

Global Set of Climate Change Statistics and Indicators: Introduction to group work



Eighth Meeting of the Expert Group on Environment Statistics
New York, 12-21 October 2021 (virtual)
Session 1: Climate Change Statistics and Indicators: Global Set



Outline

1. New indicators
2. Proposed modifications
3. Tier 3 work
4. Group work sessions
5. Additional points



New indicators

UNSD received suggestions for new indicators from 5 countries and 3 agencies.

These were screened according to the criteria:

- 1) link to one of the change areas
- 2) suitability for naming and monitoring
- 3) fit into the area structure in a balanced way
- 4) possible to develop indicator/statistic, structure

Selections include most are in driver

Growing degree-day [impact]1	
	Daily average temperature
	Phenological stage
Reference evapotranspiration	
	Minimum temperature
	Maximum temperature

Indicator	Area	Sources of data
Annual fisheries and aquaculture losses due to extreme weather and climate events	Impacts	<ul style="list-style-type: none"> - FAO post disaster needs assessment - FAO emergency appeals - National fisheries yearbook
Number/frequency of mass mortality events of aquatic organisms (due to infectious diseases or environment-related factors or unknown causes – until diagnoses) & Number of emerging diseases	Impacts	<ul style="list-style-type: none"> - Biosecurity project data - EMPRES/aquatics - Requests for technical assistance from affected countries
Number/frequency of HABs events reported annually	Impacts	<ul style="list-style-type: none"> - HAEDAT data
Annual production from newly emerging species due to climate-related fish distribution changes	Impacts	
Number of countries using ecosystem-based approaches to managing marine areas	Adaptation	<ul style="list-style-type: none"> - SDG indicator 14.2.1 metadata
Degree of application of a legal/regulatory/ policy/institutional framework which recognizes and protects access rights for small-scale fisheries	Adaptation	<ul style="list-style-type: none"> - SDG indicator 14.b.1 metadata
Proportion of management plans designed and implemented based on principles of ecosystem approaches to fisheries (EAF) and to aquaculture (EAA)	Adaptation	<ul style="list-style-type: none"> - EAFnet - EAF review in Africa - Data collected through EAF-Nansen Programme

Examples of suggestions on new indicators

Countries have proposed various new indicators, such as:

- CO₂ emissions per capita
- Rate of decrease for the CO₂ emission per unit of GDP
- Rate of decrease for the final energy consumption per unit of GDP
- Proportion of non-fossil fuel energy consumption to final energy consumption
- Full utility rate of agricultural straws
- Increase of forest growing stock

IMF also proposed new indicators (including detailed metadata)

- Trade in low carbon technology products
- CO₂ emissions in Gross Fixed Capital Formation of Direct Investment
- CO₂ emissions in value added of Foreign Controlled Multinational Enterprises



Examples of country suggestion on indicator modification

Countries have:

- Provided suggestions to improve the statistics underlying Indicator 27: Renewable freshwater resources per capita, and Indicator 28: Freshwater abstracted as proportion of renewable freshwater resources.
- Suggested that indicators on “population” and “urban population” also capture the distribution by gender and age to show trends in population growth.
- Recommended the inclusion of data on age-dependency ratio, and sex disaggregated data in the "vulnerable population" topic as their own indicators.
- For indicator 81 Proportion of population with access to heating/cooling, the data available is for percentage of dwellings with access to heating/cooling.
- For Indicator 13 Number of (fossil-driven) vehicles per capita - Would be good to distinguish between emissions for freight and passenger transport - emissions per vehicle km traveled.



Tier 3

UNSD screened all the feedback provided on the tier 3 indicators

- Cases where countries answered 'yes' on methodological soundness were flagged
- Such cases (where more than 3 countries have methods) are included for review in the groupwork

Area	Topic	Indicator	Statistics	explore	Themes	Proposed Review	UNSD review
MITIGATION		100	Climate change mitigation technology	3	Technology	OECD; UNFCCC	(18 countries, 29%). National methods: None
MITIGATION			Number of hybrid and electric driven vehicles	3	Technology	OECD; UNFCCC	
MITIGATION			GHG removals by technological processes	3	GHG removals	IPCC; FAO; UNSD	
MITIGATION		104	Progress towards GHG emissions reduction target	3	GHG emissions	UNFCCC; IMF	(34 countries, 54%). National methods: France, Philippines, Russian Fed, Slovenia, Ecuador, Mauritius (reference Japanese material), Paraguay, UK, Japan, Canada. Suggestion: National guidance exists; keep and consult EGES
ADAPTATION			<i>Climate change adaptation policies, strategies and plans</i>				
ADAPTATION		105	Number of sectors planning, budgeting and implementing climate change adaptation activities	3	Governance	OECD; UNFCCC	(28 countries/63 (44%) say it's relevant); Armenia, Chile, Russian Fed.
ADAPTATION		106	Share of government adaptation expenditure in relation to GDP (UN-ECE 35)	3	Expenditures	OECD; Eurostat	(19 countries/63 (30%) say it's relevant); National methods: Vietnam, Spain.
ADAPTATION		108	Coverage of disaster shelters per capita	3	Governance	UNDRR	National methods: Mauritius.
ADAPTATION			Number of disaster shelters	3	Governance	UNDRR	

Work groups

We will break into four groups:

1. Drivers + Mitigation
2. Impacts
3. Vulnerability
4. Adaptation

Each break out group has a facilitator and a rapporteur.

The review outcome should be presented at plenary tomorrow.



Optional (on metadata)

- Rationale
- Limitations
- Interpretation
- Compilation formulae
- More disaggregation
- Tier revision



Optional (on list)

- Linkages among the indicators [in metadata?]
- How to handle indicators which belong to more than one area
 - Share of climate change mitigation expenditure in relation to GDP (UN-ECE 30)
 - Share of government adaptation expenditure in relation to GDP (UN-ECE 35)
- Repeated statistics:
 - E.g.: precipitation, sea level rise, land cover, land use, forest area
- Social and economic statistics: GDP and population [no metadata]



Thank you for your attention!

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Climate Change Statistics Website

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

and

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

