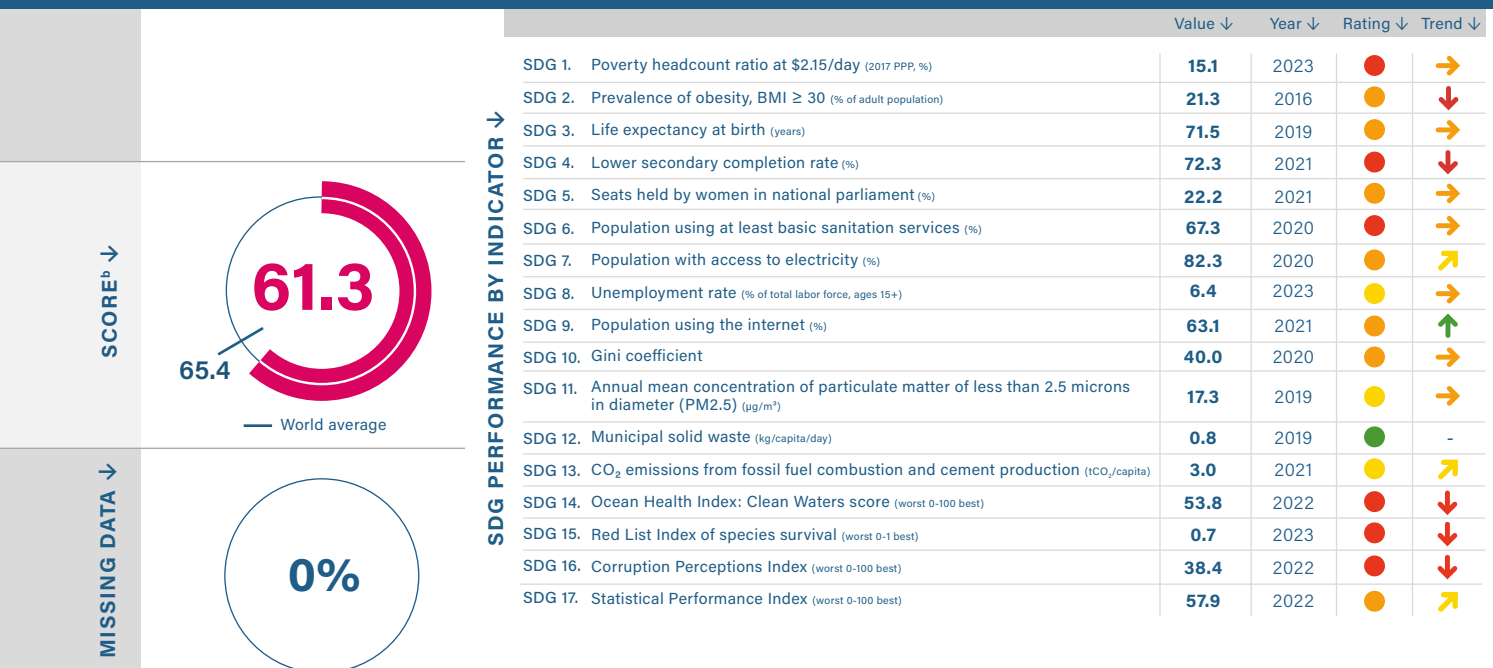
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MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



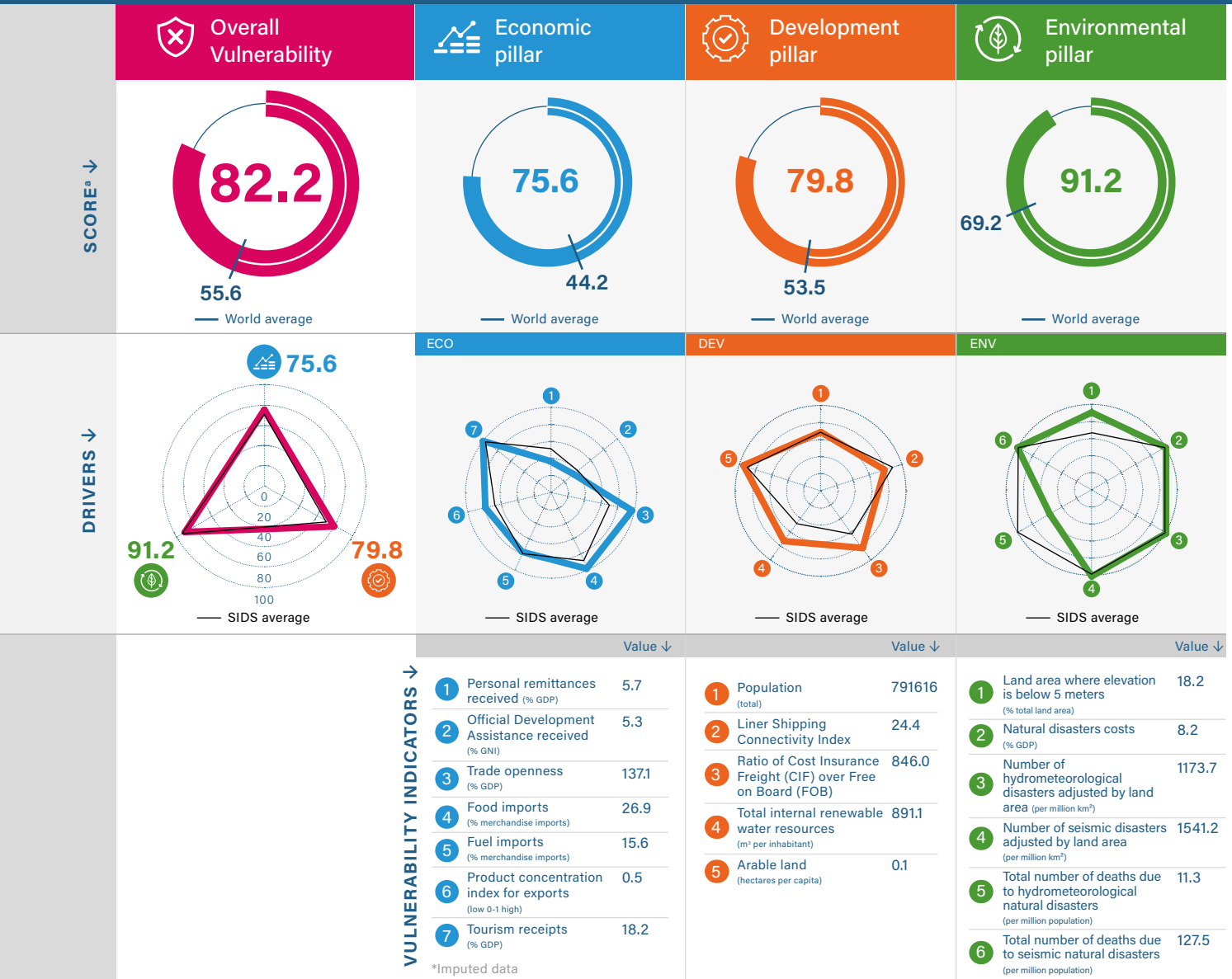
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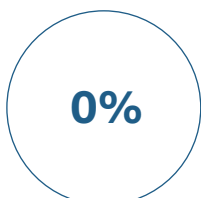
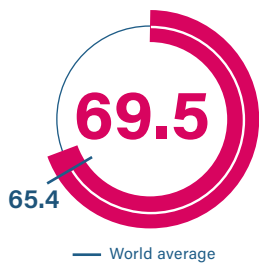
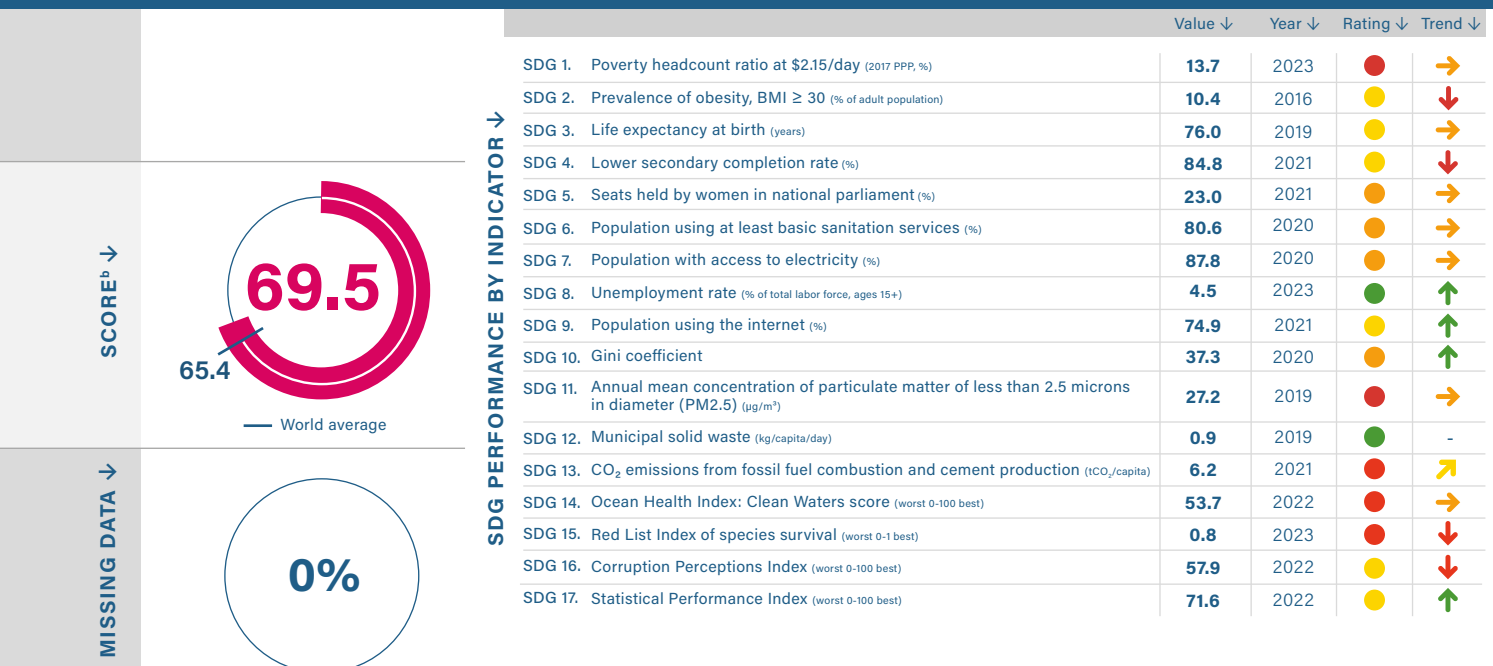


Atlantic, Indian Ocean and South China Sea SIDS

MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



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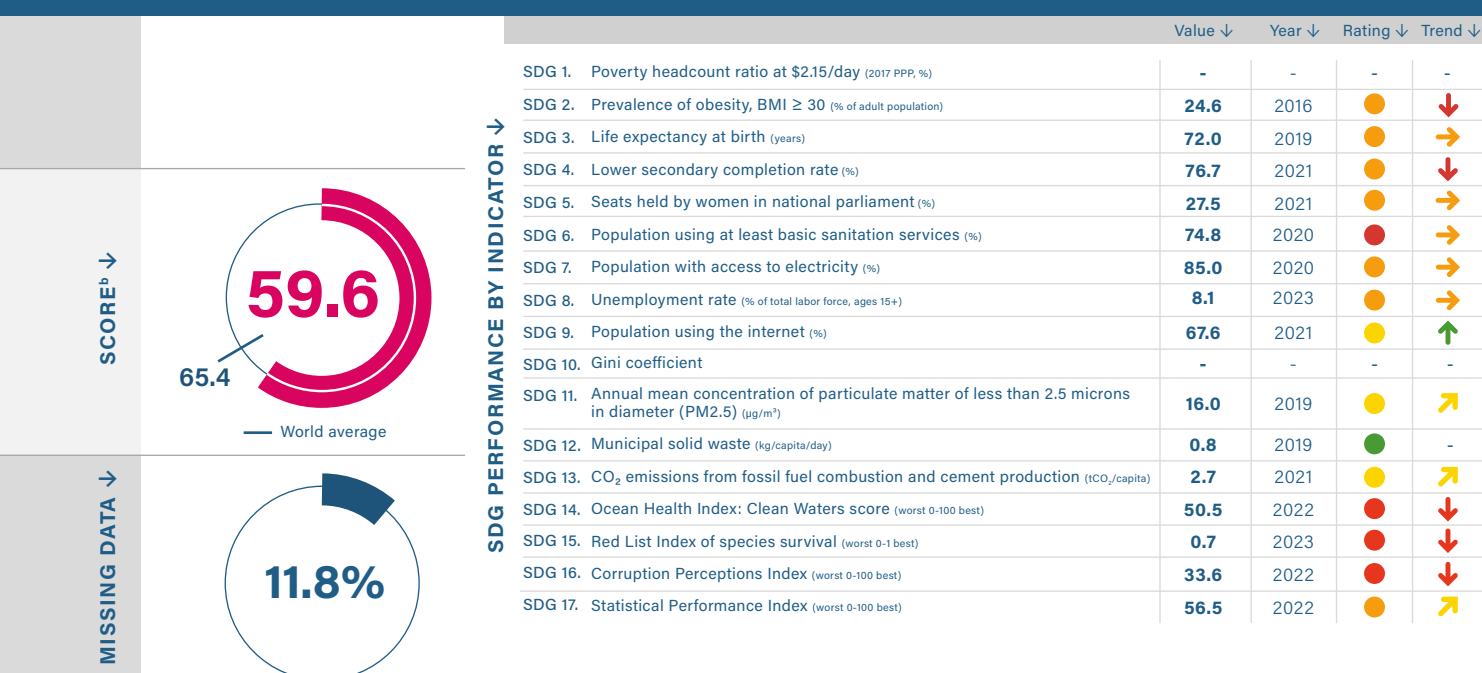
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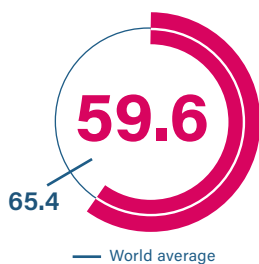
MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



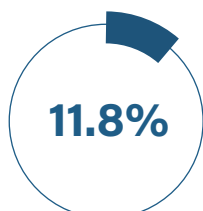
SDG INDEX FOR SIDS ↓



SCORE^b ↓



MISSING DATA ↓



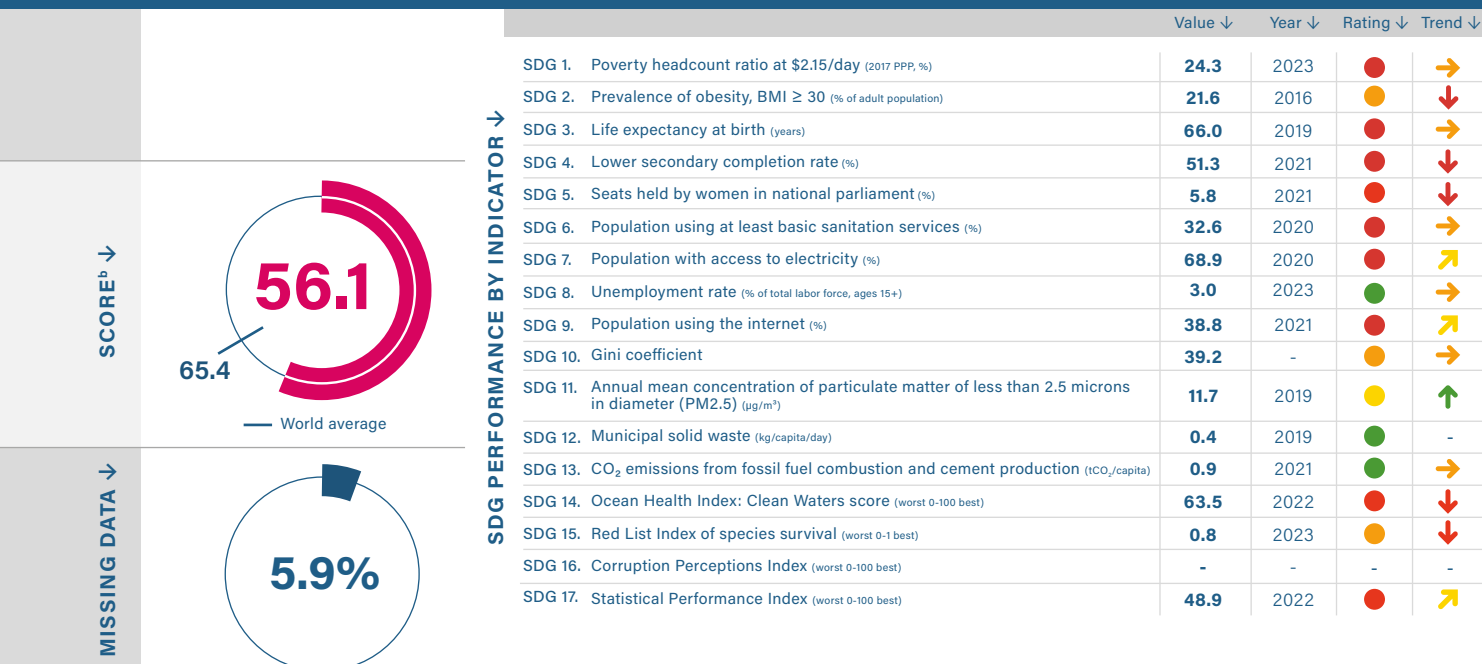
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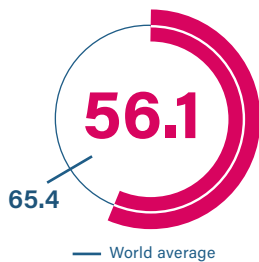
MULTIDIMENSIONAL STRUCTURAL VULNERABILITY INDEX (MSVI) ↓



SDG INDEX FOR SIDS ↓



SCORE^b ↓



MISSING DATA ↓



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SUSTAINABLE DEVELOPMENT
SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS