

Supplementary Information for

Investing smarter and deeper to advance equity in high-stakes coastal locations

Authors & Affiliations

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Supplementary Text

Indicator selection

External ocean investment: OECD defines Official Development Assistance (ODA) as financial flows (e.g., loans, grants) to countries and territories from official government sources that are concessional in nature with the aim of promoting economic development and welfare in the recipient country ¹. The Sustainable Ocean for All project dataset comprises project-level ODA data (n=61,102) extracted from the OECD's Creditor Reporting System (CRS), focusing on industries that depend on marine resources ². The OECD's CRS database ¹ comprises ODA data (e.g., grants, concessional loans) reported to the OECD by Development Assistance Committee (DAC) member countries as well as non-member countries, multilateral organizations, and large private philanthropic foundations ². The detailed version of the dataset is updated annually. The Sustainable Ocean for All Initiative dataset (data used in this study) describes ODA for coastal and marine projects relevant to Sustainable Development Goal (SDG) 14 in and around 120 countries and territories within less-economically developed regions ³. It includes data on donor and recipient countries, sectors (e.g., tourism, offshore energy), committed and disbursed funding, and “markers”. These markers are where data providers (i.e., implementers) indicate whether addressing issues related to gender equality, biodiversity, climate adaptation and mitigation, and the environment more broadly were a significant or primary objective of a project. For more information on project classification and markers, see ³.

We used total country-level investment rather than per capita investment or project count, as this metric best captures the magnitude of financial commitments and subsequent economic impacts within each country. Furthermore, when applying per-capita investment instead of total investment, there was no significant change in the rank distribution of countries relative to contextual conditions (Table S3).

Contextual inequity: Composite indicators are highly sensitive to both the choice of, and relationship between, indicators. We assessed the relationship between indicators to evaluate the construct validity of variables within, and between, each contextual inequity aspect. Weak governance was significantly correlated to social inequality (Spearman, $p < 0.05$; Fig. S13E). Social-ecological vulnerability was not correlated to either governance (Fig. S13D) or social inequality (Fig. S13F).

Caveats

Equity within projects: Our analysis of equity in externally-funded projects revealed several key findings, albeit with important caveats. While explicit mentions of equity in project descriptions were relatively low, this may not accurately reflect the implementation of equitable practices on the ground. We relied on keywords within the project title and description which may or may not adequately reflect the nature and scope of projects as the quality and comprehensiveness of reporting may vary greatly by project. Funders and/or recipients may also have incentives to use terms or select markers to boost perceptions of a project which may not accurately reflect the project's true nature. Search terms may also incorrectly identify unrelated or exclude relevant projects. Nonetheless, such approaches have been used elsewhere ^{3,4}, and provide considerable insights regarding funders' intent to consider or actively address various aspects of equity and the general level of investment in such projects.

External investment: Investment distribution showed significant global disparities, with important hotspots that we consider as high stakes areas. Nonetheless, our study was limited to OECD funded ODA only, and as such does not include all ODA or other investments flowing towards the Global South. In addition, the data are at the country level, and we were unable to assess the distribution of investment within a country.

Contextual inequity: Finally, to assess contextual inequity, we developed a composite index incorporating vulnerability, weak governance, and social inequality components, which includes both national and sub-national indicators (Table S1). While providing a useful framework, it might be limited in capturing complex local situations and is sensitive to computational methods. We also recognize that each source dataset represents processed data from multiple sources, each with their own set of caveats including missing or low-resolution data, sampling errors, etc. We also recognize that there are numerous other data sources and indicators on local or national-level investment, vulnerability, weak governance, and inequality. While assessing the relative representativeness, construct validity, and quality of additional data sources, and its impact on the composite indices is an important exercise, this is beyond the scope of this study. Our indices and indicators are meant to be illustrative of equity conditions at the global level, and represents a framework that can be adapted in future work with alternative indicators and sources.

The above challenges in assessing equity highlight the need for further research and increased reporting to support evidence-building regarding the equity of external investment and strategies to ensure more appropriate and context-specific design and implementation.

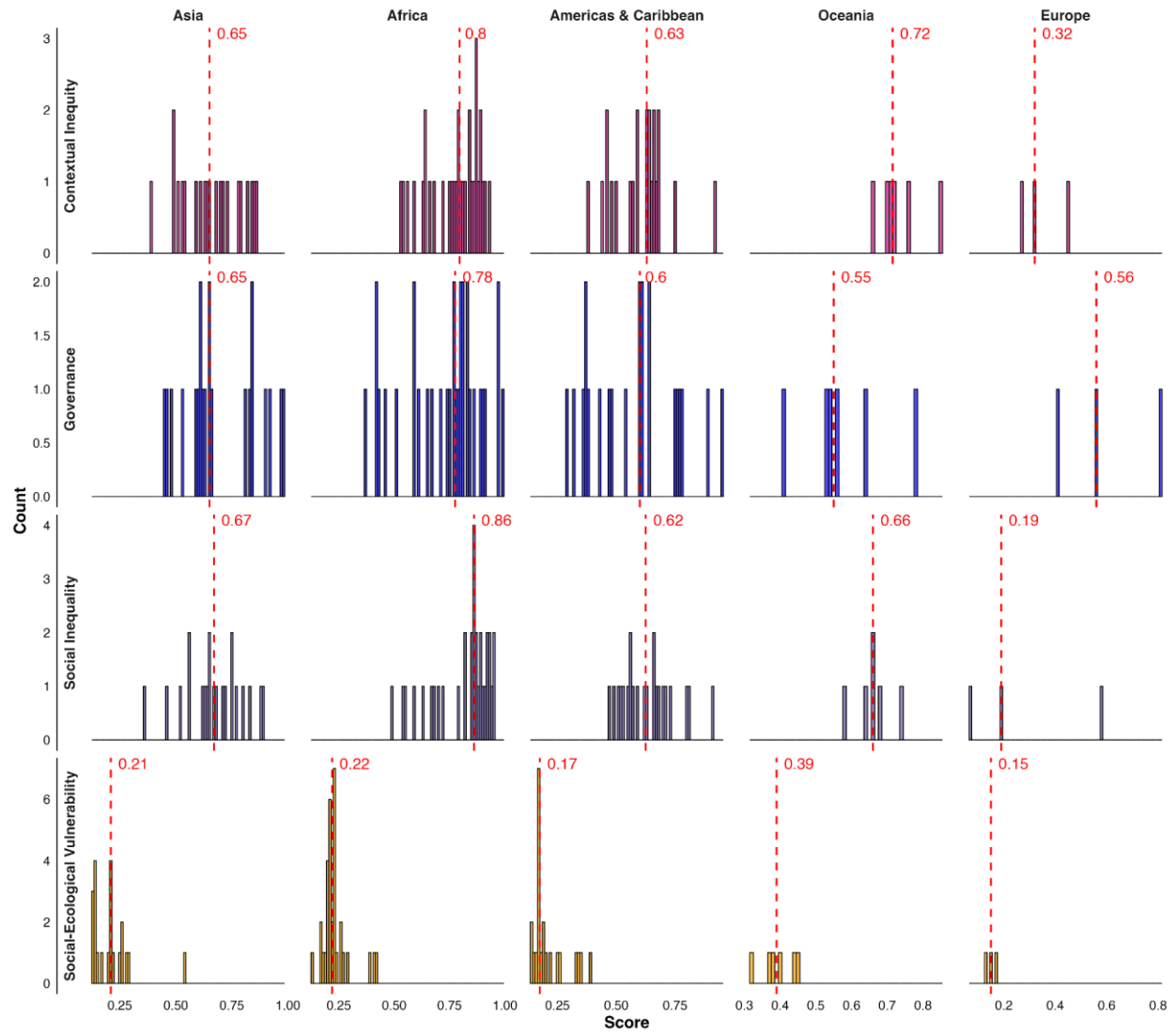
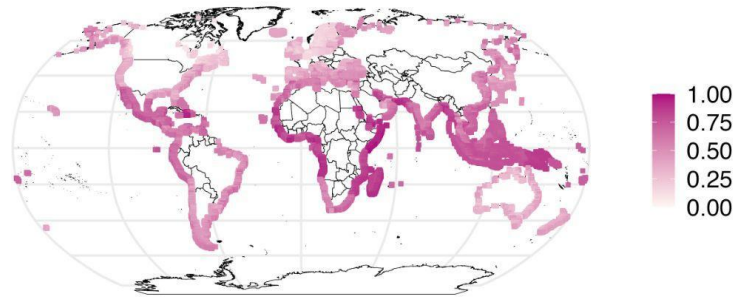
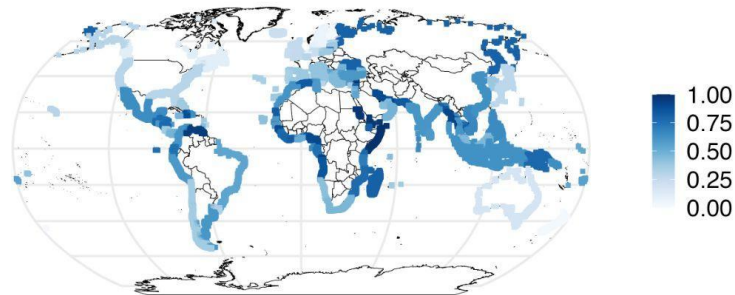


Fig. S1. Distribution of contextual inequity and its three components: weak governance, social inequality, and social-ecological vulnerability index across the five regions. Histograms depict the frequency distribution of index average values (0-1) for countries within each region. Red dashed lines indicate regional median values. Larger values indicate higher contextual inequity.

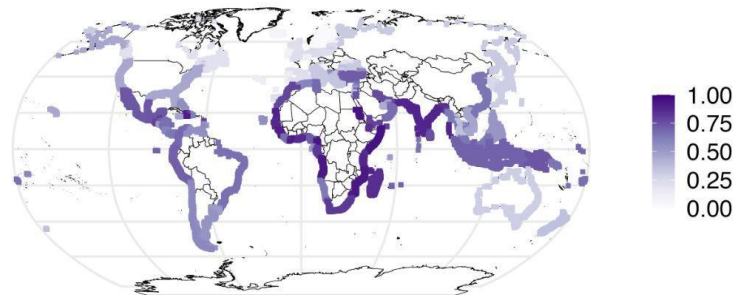
A. Contextual inequity



B. Weak governance



C. Social inequality



D. Social-ecological vulnerability

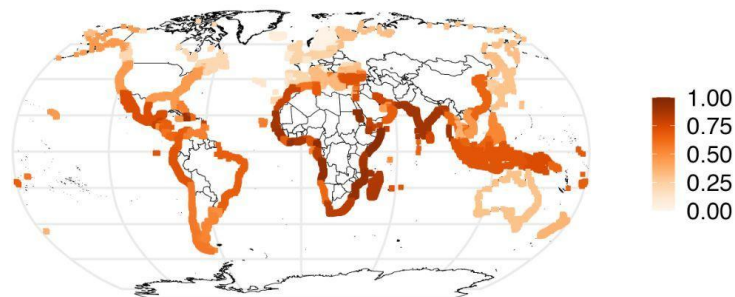


Fig. S2. World map showing the geographic distribution of contextual inequity (A) and its three components: weak governance (B), social inequality (C), and social-ecological vulnerability (D), where 0 represents the minimum index value and 1 represents the maximum index value.

Gini - Contextual inequity index

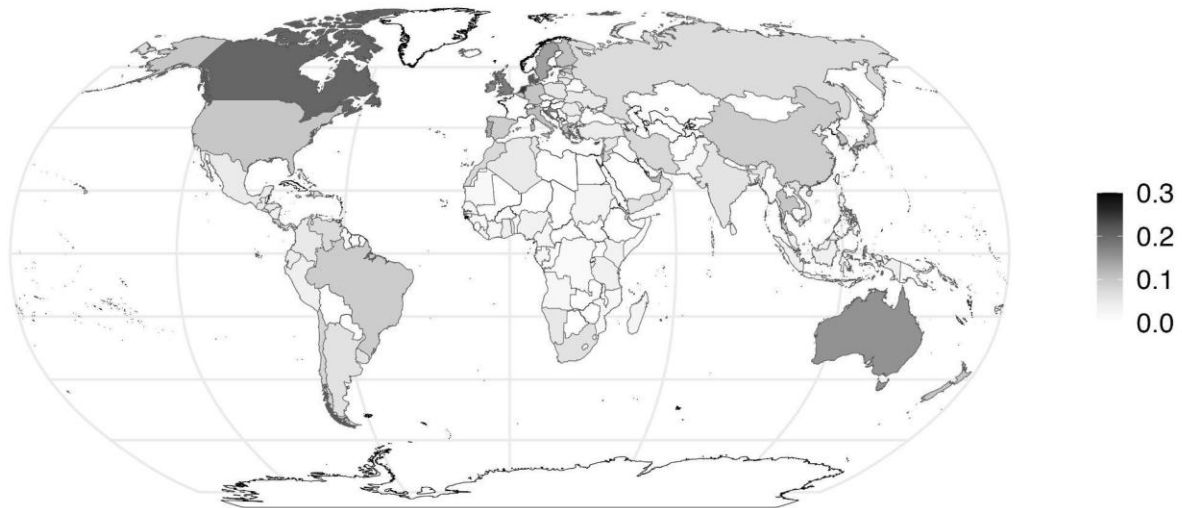


Fig. S3. Gini index of the contextual inequity index for 115 countries across regions and economies. A coefficient of 0 indicates uniform contextual inequity across all pixels within the country, while a Gini coefficient close to 1 reflects significant in-country variability in contextual inequity. Note: countries with longer coastlines and larger populations tend to have larger Gini contextual inequity indices.

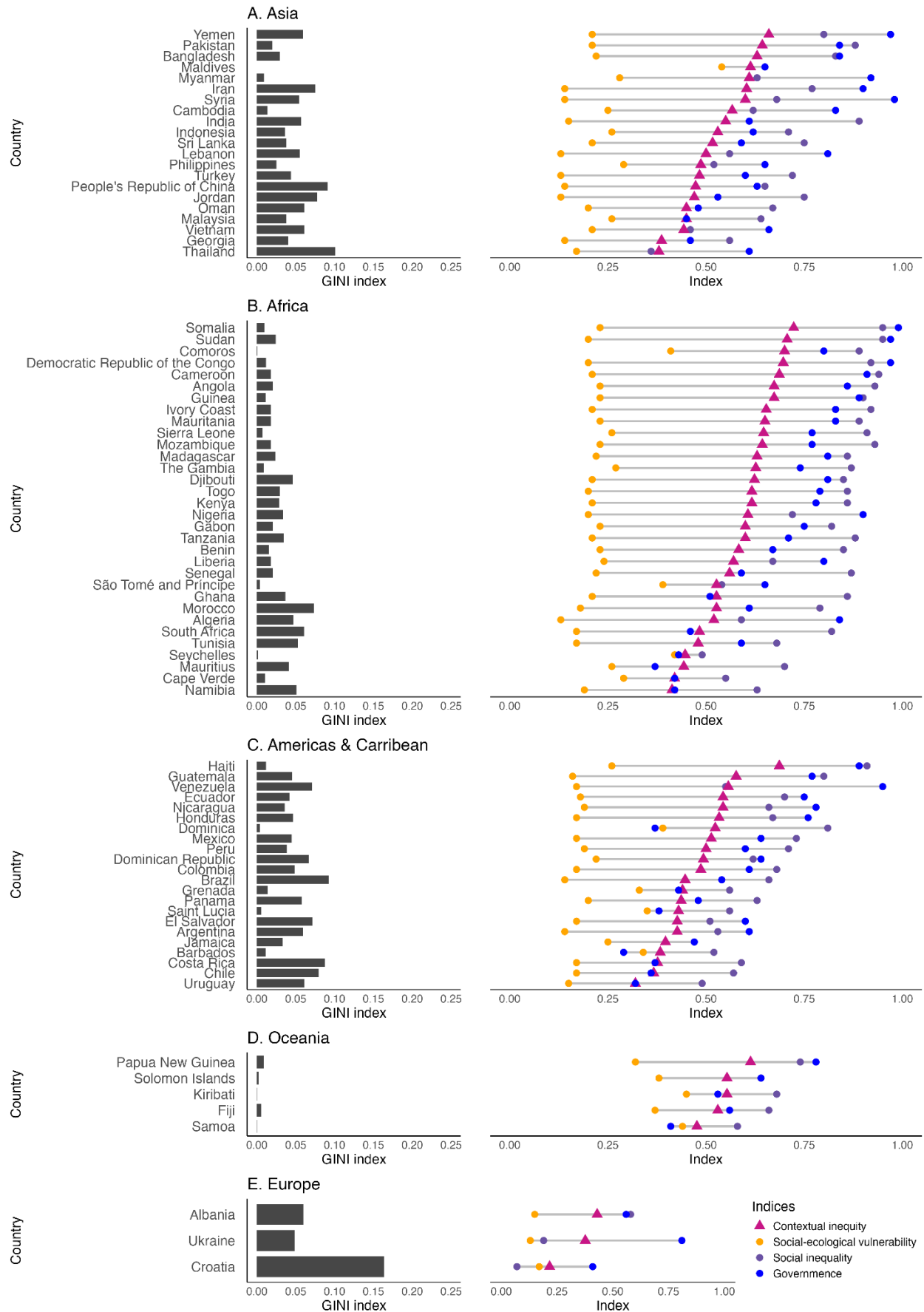


Fig. S4. Comparison of average contextual inequity and the three components: weak governance, social inequality, and social-ecological vulnerability indices across five global regions. For each region, countries are listed on the y-axis. The left panel shows scaled GINI indices (black bars) which illustrates the within-country variation in contextual inequity for each country, while the right panel displays the contextual inequity (pink), governance (blue), social inequality (purple), and social-ecological vulnerability (orange) average values. All indices are scaled from 0 to 1.

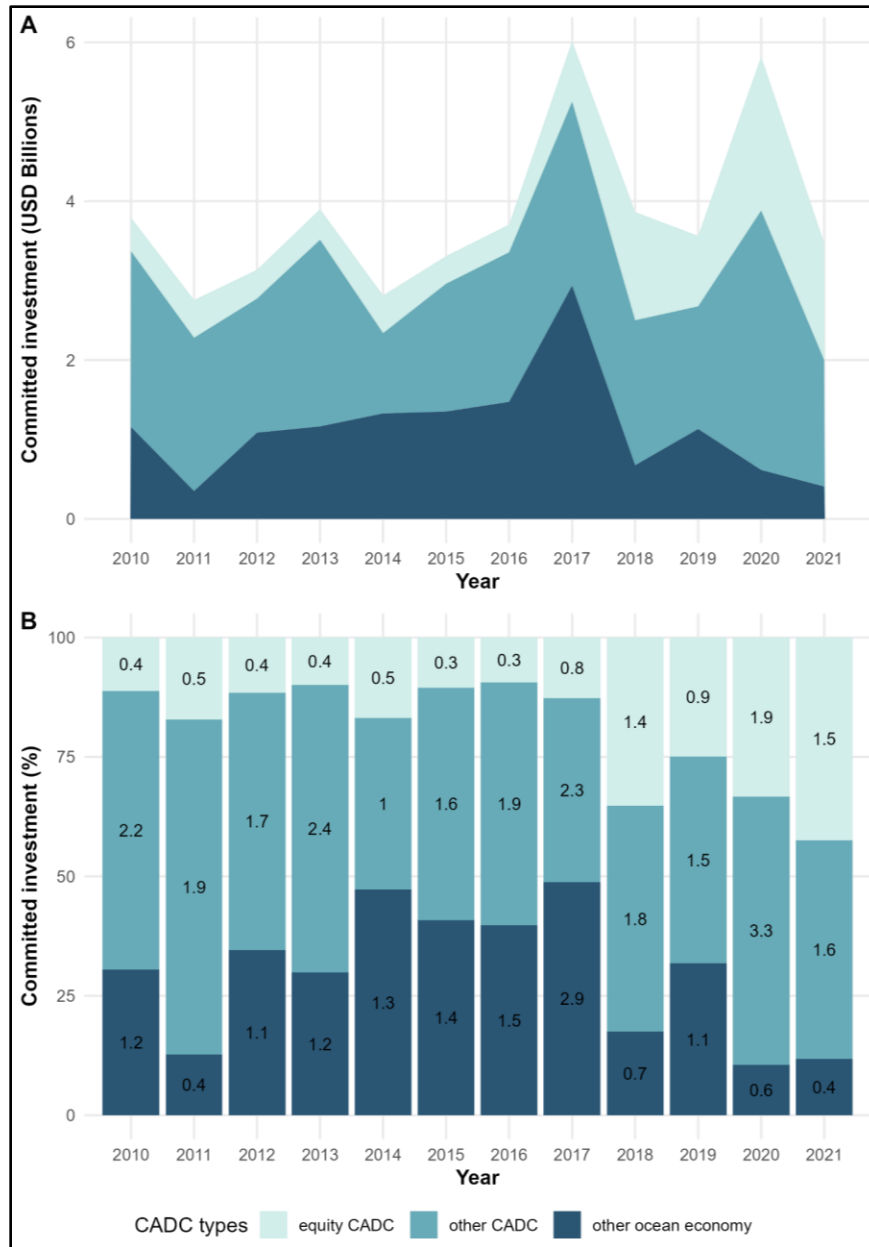


Fig. S5. Trends and Distribution of Ocean Economy Investments (2010-2021) (A) Annual committed investment in ocean economy types from 2010 to 2021 in USD billion; equity CADC: climate adaptation, development, and conservation (CADC) projects that had explicit equity considerations in project descriptions, other CADC: projects without explicit equity considerations, and other ocean economy: non-CADC projects, ocean economy projects not identified as “sustainable” by the OECD (see Methods). (B) Committed investment in ocean economy sectors by CADC type. The stacked bar chart shows the relative proportions of investment across three CADC types. Values for each section represent the total committed investment in USD billion for that year.

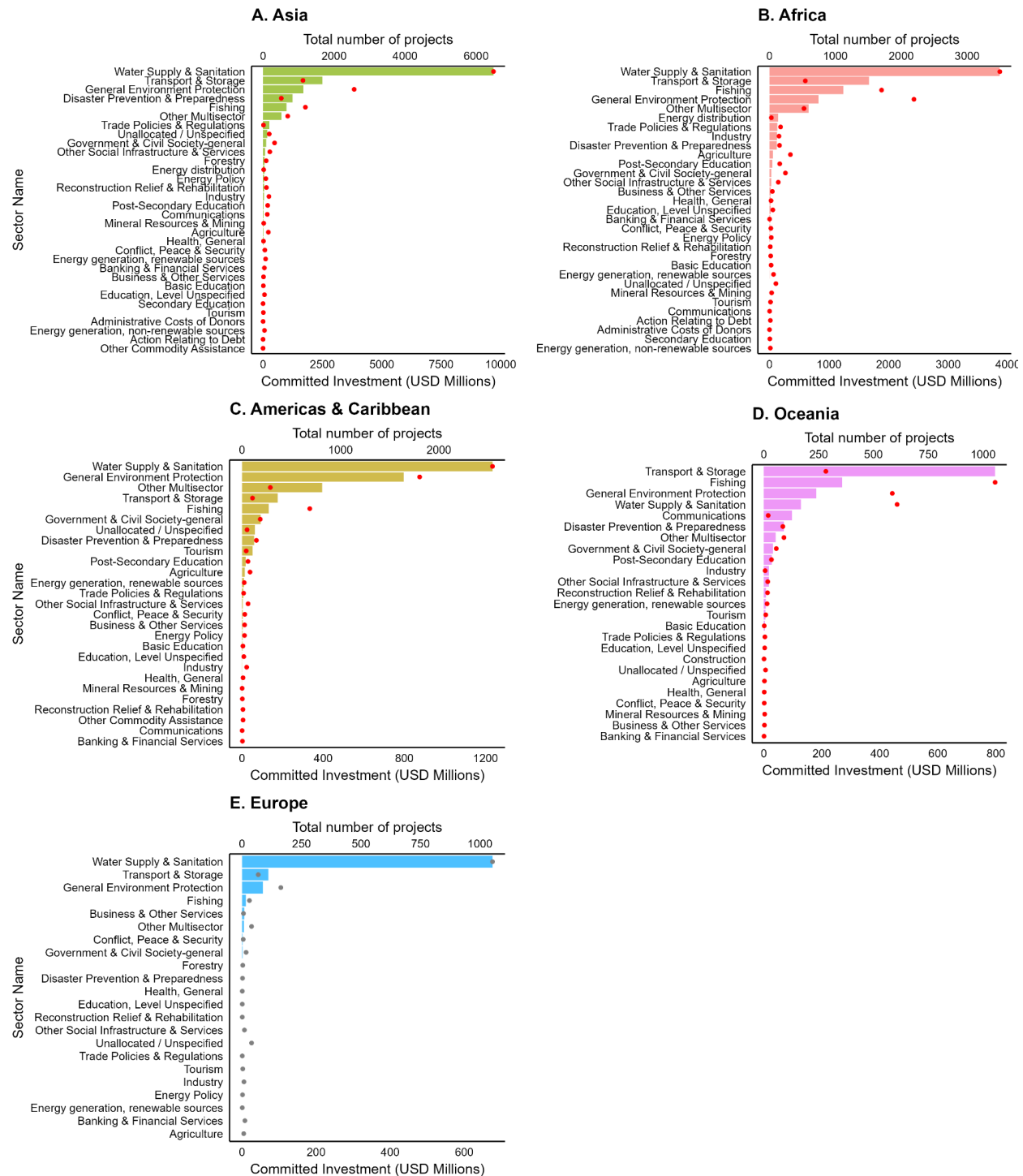


Fig. S6. Distribution of CAD and committed investment across sectors by regions. Each bar indicates the committed investment (in USD million) to each sector and red circles indicate the number of projects in each sector. Sectors are defined based on OECD categorization ¹.

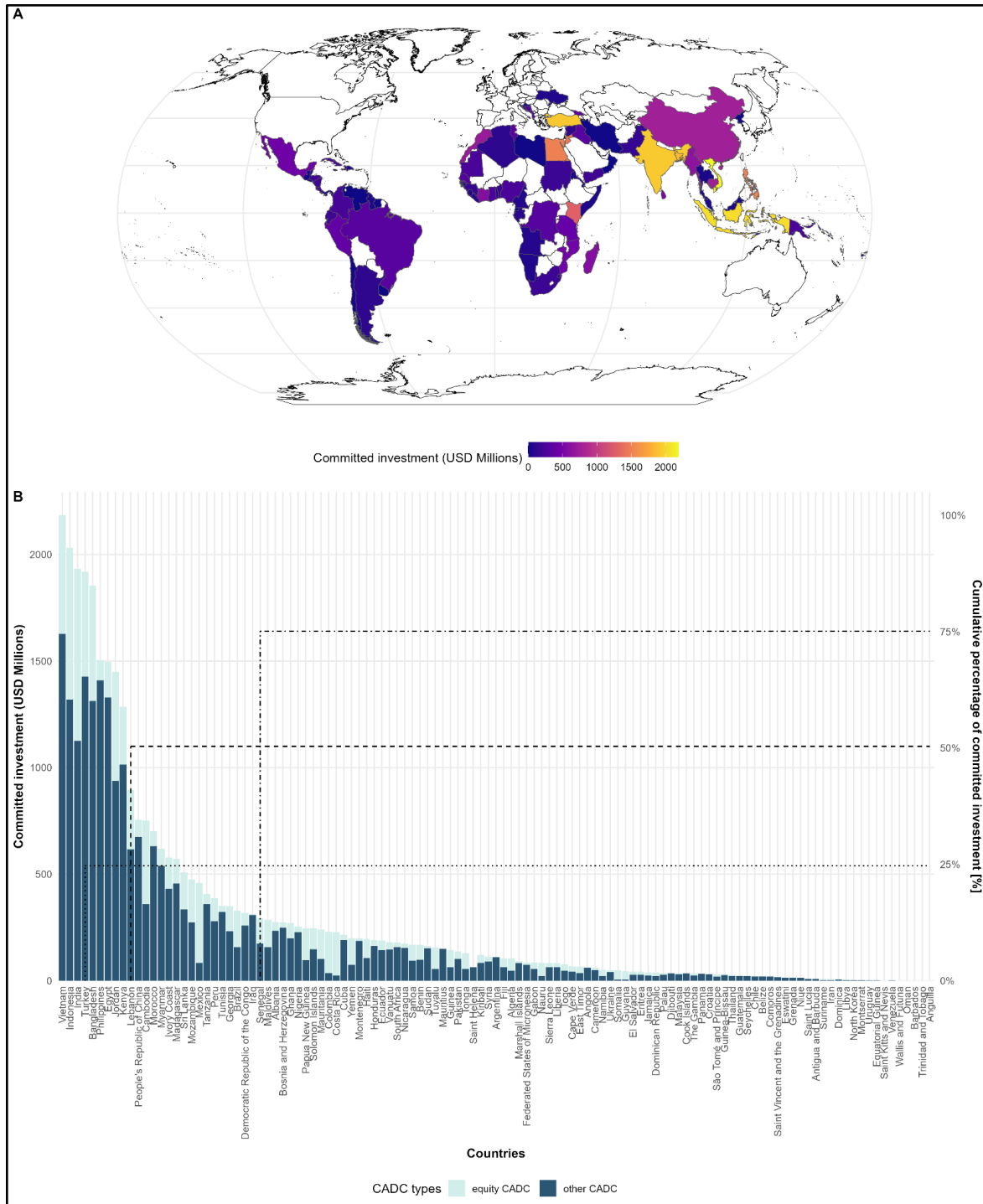


Fig. S7. Global distribution and concentration of committed climate adaptation, development, and conservation (CADC) investments. (A) World map showing the cumulative committed investment in USD million by country between 2010 and 2021. (B) Bar chart ranks countries by their total committed CADC investment in equity CADC (teal) and other CADC (light blue) investments. The right y-axis and dashed lines indicate the cumulative percentage of global CADC investment.

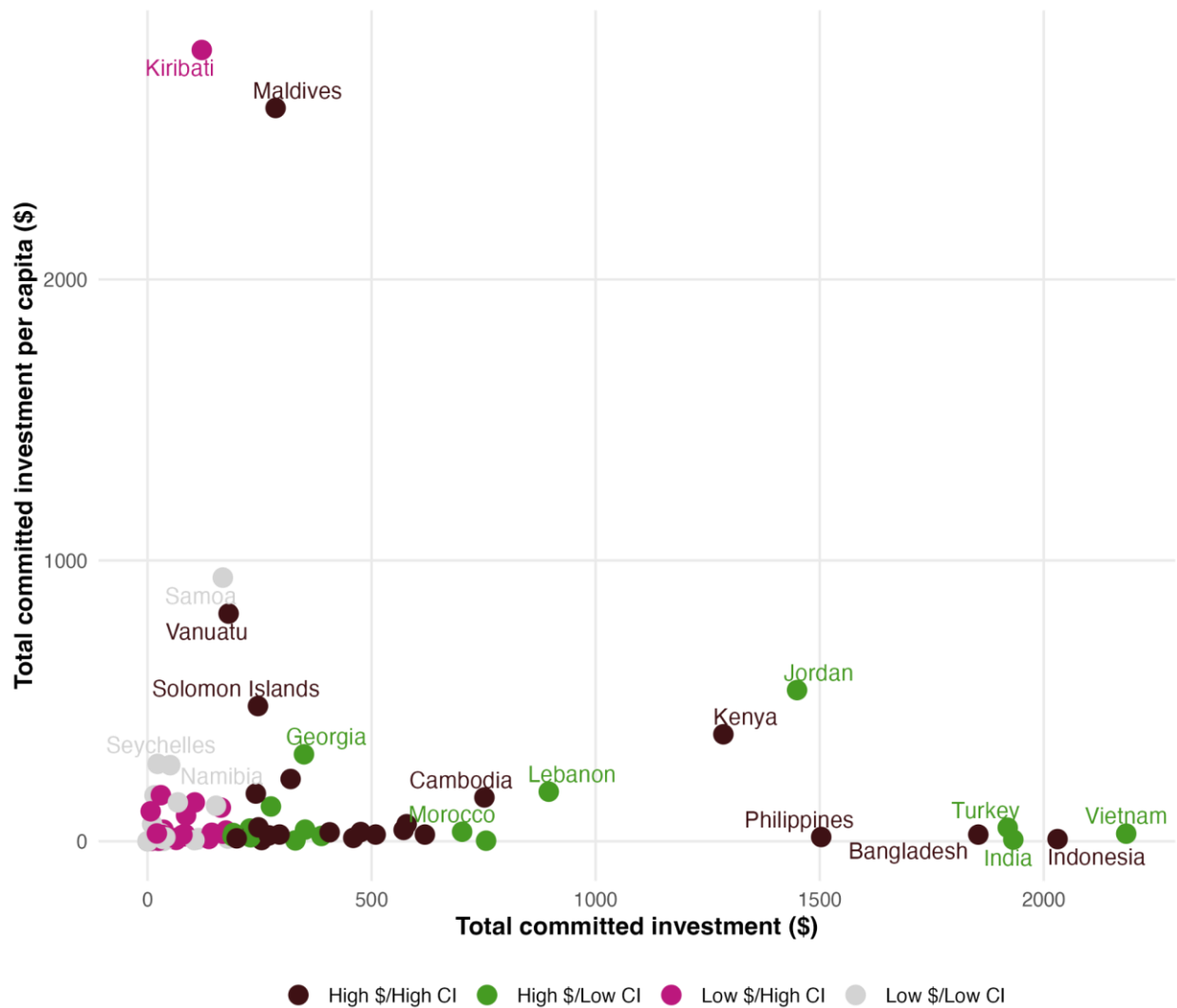


Fig. S8. Relationship between total committed investment and investment per capita across various countries and territories. The x-axis shows the total committed investment in USD million, while the y-axis represents the total committed investment per capita. Colors indicate the level of committed investment and contextual inequity (CI) relative to median values: green (high investment, low inequity), light grey (low investment, low inequity), pink (low investment, high inequity), brown (high investment, high inequity; i.e., high-stakes locations).

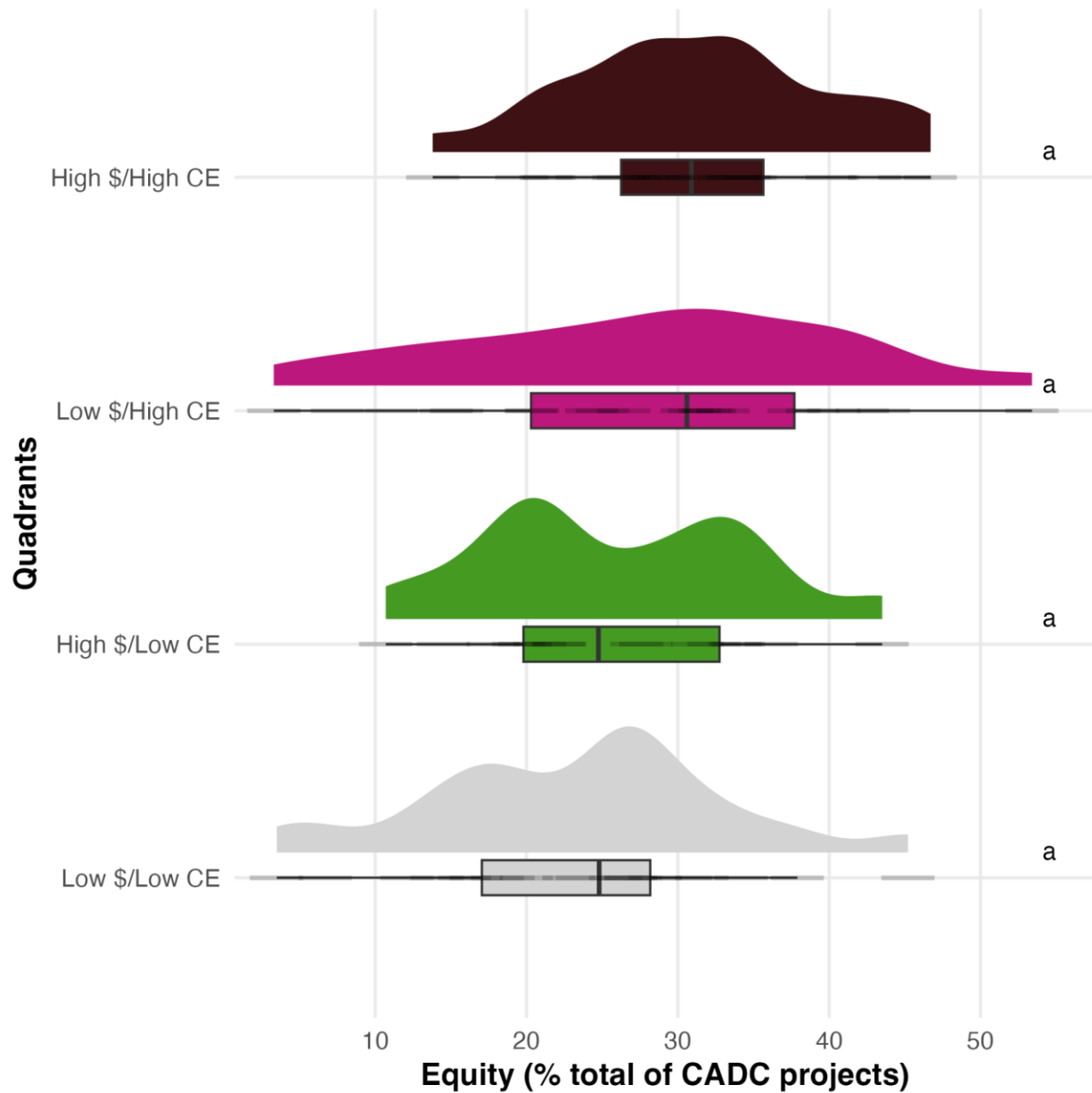


Figure S9. Distribution of countries across the four quadrants (Fig 2C) based on the percentage of projects in each country mentioning equity related terms. Colors indicate the level of committed investment and contextual inequity relative to median values using the same color scheme as in Fig. 2. The x-axis shows the percentage of total CADC projects in a country that explicitly mention equity in project descriptions, while the y-axis delineates four quadrants based on high/low investment (\$) and high/low contextual inequity (CE). An analysis of variance (ANOVA) was performed to examine the differences in the distribution of percentage of projects mentioning equity in each of the four quadrants. To further investigate pairwise differences among

the four groups, a Tukey's Honest Significant Difference (HSD) test was conducted. The Tukey test compared the means of all possible pairs of quadrants to identify statistically significant differences between quadrants. To summarize the results of the post-hoc comparisons, a compact letter display (CLD) was generated. The CLD assigns letters to each group (right of plot), where levels sharing the same letter are not significantly different from one another. Results indicate that there is no significant difference in the percentage of projects mentioning equity across the four quadrants.

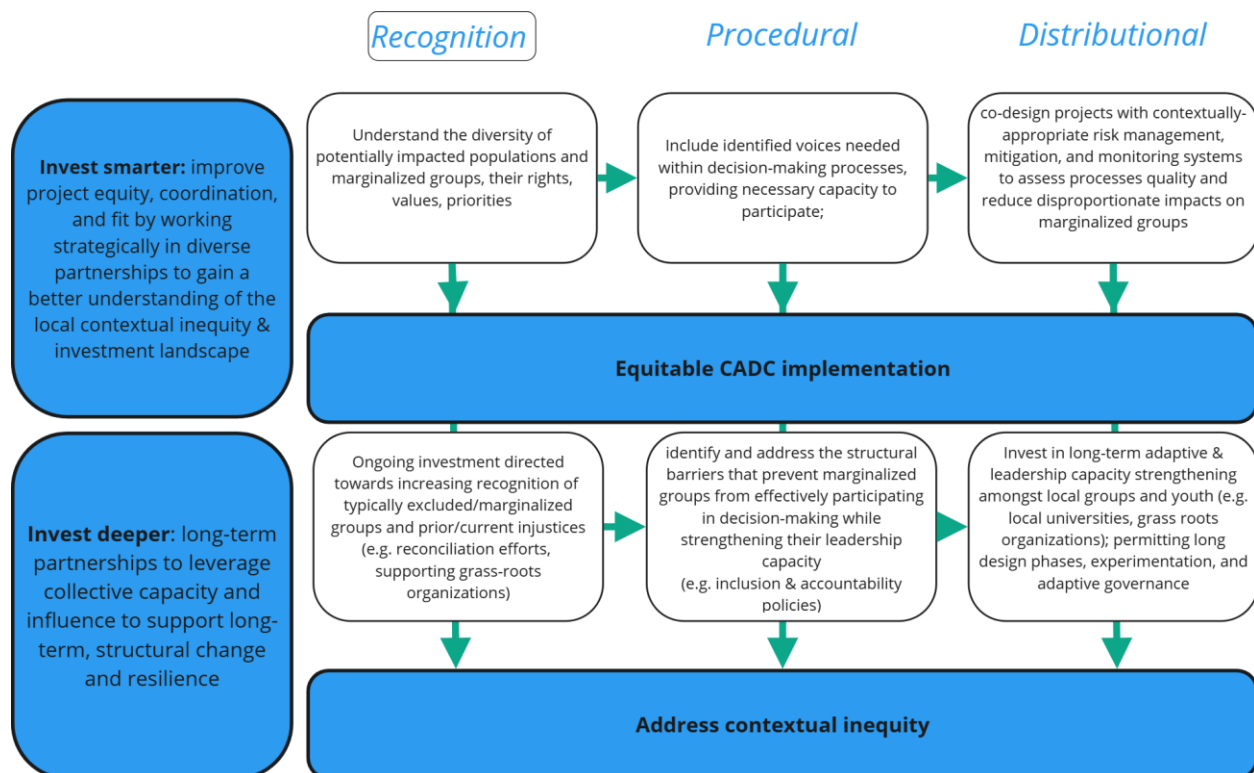


Fig. S10. Example of strategies for investing smarter and deeper to advance equity in high stakes locations.

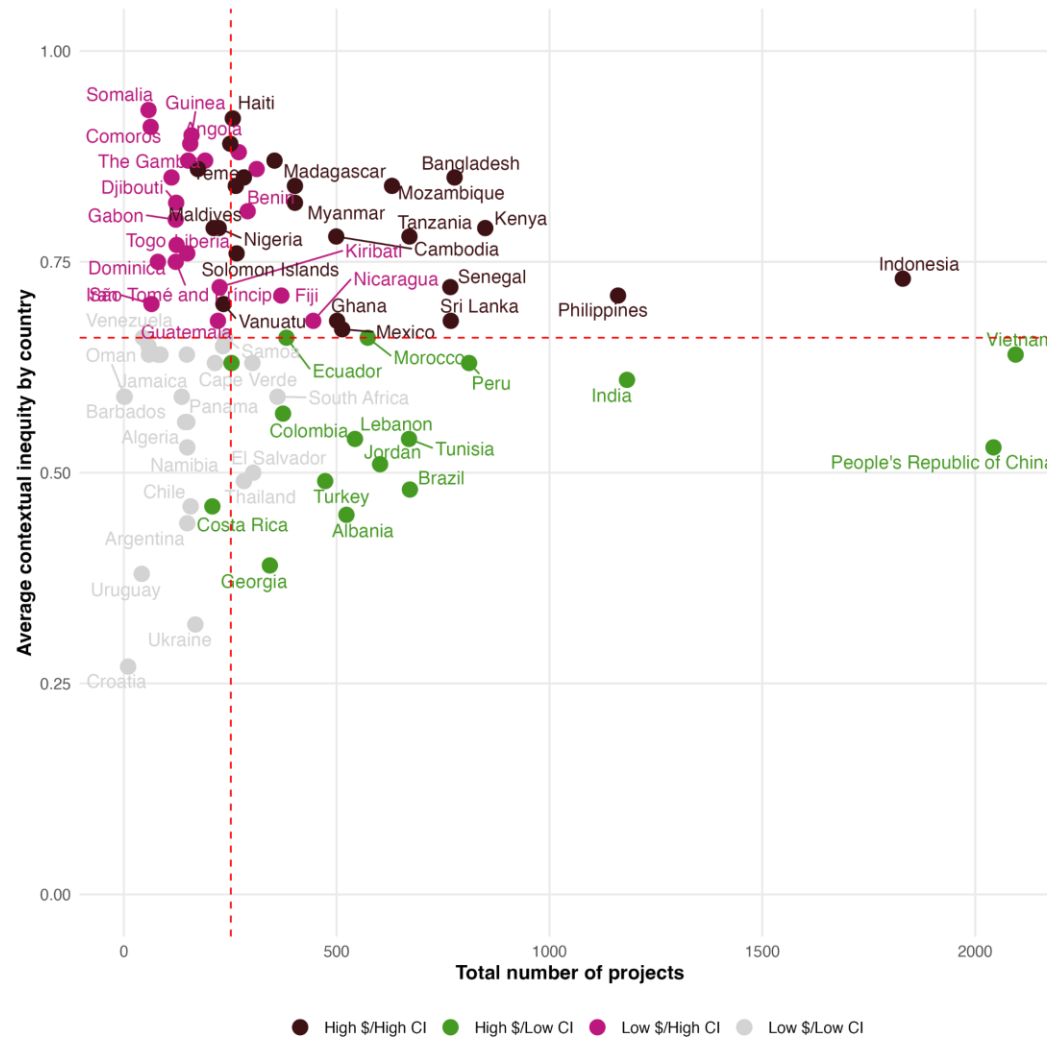


Fig. S11. Number of projects relative to contextual inequality. Colors based on quadrants using total committed investment and contextual inequality by country (Fig 2A): green (high investment, low inequality), light grey (low investment, low inequality), pink (low investment, high inequality), brown (high investment, high inequality; high stakes locations). Red dotted lines are median values for project counts by countries (x-axis) and median contextual inequality (y-axis).

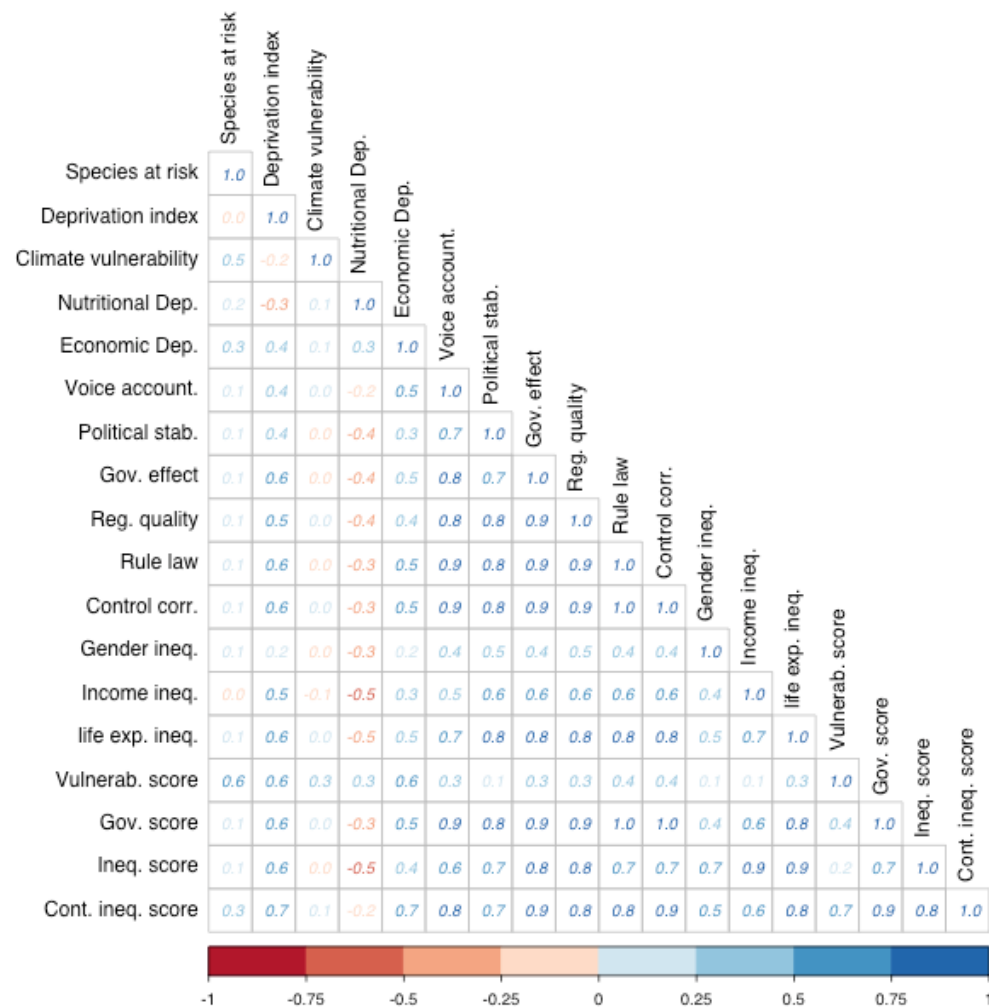


Fig. S12. Correlation between individual indicators of contextual inequity. Significant correlations are shown in bold.

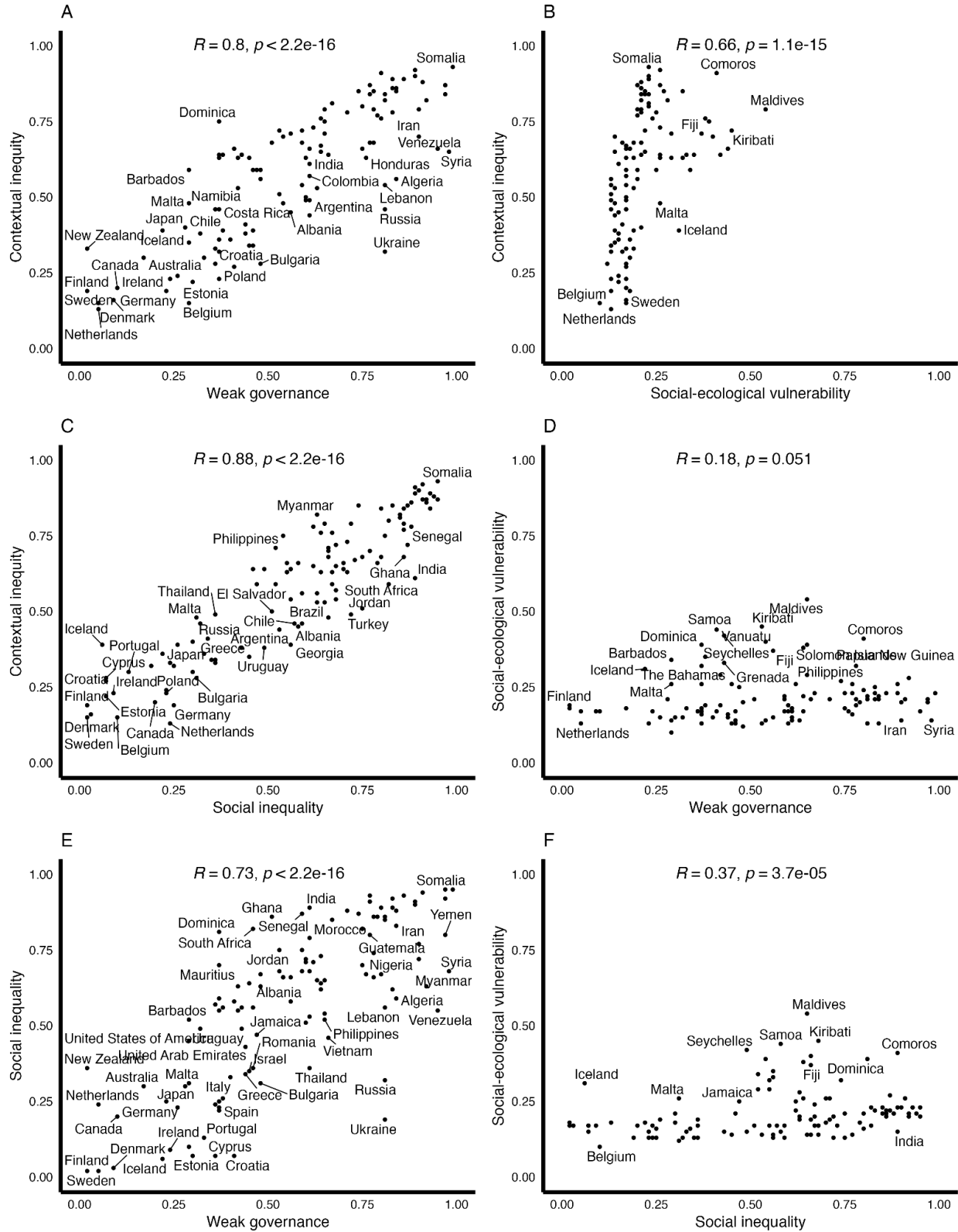


Fig. S13. Relationship between contextual inequality, and its components: weak governance, social inequality, and social-ecological vulnerability.

Table S1. List of contextual inequity indicators with source layer descriptions. See Methods and data source for more information on indicator compilation.

Indicators	Definition	Description	Year-Resolution	Link to data source
Social-ecological vulnerability				
Degraded ecosystems	Degree of exposure of coastal human populations to coastal ecosystem degradation	The mean gravity value of the number of marine and coastal species threatened by several stressors within a terrestrial buffer radius for each coastal populated pixel.	2003-2013-10 km	https://www.science.org/doi/10.1126/science.abe6731
Relative Deprivation Index	Relative levels of multidimensional deprivation and poverty based on local socio-economic and demographic conditions.	Harmonized dataset of 6 indicators of deprivation and poverty: child dependency ratios; infant mortality rates; human wellbeing based on education, health, and standard of living; building footprints per square kilometer; changes in the average intensity of nighttime lights; slope of metric of night-time lights.	2010 - 2020 - ~1km	https://earth.gov/data-catalog/grdi-v1
Climate vulnerability	Percentage of the total population exposed to potential sea level rise.	Percentage of country's population living within 100 km from the coastline and below 10 m above sea level using information on pixel level population (5km) sourced from the Gridded Population of the World (GPWv4) ⁵ .	2015-5 km	https://earth.gov/ghgcenter/data-catalog/sedac-popdensity-yeargrid5yr-v4.11

Marine employment dependency	Proportion of population engaged in small-scale marine fisheries	Ratio of the number of small-scale marine fishers to the national economically active population. Based on statistics from the Food and Agriculture Organization of the United Nations: Home (UN FAO), International Labour Organization, and from published literature.	2003 country	- https://www.nature.com/articles/ncomms16039#Sec19
Marine nutritional dependency	Per capita consumption of fish and seafood, including crustaceans, cephalopods and other mollusc species.	Per capita values derived by dividing consumption by the population (data provided by UN FAO and Our World in Data).	2008-2018-country	https://ourworldindata.org/grapher/fish-and-seafood-consumption-per-capita
Weak governance				

Low voice and accountability	The opportunity for effective participation of all relevant actors in governance; level of respect for all relevant actors and their knowledge, values, identities, and institutions.	World Bank Governance Indicators. Derived from combined data from survey respondents and experts over the period 1996-2022. Original values were inverted in this study to indicate weak governance.	2015-country	https://www.worldbank.org/en/publication/worldwide-governance-indicators
Weak rule of law	The extent to which agents have confidence in and abide by the rules of society”, and in particular the “quality of contract, property rights, the police and the courts, and the likelihood of crime and violence.		2015-country	https://www.worldbank.org/en/publication/worldwide-governance-indicators
Weak control of corruption	The extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests		2015-country	

Political instability	Perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.”	2015-country	
Government ineffectiveness	The quality of public services, of civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to these policies.	2015-country	
Poor regulatory quality	Perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote public sector development.	2015-country	
Social inequality			

Gender inequality	Female Labor Income Share	Harmonized survey data of employment and labor income by gender within each country. Data were combined from the International Labour Organization (ILO), the Luxembourg Income Study, and the European Union Statistics on Income and Living conditions.	2019-country	https://wid.world/document/half-the-sky-the-female-labor-income-share-in-a-global-perspective-world-inequality-lab-working-paper-2021-22/
Inequality adjusted life expectancy	Life expectancy component of the inequality-adjusted human development index (HDI).	Component of the inequality-adjusted Human Development Index. A long and healthy life is measured by the life expectancy at birth. The life expectancy is the average number of years a newborn would live if age-specific mortality rates in the current year were to stay the same throughout its life. The inequality adjusted HDI adjusts the HDI for inequality in the distribution of each dimension across the population.	1990–2022-country	https://hdr.undp.org/inequality-adjusted-human-development-index#/indicies/IHDI
Income inequality	Gross national income per capita adjusted for inequality in income distribution. Component of the inequality-adjusted HDI.	Based on logged income values and income inequality across multiple values. Uses data from the United Nations University's World Income Inequality Database.	2015-country	https://hdr.undp.org/inequality-adjusted-human-development-index#/indicies/IHDI

Table S2. Contextual inequity composite index (and component indices) by country for the 115 countries. Larger Gini values indicate greater variation in the levels of contextual inequity within a country.

Country	ISO3 country code	Social-ecological vulnerability	Weak governance	Social inequality	Contextual inequity index	Gini contextual inequity index
Albania	ALB	0.15	0.56	0.58	0.45	0.06
Algeria	DZA	0.13	0.84	0.59	0.56	0.05
Angola	AGO	0.23	0.86	0.93	0.89	0.02
Argentina	ARG	0.14	0.61	0.53	0.44	0.06
Australia	AUS	0.18	0.17	0.30	0.30	0.15
Bangladesh	BGD	0.22	0.84	0.83	0.85	0.03
Barbados	BRB	0.34	0.29	0.52	0.59	0.01
Belgium	BEL	0.10	0.29	0.10	0.15	0.09
Benin	BEN	0.23	0.67	0.85	0.81	0.02
Brazil	BRA	0.14	0.54	0.66	0.48	0.09
Bulgaria	BGR	0.12	0.48	0.31	0.28	0.04
Cambodia	KHM	0.25	0.83	0.62	0.78	0.01

Cameroon	CMR	0.21	0.91	0.94	0.88	0.02
Canada	CAN	0.17	0.10	0.20	0.20	0.20
Cape Verde	CPV	0.29	0.42	0.55	0.63	0.01
Chile	CHL	0.17	0.36	0.57	0.46	0.08
Colombia	COL	0.17	0.61	0.68	0.57	0.05
Comoros	COM	0.41	0.80	0.89	0.91	0.00
Costa Rica	CRI	0.17	0.37	0.59	0.46	0.09
Croatia	HRV	0.17	0.41	0.07	0.27	0.16
Cyprus	CYP	0.17	0.36	0.07	0.28	0.20
Democratic Republic of the Congo	COD	0.20	0.97	0.92	0.87	0.01
Denmark	DNK	0.17	0.09	0.03	0.16	0.21
Djibouti	DJI	0.21	0.81	0.85	0.82	0.05
Dominica	DMA	0.39	0.37	0.81	0.75	0.00
Dominican Republic	DOM	0.22	0.64	0.62	0.65	0.07
Ecuador	ECU	0.18	0.75	0.70	0.66	0.04
El Salvador	SLV	0.17	0.60	0.51	0.50	0.07
Estonia	EST	0.15	0.30	0.07	0.22	0.10

Fiji	FJI	0.37	0.56	0.66	0.71	0.01
Finland	FIN	0.18	0.02	0.02	0.19	0.10
Gabon	GAB	0.23	0.75	0.82	0.80	0.02
Georgia	GEO	0.14	0.46	0.56	0.39	0.04
Germany	DEU	0.13	0.23	0.25	0.19	0.10
Ghana	GHA	0.21	0.51	0.86	0.68	0.04
Greece	GRC	0.16	0.44	0.34	0.41	0.11
Grenada	GRD	0.33	0.43	0.56	0.64	0.01
Guatemala	GTM	0.16	0.77	0.80	0.68	0.05
Guinea	GIN	0.23	0.89	0.90	0.90	0.01
Haiti	HTI	0.26	0.89	0.91	0.92	0.01
Honduras	HND	0.17	0.76	0.67	0.63	0.05
Iceland	ISL	0.31	0.22	0.06	0.39	0.01
India	IND	0.15	0.61	0.89	0.61	0.06
Indonesia	IDN	0.26	0.62	0.71	0.73	0.04
Iran	IRN	0.14	0.90	0.77	0.70	0.08
Ireland	IRL	0.17	0.24	0.09	0.23	0.16

Israel	ISR	0.13	0.45	0.35	0.34	0.12
Italy	ITA	0.15	0.40	0.33	0.36	0.11
Ivory Coast	CIV	0.21	0.83	0.92	0.86	0.02
Jamaica	JAM	0.25	0.47	0.47	0.59	0.03
Japan	JPN	0.21	0.28	0.30	0.40	0.10
Jordan	JOR	0.13	0.53	0.75	0.51	0.08
Kenya	KEN	0.21	0.78	0.86	0.79	0.03
Kiribati	KIR	0.45	0.53	0.68	0.72	0.00
Latvia	LVA	0.16	0.37	0.25	0.32	0.06
Lebanon	LBN	0.13	0.81	0.56	0.54	0.06
Liberia	LBR	0.24	0.80	0.67	0.76	0.02
Lithuania	LTU	0.17	0.36	0.24	0.33	0.05
Madagascar	MDG	0.22	0.81	0.86	0.84	0.02
Malaysia	MYS	0.26	0.45	0.64	0.63	0.04
Maldives	MDV	0.54	0.65	0.65	0.79	0.00
Malta	MLT	0.26	0.29	0.31	0.48	0.03
Mauritania	MRT	0.23	0.83	0.89	0.89	0.02

Mauritius	MUS	0.26	0.37	0.70	0.64	0.04
Mexico	MEX	0.17	0.64	0.73	0.67	0.04
Morocco	MAR	0.18	0.61	0.79	0.66	0.07
Mozambique	MOZ	0.23	0.77	0.93	0.84	0.02
Myanmar	MMR	0.28	0.92	0.63	0.82	0.01
Namibia	NAM	0.19	0.42	0.63	0.53	0.05
Netherlands	NLD	0.13	0.05	0.24	0.13	0.25
New Zealand	NZL	0.19	0.02	0.36	0.33	0.10
Nicaragua	NIC	0.19	0.78	0.66	0.68	0.04
Nigeria	NGA	0.20	0.90	0.72	0.79	0.03
Oman	OMN	0.20	0.48	0.67	0.59	0.06
Pakistan	PAK	0.21	0.84	0.88	0.86	0.02
Panama	PAN	0.20	0.48	0.63	0.56	0.06
Papua New Guinea	PNG	0.32	0.78	0.74	0.85	0.01
People's Republic of China	CHN	0.14	0.63	0.65	0.53	0.09
Peru	PER	0.19	0.60	0.71	0.63	0.04
Philippines	PHL	0.29	0.65	0.52	0.71	0.03

Poland	POL	0.13	0.37	0.23	0.23	0.05
Portugal	PRT	0.18	0.33	0.13	0.30	0.13
Romania	ROU	0.13	0.46	0.36	0.34	0.05
Russia	RUS	0.13	0.81	0.32	0.46	0.07
Saint Lucia	LCA	0.35	0.38	0.56	0.64	0.01
Samoa	WSM	0.44	0.41	0.58	0.66	0.00
Senegal	SEN	0.22	0.59	0.87	0.72	0.02
Seychelles	SYC	0.42	0.43	0.49	0.64	0.00
Sierra Leone	SLE	0.26	0.77	0.91	0.87	0.01
Solomon Islands	SLB	0.38	0.64	0.64	0.76	0.00
Somalia	SOM	0.23	0.99	0.95	0.93	0.01
South Africa	ZAF	0.17	0.46	0.82	0.59	0.06
South Korea	KOR	0.19	0.38	0.26	0.39	0.10
Spain	ESP	0.18	0.37	0.22	0.36	0.09
Sri Lanka	LKA	0.21	0.59	0.75	0.68	0.04
Sudan	SDN	0.20	0.97	0.95	0.87	0.02
Sweden	SWE	0.17	0.05	0.02	0.15	0.14

Syria	SYR	0.14	0.98	0.68	0.65	0.05
São Tomé and Príncipe	STP	0.39	0.65	0.54	0.75	0.00
Tanzania	TZA	0.21	0.71	0.88	0.78	0.03
Thailand	THA	0.17	0.61	0.36	0.49	0.10
The Bahamas	BHS	0.32	0.37	0.55	0.63	0.01
The Gambia	GMB	0.27	0.74	0.87	0.85	0.01
Togo	TGO	0.20	0.79	0.86	0.77	0.03
Tunisia	TUN	0.17	0.59	0.68	0.54	0.05
Turkey	TUR	0.13	0.60	0.72	0.49	0.04
Ukraine	UKR	0.13	0.81	0.19	0.32	0.05
United Arab Emirates	ARE	0.15	0.44	0.43	0.38	0.12
United Kingdom	GBR	0.15	0.26	0.23	0.24	0.18
United States of America	USA	0.14	0.29	0.45	0.35	0.10
Uruguay	URY	0.15	0.32	0.49	0.38	0.06
Vanuatu	VUT	0.40	0.54	0.66	0.70	NA
Venezuela	VEN	0.17	0.95	0.55	0.66	0.07
Vietnam	VNM	0.21	0.66	0.46	0.64	0.06

Yemen

YEM

0.21

0.97

0.80

0.84

0.06

Table S3. External ocean investment by regions and subregions between 2010 and 2021. Regions are ranked by committed investments in USD million. The table includes the cumulative committed investment in USD billion and as percentages.

Region	Subregion	Committed investment (USD million)	Committed investment (%)	Total committed investment by region (USD million)	Cumulative committed investment by region (USD billion)	Total committed investment by region (% of world)	Cumulative committed investment by region (%)
Asia	Eastern	758	2.3	17939.3	17.9	55	55
Asia	South-Eastern Asia	7216.3	22.1				
Asia	Southern	4725.6	14.5				
Asia	Western	5239.4	16.1				
Africa	Eastern	3061.3	9.4	9084.8	27	27.9	82.9
Africa	Middle	561.8	1.7				
Africa	Northern	2825	8.7				
Africa	Southern	245.9	0.8				
Africa	Western	2390.8	7.3				
Americas	Caribbean	557.1	1.7	3063.3	30.1	9.4	92.2
Americas	Central America	1177	3.6				
Americas	South America	1329.2	4.1				
Oceania	Melanesia	780.4	2.4	1704.2	31.8	5.2	97.5
Oceania	Micronesia	419.7	1.3				

Oceania	Polynesia	504	1.6				
Europe	Eastern	49.1	0.2				
Europe	Southern Europe	778.6	2.4	827.7	32.6	2.5	100

Table S4. Summary of committed and cumulative investments by country. The table presents investment commitments (in USD million), estimated investment trends (in USD millions per year), cumulative investment (in USD million), and rankings by committed investment, project count, and per capita commitment as well as percentage of total investment and cumulative investment. Data are categorized by country, ISO Alpha-3 code, and region, and ordered by decreasing amount of committed investment, highlighting key investment trends and distribution patterns across the 115 countries for which investment information is available. Trends values with stars are significant investment trends over the 2010 - 2021 period. The top 10 countries in terms of investment are highlighted in bold.

Country	ISO3 Country code	Region	Total investme nt (Million USD)	Estimate d trend (Millions /year)	Cumulati ve investme nt (Million USD)	Total investme nt (%)	Cumulati ve investme nt (%)	Per capita investme nt (USD per inhabitan t)	Project count	Total investme nt (Rank)	Project count (Rank)	Per capita investme nt (Rank)
Vietnam	VNM	Asia	2183.9	-14.39	2183.9	6.7	6.7	27.2	2095	1	1	60
Indonesia	IDN	Asia	2030.7	74.04*	4214.6	6.2	12.9	7.9	1830	2	3	91
India	IND	Asia	1931.9	25.62	6146.5	5.9	18.8	5.9	1182	3	4	94
Turkey	TUR	Asia	1919.6	44.24	8066.1	5.9	24.7	48.4	473	4	24	46
Bangladesh	BGD	Asia	1853.9	-8.74	9920	5.7	30.4	23.8	777	5	8	66
Philippines	PHL	Asia	1503.3	67.04	11423.3	4.6	35	15.3	1161	6	5	77
Egypt	EGY	Africa	1496.8	-20.07	12920	4.6	39.6	37.8	626	7	15	52
Jordan	JOR	Asia	1449.4	-21.86*	14369.5	4.4	44.1	538.3	602	8	16	15

Kenya	KEN	Africa	1285.0	12.64	15654.4	3.9	48	380.9	849	9	6	18
Lebanon	LBN	Asia	895.3	-5.22	16549.8	2.7	50.7	176.7	543	10	18	25
People's Republic of China	CHN	Asia	755.5	-10.08	17305.3	2.3	53.1	2.0	2043	11	2	102
Cambodia	KHM	Asia	751.7	36.77*	18057	2.3	55.4	156.0	499	12	23	29
Morocco	MAR	Africa	702.0	-19.05	18759	2.2	57.5	34.0	573	13	17	53
Myanmar	MMR	Asia	619.0	10.63	19378	1.9	59.4	23.8	402	14	26.5	65
Ivory Coast	CIV	Africa	578.2	25.75	19956.2	1.8	61.2	60.7	174	15	62	41
Madagascar	MDG	Africa	571.5	7.85	20527.6	1.8	62.9	40.5	402	16	26.5	50
Sri Lanka	LKA	Asia	509.2	-10.71	21036.8	1.6	64.5	23.9	768	17	9	64
Mozambique	MOZ	Africa	475.7	2.98	21512.5	1.5	66	33.0	630	18	14	54
Mexico	MEX	Americas	459.1	26.62	21971.6	1.4	67.4	12.1	513	19	20	82
Tanzania	TZA	Africa	406.4	-0.07	22378	1.2	68.6	32.0	671	20	12	55
Peru	PER	Americas	388.0	-3.18	22766	1.2	69.8	19.1	811	21	7	72
Tunisia	TUN	Africa	351.6	-0.3	23117.5	1.1	70.9	41.5	670	22	13	48
Georgia	GEO	Asia	349.2	8.64*	23466.7	1.1	71.9	309.7	343	23	33	20
Brazil	BRA	Americas	330.0	2.3	23796.6	1	73	3.2	672	24	11	99
Democratic Republic of the Congo	COD	Africa	319.4	-2.27	24116	1	73.9	221.9	354	25	32	24

Iraq	IRQ	Asia	312.9	15.92*	24428.9	1	74.9	146.8	145	26	75	30
Senegal	SEN	Africa	294.5	6.53*	24723.4	0.9	75.8	24.0	767	27	10	63
Maldives	MDV	Asia	285.8	10.58*	25009.2	0.9	76.7	2610.6	211	28	55	9
Albania	ALB	Europe	275.5	7.64*	25284.6	0.8	77.5	123.8	523	29	19	34
Bosnia and Herzegovina	BIH	Europe	273.9	-2.88	25558.5	0.8	78.4	324.9	510	30	21	19
Ghana	GHA	Africa	270.9	1.87	25829.4	0.8	79.2	21.0	501	31	22	69
Nigeria	NGA	Africa	254.6	0.68	26084	0.8	80	4.6	223	32	52	96
Papua New Guinea	PNG	Oceania	247.5	2.96	26331.6	0.8	80.7	49.6	282	33	38.5	45
Solomon Islands	SLB	Oceania	246.5	6.22	26578	0.8	81.5	481.4	265	34	41	16
Mauritania	MRT	Africa	241.7	-0.57	26819.7	0.7	82.2	169.9	250	35	46	26
Colombia	COL	Americas	230.0	12.62*	27049.8	0.7	82.9	14.4	374	36	29	79
Costa Rica	CRI	Americas	228.5	11.27	27278.2	0.7	83.6	45.4	208	37	56.5	47
Cuba	CUB	Americas	216.7	1.73	27494.9	0.7	84.3	19.6	190	38	60	70
Yemen	YEM	Asia	199.0	1.66	27693.9	0.6	84.9	10.5	263	39	43	85
Montenegro	MNE	Europe	198.6	-5.02	27892.5	0.6	85.5	458.2	264	40	42	17
Haiti	HTI	Americas	196.9	-0.36	28089.4	0.6	86.1	19.2	256	41	44	71
Honduras	HND	Americas	191.3	-0.11	28280.6	0.6	86.7	29.4	253	42	45	57

Ecuador	ECU	Americas	189.6	-3.11	28470.2	0.6	87.3	18.3	382	43	28	73
Vanuatu	VUT	Oceania	180.9	-6.89*	28651.1	0.6	87.8	810.6	234	44	48	14
South Africa	ZAF	Africa	179.4	3.64	28830.6	0.5	88.4	9.8	361	45	31	86
Nicaragua	NIC	Americas	175.2	-2.32	29005.7	0.5	88.9	38.3	445	46	25	51
Samoa	WSM	Oceania	168.1	2.84	29173.8	0.5	89.4	938.7	238	47	47	12
Benin	BEN	Africa	168.0	4.39*	29341.9	0.5	90	27.1	291	48	37	61
Sudan	SDN	Africa	163.7	-0.59	29505.5	0.5	90.5	119.9	151	49	67	35
Tuvalu	TUV	Oceania	156.1	1.07	29661.6	0.5	90.9	187397.7	208	50	56.5	1
Mauritius	MUS	Africa	152.9	-0.28	29814.5	0.5	91.4	126.5	148	51	72.5	33
Guinea	GIN	Africa	143.4	5.62	29957.8	0.4	91.8	30.4	159	52	64	56
Pakistan	PAK	Asia	137.1	2.2	30094.9	0.4	92.3	8.5	312	53	34	89
Tonga	TON	Oceania	129.1	3.08	30224	0.4	92.7	1773.9	194	54	58	10
Kiribati	KIR	Oceania	121.1	4.91*	30345.1	0.4	93	2817.1	225	55	51	8
Syria	SYR	Asia	113.9	0	30459	0.3	93.4	11.4	58	56	98.5	83
Argentina	ARG	Americas	111.2	2.07	30570.2	0.3	93.7	6.6	149	57	69.5	93
Fiji	FJI	Oceania	105.5	0.89	30675.7	0.3	94	138.4	370	58	30	31
Algeria	DZA	Africa	104.8	-0.3	30780.5	0.3	94.4	4.4	144	59	76	97
Marshall Islands	MHL	Oceania	91.4	3.65	30871.9	0.3	94.6	12116.7	143	60	77	4

Federated States of Micronesia	FSM	Oceania	86.3	3.84	30958.1	0.3	94.9	1419.8	230	61	50	11
Gabon	GAB	Africa	86.1	3.22	31044.2	0.3	95.2	91.7	122	62	83.5	39
Nauru	NRU	Oceania	84.7	1.44	31128.9	0.3	95.4	23357.0	115	63	85.5	2
Sierra Leone	SLE	Africa	83.5	1.39	31212.4	0.3	95.7	17.9	191	64	59	74
Liberia	LBR	Africa	83.4	2.75	31295.8	0.3	95.9	26.1	149	65	69.5	62
Togo	TGO	Africa	77.9	3.35*	31373.7	0.2	96.2	22.6	124	66	81	67
Cape Verde	CPV	Africa	67.6	2.69*	31441.3	0.2	96.4	138.4	302	67	36	32
East Timor	TLS	Asia	65.3	-1.25	31506.6	0.2	96.6	52.4	148	68	72.5	44
Angola	AGO	Africa	64.0	-2.78	31570.6	0.2	96.8	5.1	156	69	66	95
Saint Helena	SHN	Africa	62.8	0	31633.4	0.2	97	18291.2	70	70	94	3
Cameroon	CMR	Africa	60.9	-0.16	31694.3	0.2	97.2	11.1	270	71	40	84
Namibia	NAM	Africa	50.6	0.05	31744.9	0.2	97.3	271.2	149	72	69.5	22
Ukraine	UKR	Europe	49.1	0.52	31794	0.2	97.5	9.0	168	73	63	88
Somalia	SOM	Africa	48.4	0.87	31842.4	0.1	97.6	9.4	58	74	98.5	87
Guyana	GUY	Americas	45.7	-0.06	31888.1	0.1	97.8	60.3	125	75	80	42
El Salvador	SLV	Americas	42.8	-2.43*	31930.9	0.1	97.9	6.9	304	76	35	92
Eritrea	ERI	Africa	42.7	1.03	31973.6	0.1	98	12.2	43	77	104	81

Jamaica	JAM	Americas	39.9	-0.18	32013.5	0.1	98.1	14.4	136	78	79	78
Dominican Republic	DOM	Americas	37.9	-0.17	32051.4	0.1	98.3	3.7	233	79	49	98
Palau	PLW	Oceania	36.3	1.15	32087.7	0.1	98.4	2893.2	177	80	61	7
Djibouti	DJI	Africa	35.6	-2.17*	32123.4	0.1	98.5	41.1	123	81	82	49
Malaysia	MYS	Asia	35.1	0.18	32158.5	0.1	98.6	1.1	214	82	54	106.5
Cook Islands	COK	Oceania	35.1	0	32193.6	0.1	98.7	3338.2	115	83	85.5	6
The Gambia	GMB	Africa	34.7	-0.61	32228.3	0.1	98.8	22.4	112	84	87	68
Panama	PAN	Americas	33.9	0.47	32262.2	0.1	98.9	8.5	149	85	69.5	90
Croatia	HRV	Europe	30.7	0	32292.9	0.1	99	27.8	10	86	109.5	59
São Tomé and Príncipe	STP	Africa	29.7	0.26	32322.6	0.1	99.1	164.2	122	87	83.5	27
Guinea-Bissau	GNB	Africa	29.6	0.03	32352.2	0.1	99.2	17.7	137	88	78	75
Thailand	THA	Asia	27.3	0.41	32379.5	0.1	99.3	0.8	282	89	38.5	108
Guatemala	GTM	Americas	24.5	-0.65	32403.9	0.1	99.3	2.1	221	90	53	101
Seychelles	SYC	Africa	22.4	0	32426.4	0.1	99.4	275.6	86	91	88	21
Chile	CHL	Americas	22.2	0	32448.5	0.1	99.5	1.6	157	92	65	103
Belize	BLZ	Americas	21.8	0.13	32470.4	0.1	99.5	59.6	147	93	74	43
Comoros	COM	Africa	20.8	-0.55	32491.2	0.1	99.6	27.9	63	94	96	58

Saint Vincent and the Grenadines	VCT	Americas	18.7	0.69*	32509.9	0.1	99.7	228.3	76	95	93	23
Eswatini	SWZ	Africa	15.9	0.23	32525.8	0	99.7		29	96	108	115
Grenada	GRD	Americas	15.6	-0.18	32541.4	0	99.8	163.8	59	97	97	28
Niue	NIU	Oceania	14.8	-0.29	32556.3	0	99.8	10446.1	79	98	91.5	5
Saint Lucia	LCA	Americas	10.4	-0.06	32566.7	0	99.8	61.1	80	99	89.5	40
Antigua and Barbuda	ATG	Americas	9.9	-0.06	32576.5	0	99.9	114.6	52	100	100	37
Suriname	SUR	Americas	8.5	0.39	32585	0	99.9	16.1	79	101	91.5	76
Iran	IRN	Asia	7.8	0.13	32592.9	0	99.9	1.2	65	102	95	105
Dominica	DMA	Americas	7.0	0.35*	32599.9	0	99.9	106.7	80	103	89.5	38
Libya	LBY	Africa	6.2	0	32606.1	0	100	1.5	10	104	109.5	104
Montserrat	MSR	Americas	3.3	0	32609.4	0	100	867.1	37	105	106	13
Uruguay	URY	Americas	2.7	0	32612.1	0	100	1.1	42	106	105	106.5
North Korea	PRK	Asia	2.5	0	32614.5	0	100	0.1	31	107	107	110
Equatorial Guinea	GNQ	Africa	1.8	0.07*	32616.3	0	100	2.7	49	108	101	100
Venezuela	VEN	Americas	1.3	0	32617.6	0	100	0.1	45	109	103	111
Wallis and Futuna	WLF	Oceania	0.8	-0.02	32618.4	0	100	115.0	48	110	102	36
Saint Kitts and Nevis	KNA	Americas	0.7	0	32619.1	0	100	14.3	4	111	111	80

Oman	OMN	Asia	0.2	0	32619.2	0	100	0.0	2	112	113	112
Barbados	BRB	Americas	0.1	0	32619.3	0	100	0.3	1	113	114.5	109
Trinidad and Tobago	TTO	Americas	0.0	0	32619.3	0	100	0.0	3	114	112	113
Anguilla	AIA	Americas	0.0	0	32619.3	0	100	0.0	1	115	114.5	114

Table S5. External ocean investment by regions and the four quadrants (Fig. 2) between 2010 and 2021. The table includes the cumulated committed investments in USD million and percentages by region and quadrant, percentages by quadrants, and the total number of countries, for the 84 countries for which investment and contextual inequity information are both available.

Region	Total investment (Million USD)	Number of countries	Total number of countries		Total investment		Quadrants
			(number)	(%)	(Million USD)	(%)	
Africa	577.65	6					
Americas	317.78	11					
Asia	176.45	4	24	29%	1319.78	4.5%	Low investment - Low inequity
Europe	79.81	2					
Oceania	168.09	1					

Africa	1100.15	14						
Americas	206.64	3						
Asia	144.88	2	21	25%	1678.26	5.8%	Low investment - High inequity	
Oceania	226.59	2						
Africa	1053.58	2						
Americas	1557.36	6						
Asia	9484.79	7	16	19%	12371.21	42.4%	High investment - Low inequity	
Europe	275.48	1						
Africa	4697.73	10						
Americas	655.97	2						
Asia	7752.50	8	23	27%	13781.1	47.3%	High investment - High inequity	
Oceania	674.90	3						
Total	29150.35	84						

Table S6. Keywords used to identify equity related terms in project descriptions. See Methods for details.

Level of confidence	Keyword terms
low confidence	exploitation, grievance, parity, participat, race, safeguard, trafficking, trust, violence and girls, violence and women, violence((//w+)(//W+)){1,3}women, violence((//w+)(//W+)){1,3}girl, voice
medium confidence	burden, conflict, discriminat, inclusion, participation, poor, reconciliat, religio, representation, sexes, Vulnerable
high confidence	accountab, compensate, consultation, dignity, disabilit, disadvantaged, empower, equality, equitabl, fair//b, fairness, female, gender, girl, homeless, impoverished, inclusiv, indigenous, inequalit, inequit, injustice, lgbt, marginali, microfinance, minorit, modern slavery, participative, participatory, queer//b, refugee, rights, transgender, underserved, welfare, women, youth
additional terms (not detected)	affordable housing, ageism, anti-discriminatory, anti-oppressive, anti-racist, basic living standard, basic services, benefit-sharing, bipoc, classism, co-benefit, co-produc, conflict resolution, correctability, cost-sharing, cultural value, decision control, decolonization, disparity, diverse groups, elite capture, end poverty, environmental and social safeguard, environmental justice, equal access, equal opportunit, equal pay, essf, ethicality, ethically, ethnicity, extreme poverty, fair treatment, female genital mutilation, feminis, financial inclusion, forced marriage, fpic, gini//b, homophobia, human rights, human trafficking, identities, income distribution, income equality, income inequality, intersectional, knowledge system, local ecological knowledge, marine justice, no poverty, non binary, non-binary, non-discriminat, of color, of colour, oppress, patriarchy, poverty eradication, poverty line, privileged, pro-poor, racism, reproductive health, reproductive rights, sex and inequality, sexism, sexual and reproductive health, sexual exploitation, sexual health, sexual violence, social equity, social inclusion, social justice, social monitoring, social protection, social safety, social security, tek//b, trade-off, tradeoff, traditional ecological knowledge, traditional knowledge, trustworthiness, two-spirit, universal health coverage, violence against girls, violence against women, wealth distribution

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