

Global set of climate change statistics and indicators - findings on adaptation

Environment Statistics Section, UNSD



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Outline

1. Adaptation indicators
2. Indicators suggested via consultancies in CARICOM and Africa
3. Responses to the Global Consultation
 - By countries on part 1
 - By countries on part 2
 - By international agencies
4. Future work



Adaptation topics and indicators in the Global Set

Adaptation: Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. Various types of adaptation exist, e.g. anticipatory and reactive, private and public, and autonomous and planned. Examples are raising river or coastal dikes, the substitution of more temperature-shock resistant plants for sensitive ones, etc. (IPCC Climate Change 2007 Synthesis Report).

- Climate change adaptation policies, strategies and plans
- Risk management, disaster forecasting and early warning systems
- Climate change public awareness and education
- Climate change adaptation management and practice
- Climate change monitoring
- Water management
- Waste management



Adaptation topics and indicators in the Global Set

105	Number of sectors planning, budgeting and implementing climate change adaptation actions	5020	3	Governance
106	Share of government adaptation expenditure in relation to GDP (UN-ECE 35)	5030	3	Expenditures
107	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies (SDG 11.5.1)	5100	2	Governance
108	Coverage of disaster shelters per capita	5110	3	Governance
109	Climate change funds received	5120	3	Governance
110	Coverage of early warning systems	5130	3	Governance
111	Average increase of insurance premiums incurred due to climate change	5140	3	Insurance
112	Proportion of population with access to climate information	5200	3	Education
113	Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curriculum	5210	2	Education
114	Number of companies publishing sustainability reports (SDG 12.6.1)	5220	2	Corporate reports
115	Areas adapted to climate change [Adaptation at coastal zones or river basin]	5230	3	Land
116	Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas	5250	1	Protected areas
117	Share of green urban areas in the total area of cities (UN-ECE 82)	5300	3	Urban areas
118	Number of units dedicated to climate change in government structures	5310	3	Governance
119	Number of reports on climate change statistics and indicators	5320	3	Governance
120	Proportion of degraded area of ecosystems which has been restored	5330	3	Ecosystems
121	National National Integrated Coastal Zone Management (ICZM)	5340	3	Governance
122	Fisheries measures in place and multilateral/bilateral fisheries management arrangements	5350	3	Governance
123	Buildings adapted to climate change	5290	3	Buildings
124	Proportion of agricultural area under productive and sustainable agriculture (SDG 2.4.1)	5260	2	Agriculture
125	Progress towards sustainable forest management (SDG 15.2.1)	5360	2	Forests
126	Biodiversity information monitoring index	5500	2	Biodiversity
127	Meteorological monitoring network	5510	3	Meteorology
128	Air quality monitoring systems	5520	3	Meteorology
129	Water monitoring systems	5530	3	Water
130	Ocean monitoring	5540	3	Water
131	Water use per capita	5580	2	Water
132	Municipal waste collected per capita	5550	1	Waste
133	Proportion of municipal waste treated	5560	1	Waste
134	Proportion of domestic and industrial wastewater flows safely treated (SDG 6.3.1)	5570	2	Water quality



Consultancy work in CARICOM and African countries

- An assessment of existing and needed capacities in Caribbean Community Small Island Developing States (CARICOM SIDS) and African countries was done in early 2021 focused on indicators related to climate vulnerability and adaptation, which were the areas identified as particularly important for SIDS, developing and least developed countries.
- The assessment was completed by two international consultants who gathered information from about 10 countries.
- It helped to define priority indicators on vulnerability and adaptation in the above-mentioned regions.



Consultancy work in CARICOM and African countries

<i>Climate change adaptation policies, strategies and plans</i>		501		
105	Number of sectors planning, budgeting and implementing climate change adaptation actions	5020	3	Governance
	List and description of adaptation actions	5021	2	Governance
<i>Risk management, disaster forecasting and early warning systems</i>		510		
108	Coverage of disaster shelters per capita	5110	3	Governance
	Number of disaster shelters	5111	3	Governance
109	Climate change funds received	5120	3	Governance
		5121		Governance
110	Coverage of early warning systems	5130	3	Governance
	Existence and number of early warning systems (FDES 6.3.1.a.7)	5131	2	Governance
111	Average increase of insurance premiums incurred due to climate change	5140	3	Insurance
	Insurance premiums incurred due to climate change	5141	3	Insurance
<i>Climate change public awareness and education</i>		520		
112	Proportion of population with access to climate information	5200	3	Education
	Number of households with timely access to climate information	5201	3	Education
	Number of people reached through climate change public awareness campaigns	5202	3	Education
<i>Climate change adaptation management and practice</i>		523		
118	Number of units dedicated to climate change in government structures	5310	3	Governance
	List and description	5311	3	Governance
119	Number of reports on climate change statistics and indicators	5320	3	Governance
	List and description	5321	3	Governance
123	Buildings adapted to climate change	5290	3	Buildings
	Number of dwellings with adequacy of building materials defined by national or local standards (FDES	5292	2	Buildings



Country responses to Part 1 of Global Consultation

D4. What kind of adaptation related information/data/statistics have been provided, or are ready to be provided, by the NSO for use in preparing national reports (such as [National Adaptation Plans](#) (NAPs) under the UNFCCC or [Adaptation Communications](#) under the Paris Agreement)?

- Of 60 responses (55 countries) 28 provided information on NSOs involvement in adaptation-related information;
- Most (10) mentioned some general form of involvement in terms of data supply;
- Several (7) specified that households statistics were provided for adaptation measures and policies drawn by relevant national institutions;
- Isolated examples include spatially explicit data on population which is applied to overlay with data on hazard areas;
- Environmental statistics (on crops, livestock, energy) supplied by NSOs were also mentioned in isolated cases.



Country responses to part 2 on the adaptation indicators

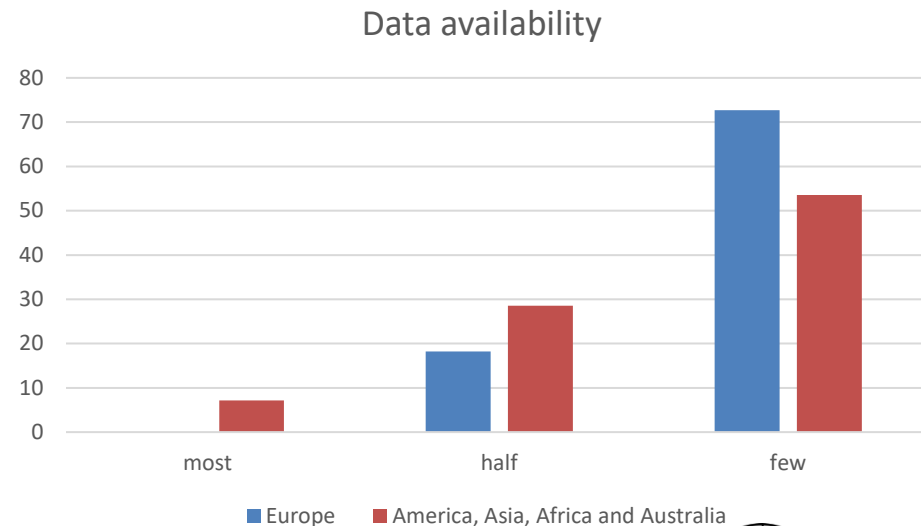
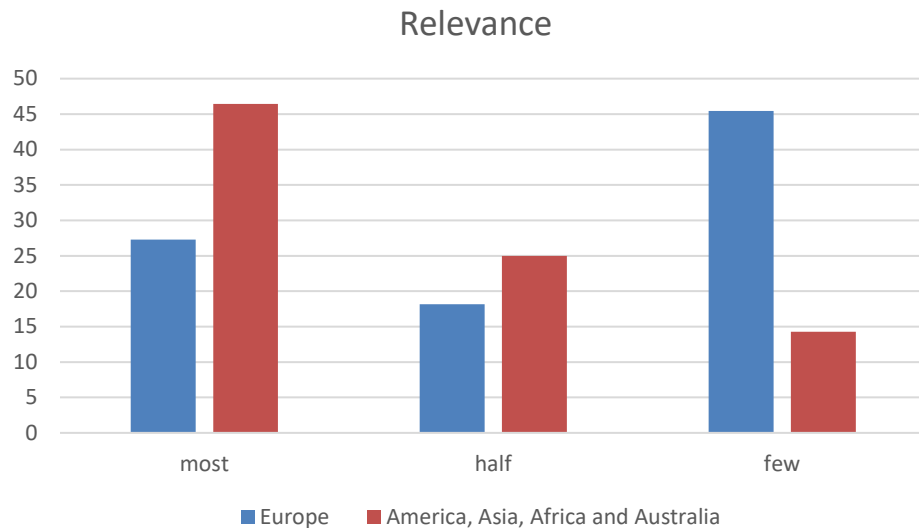
About 50 countries assessed the proposed adaptation indicators to certain degree.

		Europe	America	Asia/Australia	Africa
Relevance	most	6	6	3	4
	half	4	1	3	3
	few	10	2	1	1
Data availability	most		1		1
	half	4	3	2	3
	few	16	7	4	4
		22	11	9	8



Country responses to part 2 on the adaptation indicators

- Overall, the adaptation indicators are more relevant to countries outside of Europe
- Data availability is challenging (since most are Tier 3), most countries have data for few of the proposed indicators
- Several countries that considers also proxies assessed half or more of the indicators/statistics as measurable (Chile and Mauritius assessed most indicators with either available data or available proxies)



Responses by international agencies

1. Improvements on several tier 3 indicators suggested:

- By IMF on Insurance indicator (111), adaptation expenditures (106), reports on climate statistics (119), received funds (109)
- By WCMC on areas adapted to CC (115), biodiversity-important areas (116), restored ecosystems (120)

2. New indicators suggested:

- By FAO, particularly in the area of adaptation – focusing on aquaculture and fisheries;
- UN-Women: disaggregation suggested for many indicators, need for explicit indicators on gender.

3. Overall comments on the process and structure:

- ESCAP



Future work

1. Fill gaps in metadata and update tiers (where possible in the next period):

110	Coverage of early warning systems		5130	3	Governance
		Existence and number of early warning systems (FDES 6.3.1.a.7)	5131	2	Governance
111	Average increase of insurance premiums incurred due to climate change		5140	3	Insurance
		Insurance premiums incurred due to climate change	5141	3	Insurance

2. Improve the relation to climate change (mid-term):

124	Proportion of agricultural area under productive and sustainable agriculture (SDG 2.4.1)		5260	2	Agriculture
		Risk mitigation mechanisms (Subindicator of SDG 2.4.1)	5261	2	Agriculture
		Variation in water availability (Water use, Subindicator of SDG 2.4.1)	5270	2	Agriculture
		Use of agro-biodiversity-supportive practices (Subindicator of SDG 2.4.1)	5280	2	Agriculture
125	Progress towards sustainable forest management (SDG 15.2.1)		5360	2	Forests
		Proportion of forest area located within legally established protect areas (Subindicator of SDG 15.2.1)	5361	2	Forests
		Proportion of forest area under a long-term forest management plan (Subindicator of SDG 15.2.1)	5370	2	Forests
		Forest area under an independently verified forest management certification scheme (Subindicator of SDG 15.2.1)	5380	2	Forests

3. Develop missing definitions and methods (longer term):

118	Number of units dedicated to climate change in government structures		5310	3	Governance
		List and description	5311	3	Governance
119	Number of reports on climate change statistics and indicators		5320	3	Governance
		List and description	5321	3	Governance
120	Proportion of degraded area of ecosystems which has been restored		5330	3	Ecosystems
		Area of restored ecosystems	5331	3	Ecosystems
121	National National Integrated Coastal Zone Management (ICZM)		5340	3	Governance
		Areas covered by ICZM	5341	3	Governance
122	Fisheries measures in place and multilateral/bilateral fisheries management arrangements		5350	3	Governance
			5351		Governance
123	Buildings adapted to climate change		5290	3	Buildings
		Number of dwellings with adequacy of building materials defined by national or local standards	5292	2	Buildings

Thank you for your attention!

For more information please contact the Environment Statistics Section
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Website: <https://unstats.un.org/unsd/envstats/>

Climate Change Statistics Website

<https://unstats.un.org/unsd/envstats/climatechange.cshtml>

and

https://unstats.un.org/unsd/envstats/ClimateChange_StatAndInd_global.cshtml

