

Global Set of Climate Change Statistics and Indicators: Updates of the Global Set and revision of the metadata



Ninth Meeting of the Expert Group on Environment Statistics

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Outline

1. Context
2. Background
3. Overview of vulnerability and adaptation indicators in the Global Set
4. Methodologies for Tier 3 indicators
5. Examples of methodology development:
 - Climate and disasters
 - Climate and health
 - Climate and gender
6. Indicators requiring surveys and censuses data
7. Concluding remarks



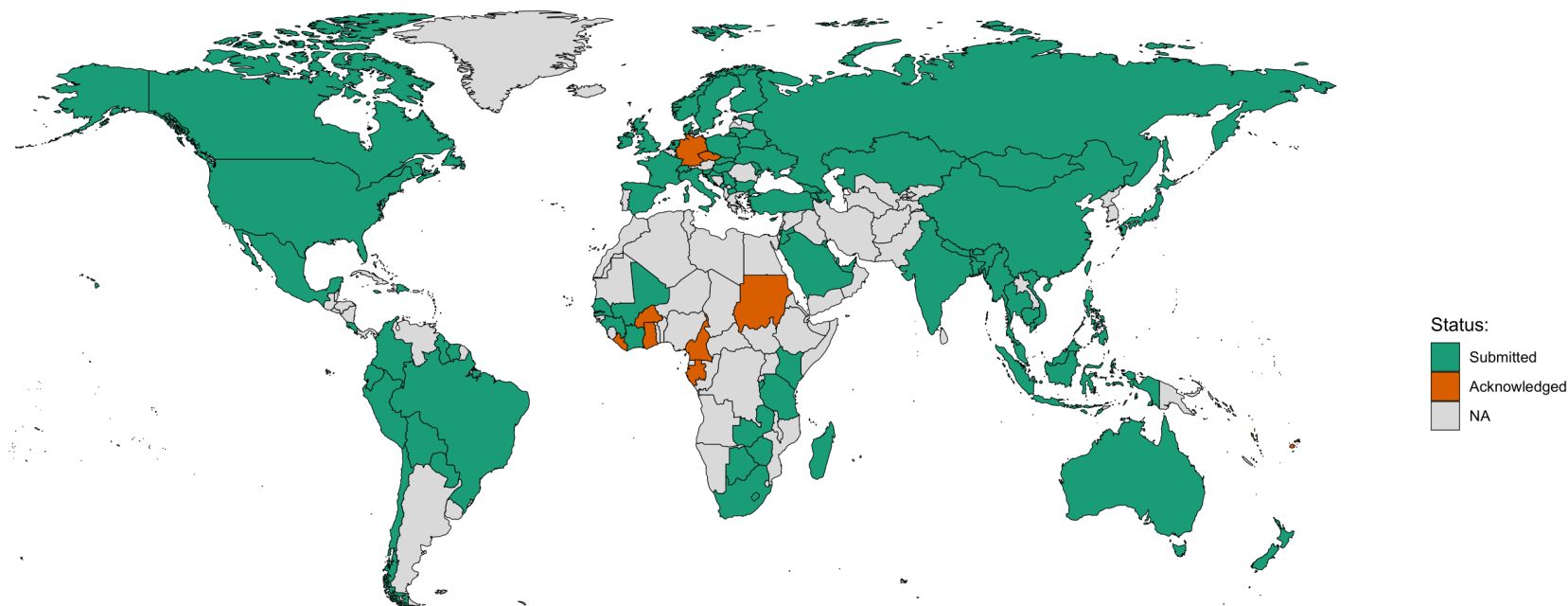
Context

1. Exploring the potential role of NSOs in the vulnerability and adaptation areas (drivers, mitigation and impacts are mostly covered by specialized national institutions and authorities reporting to UNFCCC)
2. The Global Set was updated and adopted by the 53rd Session of the Statistical Commission in March this year
3. However, there is a need for indicator revisions (tier 3) and metadata improvements
4. Strong foundations exist, e.g. the FDES, SDGs, however further work is needed, both on statistics and policy fronts
5. Both national and international engagements are growing



Growing engagement of countries

Global Consultation (May- Sept 2021) – 86 countries (68 on part 1 and 75 part 2) and 26 organizations



- The engagement is wider than that, e.g. 14 member states **acknowledged**.
- UNSD funded consultancies helped 2 more countries to do the assessment, another 9 countries to improve their earlier assessments in Africa
- Ongoing regional initiatives are also strengthening climate change statistics in countries

"Acknowledged" means that the national statistical offices of the countries (to whom we sent out the invitations to participate) communicated with us regarding the Global Consultation after we sent out our invitation, but that they did not submit a response.



Country responses to part 2 on the adaptation indicators

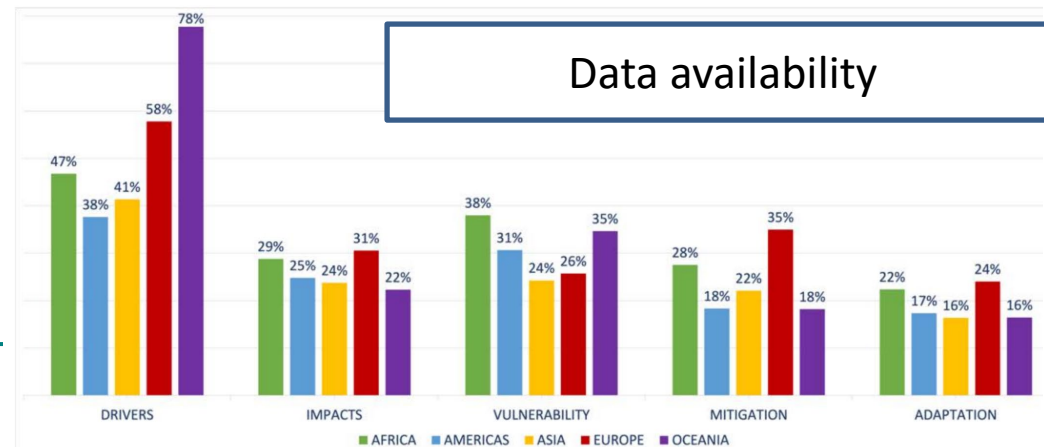
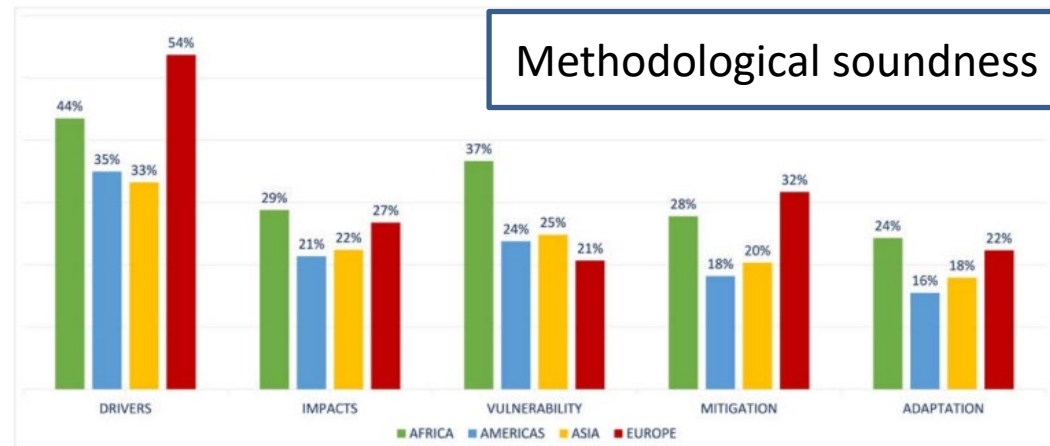
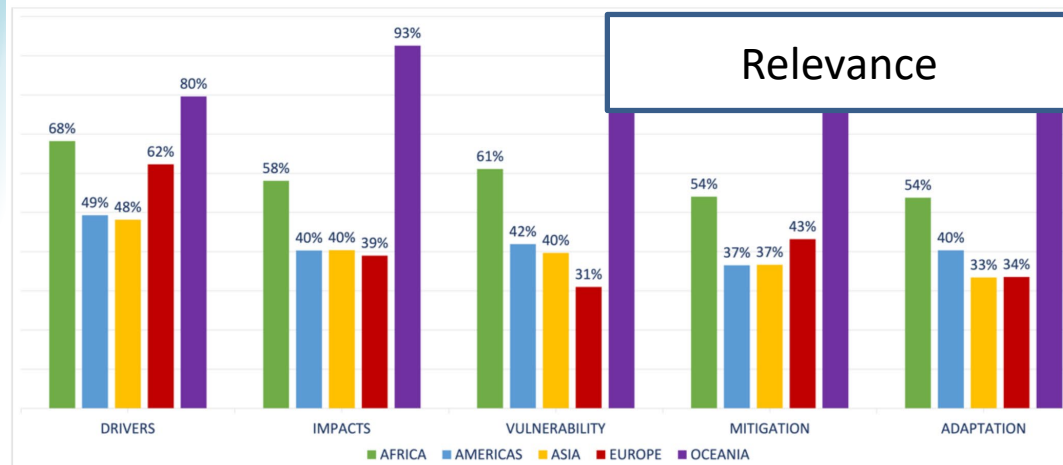
| Number of responses | Countries |
|---------------------|---|
| Africa | |
| 12 | Botswana, Burundi, Cabo Verde, Côte d'Ivoire, Guinea, Kenya, Madagascar, Mali, Mauritius, United Republic of Tanzania, Zambia, Zimbabwe |
| Americas | |
| 18 | Bermuda, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Grenada, Guyana, Jamaica, Mexico, Paraguay, Peru, Saint Lucia, Suriname, United States |
| Asia | |
| 21 | Armenia, Azerbaijan, Bangladesh, Bhutan, Cyprus, Georgia, India, Indonesia, Japan, Kazakhstan, Kuwait, Malaysia, Myanmar, Nepal, Philippines, Qatar, Saudi Arabia, Thailand, Turkey, United Arab Emirates, Viet Nam |
| Europe | |
| 24 | Belarus, Bulgaria, Denmark, Finland, France, Hungary, Ireland, Italy, Lithuania, Luxembourg, Republic of Moldova, Montenegro, Netherlands, North Macedonia, Poland, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Ukraine |
| Oceania | |
| 1 | Australia |



Country responses to part 2

- Overall, the Global Set indicators are most relevant in the African countries. The adaptation and vulnerability indicators are more relevant to countries outside of Europe. Drivers and mitigation are more relevant in Europe.
- Methodological soundness is lowest for adaptation indicators in all regions, highest for drivers.
- Data availability is most challenging for the adaptation indicators (since most are Tier 3) in all regions.
- For more details:

<https://unstats.un.org/unsd/statcom/53rd-session/documents/BG-3m-GlobalConsultationontheGlobalSet-E.pdf>



Adaptation topics, indicators in the Global Set

| | | | | | | | | | |
|------------|--|-------------------|---------------|---------------|---------------|-------------------|---------------|---------------|---------------|
| ADAPTATION | <i>Climate change adaptation policies, strategies and plans</i> | | | | | | | | |
| ADAPTATION | <i>Risk management, disaster forecasting and early warning systems</i> | | | | | | | | |
| ADAPTATION | <i>Public awareness of and education on climate change</i> | | | | | | | | |
| ADAPTATION | <i>Area-based adaptation to climate change</i> | | | | | | | | |
| ADAPTATION | <i>Climate change monitoring</i> | | | | | | | | |
| ADAPTATION | <i>Water management</i> | Indicators | | | | Statistics | | | |
| ADAPTATION | <i>Waste management</i> | | | | | | | | |
| | | Total | Tier 1 | Tier 2 | Tier 3 | Total | Tier 1 | Tier 2 | Tier 3 |
| | | 36 | 4 | 11 | 21 | 42 | 4 | 24 | 14 |

| | | | |
|---|-----|--|---|
| IMPACTS, mitigation, adaptation | 31 | Forest area as a proportion of total land area | 1 |
| MITIGATION, adaptation | 117 | Share of energy- and transport-related taxes as a percentage of total taxes and social contributions | 2 |
| MITIGATION, adaptation | 118 | Amounts provided and mobilized in United States dollars per year in relation to the continued existing collective mobilization goal of the \$100 billion commitment through to 2025 | 2 |
| MITIGATION, adaptation | 125 | Increase in forest area | 2 |
| ADAPTATION | 127 | Proportion of sectors planning, budgeting and implementing climate change adaptation actions | 3 |
| ADAPTATION, mitigation | 128 | Proportion of women in managerial positions | 1 |
| ADAPTATION | 129 | Share of government adaptation expenditure in relation to gross domestic product | 3 |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 130 | Number of units dedicated to climate change in government structures | 3 |
| ADAPTATION | 131 | National integrated coastal zone management | 3 |
| ADAPTATION | 132 | Fisheries management measures in place and multilateral/bilateral fisheries management arrangements | 3 |
| ADAPTATION | 133 | Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies | 2 |
| ADAPTATION | 134 | Coverage of disaster shelters per capita | 3 |
| ADAPTATION, mitigation | 135 | Climate change funds received | 3 |
| ADAPTATION | 136 | Coverage of early warning systems | 3 |
| ADAPTATION | 137 | Average increase of insurance premiums incurred due to climate change | 3 |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 138 | Proportion of population with access to climate information | 3 |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 139 | Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) | 2 |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 140 | Number of companies publishing sustainability reports | 2 |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 141 | Number of reports on climate change statistics and indicators | 3 |
| ADAPTATION | 142 | Adaptation at coastal zones or river basins | 3 |
| ADAPTATION, mitigation | 143 | Nature-based adaptation | 3 |
| ADAPTATION | 144 | Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type | 1 |
| ADAPTATION | 145 | Share of green urban areas in the total area of cities | 3 |
| ADAPTATION, mitigation | 146 | Proportion of degraded area of ecosystems that has been restored | 3 |
| ADAPTATION, mitigation | 147 | Buildings adapted to climate change | 3 |
| ADAPTATION, mitigation | 148 | Proportion of agricultural area under productive and sustainable agriculture | 2 |
| ADAPTATION, mitigation | 149 | Progress towards sustainable forest management | 2 |
| ADAPTATION | 150 | Biodiversity information monitoring index | 3 |
| ADAPTATION | 151 | Meteorological monitoring network | 3 |
| ADAPTATION | 152 | Air quality monitoring systems | 3 |
| ADAPTATION | 153 | Water monitoring systems | 3 |
| ADAPTATION | 154 | Ocean monitoring | 3 |
| ADAPTATION | 155 | Water use per capita | 2 |
| ADAPTATION | 156 | Municipal waste collected per capita | 1 |
| ADAPTATION | 157 | Proportion of municipal waste treated | 2 |
| ADAPTATION | 158 | Proportion of domestic and industrial wastewater flows safely treated | 2 |

Further work on structure, groupings and references

More improvements needed on:

- Policy references updates needed periodically, as follow-up of COP meetings, etc.
- Statistical advances on biodiversity, disasters, SEEA, social and gender statistics, etc.

| | | | | | |
|------------------------|------------------------|-----|---|---|---|
| VULNERABILITY, impacts | adaptation | 88 | Vulnerable or fragile ecosystems | | 3 |
| VULNERABILITY, impacts | adaptation | | | Red list of ecosystems | 2 |
| VULNERABILITY, impacts | adaptation | 89 | Vulnerable ecosystem services | | 3 |
| VULNERABILITY, impacts | adaptation | | | Crop provisioning services | 2 |
| VULNERABILITY, impacts | adaptation | | | Livestock provisioning services | 2 |
| VULNERABILITY, impacts | adaptation | | | Water supply | 2 |
| VULNERABILITY | mitigation | 90 | Ecosystem carbon stocks | | 2 |
| VULNERABILITY | mitigation | | | Carbon stock in soil | 3 |
| VULNERABILITY | mitigation | | | Carbon stocks in biomass | 2 |
| VULNERABILITY | mitigation | | | Forest biomass: Total | 2 |
| VULNERABILITY | adaptation | 95 | Proportion of population with access to electricity | Refer to original source in metadata | 1 |
| VULNERABILITY | adaptation | 99 | Proportion of population with access to heating/cooling | | 3 |
| VULNERABILITY | adaptation | | | Population with access to heating | 2 |
| VULNERABILITY | adaptation | | | Population with access to cooling | 3 |
| ADAPTATION | impacts, vulnerability | 150 | Biodiversity information monitoring index | | 3 |
| ADAPTATION | impacts, vulnerability | | | Number of species monitored | 2 |
| ADAPTATION | impacts, vulnerability | 151 | Meteorological monitoring network | | 3 |
| ADAPTATION | impacts, vulnerability | | | Number and type of weather stations | 3 |
| ADAPTATION | impacts, vulnerability | 152 | Air quality monitoring systems | | 3 |
| ADAPTATION | impacts, vulnerability | | | Number and type of air quality stations | 3 |
| ADAPTATION | impacts, vulnerability | 153 | Water monitoring systems | | 3 |
| ADAPTATION | impacts, vulnerability | | | Number and type of hydrological monitoring stations | 3 |
| ADAPTATION | impacts, vulnerability | 154 | Ocean monitoring | | 3 |
| ADAPTATION | impacts, vulnerability | | | Number and type of data buoys | 3 |

Metadata can be accessed in: Background document to the Report of the Secretary-General, <https://unstats.un.org/unsd/statcom/53rd-session/documents/BG-3m-Globalsetandmetadata-E.pdf>



Adaptation-relevant methodologies

Guidelines on Biophysical Modelling for Ecosystem Accounting

(<https://www.greenfinanceplatform.org/research/guidelines-biophysical-modelling-ecosystem-accounting>) have informed several previously Tier 3 statistics:

| Area | Number | Indicator | Statistic | Tier | Themes | Method | ([possible] National) | Type of Data Source |
|------------------------|--------|-------------------------|--|------|--------------------|---------|-------------------------|-------------------------------------|
| ADAPTATION, mitigation | 143 | Nature-based adaptation | | 3 | Ecosystem services | SEEA-EA | | |
| ADAPTATION, mitigation | | | Area (length) of storm mitigation ecosystem services | 2 | Ecosystem services | SEEA-EA | Ministry of Environment | Remote sensing and thematic mapping |
| ADAPTATION, mitigation | | | Area of coastal protection services | 2 | Ecosystem services | SEEA-EA | Ministry of Environment | Remote sensing and thematic mapping |
| ADAPTATION, mitigation | | | Area of river flood mitigation services | 2 | Ecosystem services | SEEA-EA | Ministry of Environment | Remote sensing and thematic mapping |

UNESCO indicators, https://www.education-inequalities.org/indicators/edu0_prim#ageGroup=%22edu0_prim%22

| Area | Number | Indicator | Statistic | Tier | Themes | Method | ([possible] National) | Type of Data Source |
|---|--------|--|--|------|----------------------|--------|-----------------------|---------------------|
| ADAPTATION, drivers, impact | 139 | Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies and (b) school curricula | | 2 | Education; Disasters | SDG | Ministry of Education | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | | Number of children deprived of education | 2 | Education | | Ministry of Education | Surveys |

GEO Handbook on Biodiversity Observation Networks

(<https://www.geobon.org/downloads/biodiversity-monitoring/books/GEO-Handbook.pdf>), in support of CBD's Biodiversity Monitoring Framework

| Area | Number | Indicator | Statistic | Tier | Themes | Method | ([possible] National) | Type of Data Source |
|------------|--------|---|-----------------------------|------|--------------|--------|--|------------------------|
| ADAPTATION | 150 | Biodiversity information monitoring index | | 3 | Biodiversity | | Ministry of Environment / National Focal Point for CBD | |
| ADAPTATION | | | Number of species monitored | 2 | Biodiversity | | Ministry of Environment | Administrative records |



Adaptation - tier 3 indicators and statistics

| Area | Number | InStatistic | Tier | Themes | Method | ([possible] National data sources | Type of Data Source | C |
|--|--------|---|------|-----------------------|-------------|---|--|---|
| ADAPTATION | 127 | Proportion of sectors planning, budgeting and implementing climate change adaptation actions | 3 | Governance | | | | |
| ADAPTATION | | List and description of adaptation actions | 3 | Governance | | Environment Agency/National climate cl | Administrative records | |
| ADAPTATION, mitigation | | Women's participation in sector-specific environmental governance bodies | 3 | Governance | | NSO, labour ministry | Labour force surveys, household surveys, | |
| ADAPTATION | 129 | Share of government adaptation expenditure in relation to gross domestic product | 3 | Expenditures; Disaste | UN-ECE | Ministry of Finance | Administrative records | |
| ADAPTATION, drivers, impacts, v | 130 | Number of units dedicated to climate change in government structures | 3 | Governance | | NSO/Ministry of Environment/National climate change reporting authorities | | |
| ADAPTATION, drivers, impacts, vulnerability, | | List and description of units | 3 | Governance | FDES | NSO/Ministry of Environment/National | Administrative records | |
| ADAPTATION | 131 | National integrated coastal zone management | 3 | Governance | SDG | Environment Agency/Maritime Authority/Fisheries department | | |
| ADAPTATION | | Areas covered by ICZM | 3 | Governance | | Environment Agency/Maritime Authority/Fisheries department | | |
| ADAPTATION | 132 | Fisheries management measures in place and multilateral/bilateral fisheries management arrangements | 3 | Governance | | Environment Agency/Maritime Authority/Fisheries department | | |
| ADAPTATION | 134 | Coverage of disaster shelters per capita | 3 | Governance; Disasters | | Disaster agency/Agency responsible for disaster risk reduction | | |
| ADAPTATION | | Number of disaster shelters | 3 | Governance; Disasters | | Disaster agency/Agency responsible for | Administrative records | |
| ADAPTATION, mitigation | 135 | Climate change funds received | 3 | Governance | | Climate change agency, Ministry of Finan | Administrative records | |
| ADAPTATION | 136 | Coverage of early warning systems | 3 | Governance; Disaster | Sendai | Disaster agency/Agency responsible for disaster risk reduction | | |
| ADAPTATION | 137 | Average increase of insurance premiums incurred due to climate change | 3 | Insurance | | National Insurance Regulatory Authority | Administrative records | |
| ADAPTATION | | Insurance premiums incurred due to climate related events | 3 | Insurance | | National Insurance Regulatory Authority | Administrative records | |
| ADAPTATION, drivers, impacts, v | 138 | Proportion of population with access to climate information | 3 | Education | | NSO/Environment Agency/National climate change reporting authorities | | |
| ADAPTATION, drivers, impacts, vulnerability, | | Number of households with timely access to climate information | 3 | Education | | NSO/Environment Agency/National clim | Surveys, censuses | |
| ADAPTATION, drivers, impacts, vulnerability, | | Number of people reached through climate change public awareness campaigns | 3 | Education | | NSO/Environment Agency/National clim | Administrative records | |
| ADAPTATION, drivers, impacts, v | 141 | Number of reports on climate change statistics and indicators | 3 | Governance | | NSO/Ministry of Environment/National climate change reporting authorities | | |
| ADAPTATION, drivers, impacts, vulnerability, | | List and description of climate change statistical products | 3 | Governance | | NSO/Ministry of Environment/National | Administrative records | |
| ADAPTATION | 142 | Adaptation at coastal zones or river basins | 3 | Land | | Survey department/Ministry of Environment | | |
| ADAPTATION, mitigation | 143 | Nature-based adaptation | 3 | Ecosystem services | SEEA-EA | | | |
| ADAPTATION | 145 | Share of green urban areas in the total area of cities | 3 | Urban areas | UN-ECE; SDG | Environment Agency/Ministry of Public Works | | |
| ADAPTATION, mitigation | 146 | Proportion of degraded area of ecosystems that has been restored | 3 | Biodiversity | SEEA-EA | Ministry of Environment / National Focal Point for CBD | | |
| ADAPTATION, mitigation | | Area of restored ecosystems | 3 | Biodiversity | SEEA-EA | Ministry of Environment / National Focal | Remote sensing and thematic mapping | |
| ADAPTATION, mitigation | 147 | Buildings adapted to climate change | 3 | Buildings | | NSO/Ministry of Public Works | | |
| ADAPTATION | 150 | Biodiversity information monitoring index | 3 | Biodiversity | | Ministry of Environment / National Focal Point for CBD | | |
| ADAPTATION | 151 | Meteorological monitoring network | 3 | Meteorology | | Meteorological office | Administrative records | |
| ADAPTATION | | Number and type of weather stations | 3 | Meteorology | | Meteorological office | Administrative records | |
| ADAPTATION | 152 | Air quality monitoring systems | 3 | Meteorology | | Environment Agency | Administrative records | |
| ADAPTATION | | Number and type of air quality stations | 3 | Meteorology | | Environment Agency | Administrative records | |
| ADAPTATION | 153 | Water monitoring systems | 3 | Water | | Environment Agency/Maritime Authority | Administrative records | |
| ADAPTATION | | Number and type of hydrological monitoring stations | 3 | Water | | | | |
| ADAPTATION | 154 | Ocean monitoring | 3 | Water | | National hydrological and meteorologica | Remote sensing; in situ international surv | |
| ADAPTATION | | Number and type of data buoys | 3 | Water | | | | |



Vulnerability - tier 3 indicators and statistics

| | | | | | | | |
|---|-----|--|---|-----------------------|-----------------|--|-------------------------------------|
| VULNERABILITY | | Number, sex and age of undernourished people | 3 | Food | | Ministry of Health/NSO | Administrative records |
| VULNERABILITY | | Price of water | 3 | Water | FDES | National Statistical Office; Ministry of W | Surveys, censuses |
| VULNERABILITY | 85 | Area of biofuels (and other non-food crops) as a proportion of total agricultural area | 3 | Agriculture | | Ministry of Agriculture/ Energy Companies | |
| VULNERABILITY | | Area of biofuels production | 3 | Agriculture | | Ministry of Agriculture/ Energy Compan | Administrative records, surveys |
| VULNERABILITY | 86 | Population relying on subsistence and pastoral farming | 3 | Agriculture | | | |
| VULNERABILITY | | Area of rainfed agricultural systems | 3 | Agriculture | | Ministry of Agriculture | Farm surveys |
| VULNERABILITY | 87 | Vulnerable species | 3 | Biodiversity | | Ministry of Environment / National Focal Point for CBD | |
| VULNERABILITY, impacts | 88 | Vulnerable or fragile ecosystems | 3 | Biodiversity | SEEA-EA | Ministry of Environment / National Focal Point for CBD | |
| VULNERABILITY, impacts | 89 | Vulnerable ecosystem services | 3 | Biodiversity | | Ministry of Environment / National Focal Point for CBD | |
| VULNERABILITY | | Carbon stock in soil | 3 | Biodiversity | SEEA-EA; UN-ECE | National Focal Points to the UNCCD/For | Inventory; monitoring systems |
| VULNERABILITY | 91 | Infrastructure vulnerable to climate change | 3 | Infrastructure | | Disaster agency/Agency responsible for disaster risk reduction | |
| VULNERABILITY | | Vulnerable/Deteriorated infrastructure | 3 | Infrastructure | | Disaster agency/Agency responsible for | Administrative records |
| VULNERABILITY | 92 | Buildings (settlements) vulnerable to climate change | 3 | Buildings | | Disaster agency/Agency responsible for disaster risk reduction | |
| VULNERABILITY | | Number of dwellings with adequacy of building materials defined by national or local standards | 3 | Buildings | FDES | Disaster agency/Agency responsible for | Household surveys, censuses |
| VULNERABILITY | 99 | Proportion of population with access to heating/cooling | 3 | Energy | | | |
| VULNERABILITY | | Population with access to cooling | 3 | Energy | SDG | NSO | Surveys, censuses |
| VULNERABILITY | 102 | Proportion of population living in non-coastal hazard-prone areas | 3 | Disasters | | Disaster agency | Remote sensing and thematic mapping |
| VULNERABILITY | 104 | Indigenous population living in isolated areas | 3 | Indigenous population | | NSO | |
| VULNERABILITY | 105 | Proportion of population with disability | 3 | Disability | SDG | NSO | |
| VULNERABILITY | 106 | Coastal area vulnerable to climate change | 3 | Sea and coasts | | Environment Agency/Maritime Authority | Remote sensing and thematic mapping |
| VULNERABILITY | 107 | Islands vulnerable to climate change | 3 | Sea and coasts | | Environment Agency/Maritime Authority | |
| VULNERABILITY | 108 | Water bodies vulnerable to climate change impacts | 3 | Water resources | | Specialized agencies such as lands and surveys departments/National mapping agen | |
| ADAPTATION, drivers, impacts, v 130 | | Number of units dedicated to climate change in government structures | 3 | Governance | | NSO/Ministry of Environment/National climate change reporting authorities | |
| ADAPTATION, drivers, impacts, vulnerability | | List and description of units | 3 | Governance | FDES | NSO/Ministry of Environment/National | Administrative records |
| ADAPTATION, drivers, impacts, v 138 | | Proportion of population with access to climate information | 3 | Education | | NSO/Environment Agency/National climate change reporting authorities | |
| ADAPTATION, drivers, impacts, vulnerability | | Number of households with timely access to climate information | 3 | Education | | NSO/Environment Agency/National clim | Surveys, censuses |
| ADAPTATION, drivers, impacts, vulnerability | | Number of people reached through climate change public awareness campaigns | 3 | Education | | NSO/Environment Agency/National clim | Administrative records |
| ADAPTATION, drivers, impacts, v 141 | | Number of reports on climate change statistics and indicators | 3 | Governance | | NSO/Ministry of Environment/National climate change reporting authorities | |
| ADAPTATION, drivers, impacts, vulnerability | | List and description of climate change statistical products | 3 | Governance | | NSO/Ministry of Environment/National | Administrative records |

Ongoing work on:

- Gender and climate change
- Health and climate change

Upcoming work on:

- Policies and policy effectiveness
- Expenditures and finance related indicators
- Disaster indicators



Sendai Framework indicators in the Global Set

| Number | Indicator | Statistic | Tier | Themes | Agreement Paris Agreement | Paris Climate Package | Katowice PAMP- Decision 18/ | Method | FDES Reference | SDG Reference | Sendai Framework Reference | UN-ECE Reference |
|--------|--|----------------|------|-----------------|---------------------------------|-----------------------------|--------------------------------------|-------------------|-------------------|------------------|--|---------------------|
| 27 | Direct agricultural loss attributed to disasters | Refer to origi | 2 | Disasters | 7; 13.8 | Decision 18/ | Sendai; SDG | | | [Part of] 11 | C-2: Direct agricultural loss attributed to disasters | [Similar to] U |
| 40 | Direct economic loss to all other damaged or destroyed product | Refer to origi | 2 | Disasters | 7; 13.8 | Decision 18/ | Sendai; SDG | [Similar to] F | | [Part of] 11 | C-3: Direct economic loss to all other damaged or destroyed productive assets attributed to disasters. | |
| 41 | Direct economic loss in the housing sector attributed to disaste | Refer to origi | 2 | Disasters | 7; 13.8 | Decision 18/ | Sendai; SDG | [Similar to] F | | [Part of] 11 | C-4: Direct economic loss in the housing sector attributed to disasters. | |
| 42 | Number of deaths, missing persons and directly affected persons attributed | | 1 | Disasters | 7; 13.8 | Decision 18/ | Sendai; SDG | [Similar to] F | | 11.5.1 Nur | [Similar to] A-1 (Compound): Number of deaths and missing persons attributed to disasters, per 100,000 | [Similar to] U |
| 43 | <i>Number of climate refugees, climate migrants and persons displaced by clima</i> | | 3 | Disasters | 7; 13.8 | Decision 18/ | CMA.1, chap | | | | [Related to] B-1: (Compound) Number of directly affected people attributed to disasters, per 100,000 | |
| | | Number of pe | 2 | Disasters | 7; 13.8 | Decision 18/ | UN-ECE; Sen | | [Similar to] FDES | 4.1.2.a | [Related to] B-4: Number of people whose destroyed dwellings were attributed to disasters. | UN-ECE 25: I |
| 75 | Damage to critical infrastructure attributed to disasters | Refer to origi | 2 | disasters | 7; 13.8 | Decision 18/ | Sendai | | | | D-1 (compound): Damage to critical infrastructure attributed to disasters. | |
| 76 | Direct economic loss resulting from damaged or destroyed critic | Refer to origi | 2 | disasters | 7; 13.8 | Decision 18/ | Sendai; SDG | | | [Part of] 11 | C-5: Direct economic loss resulting from damaged or destroyed critical infrastructure attributed to disasters. | |
| 80 | Direct economic loss to cultural heritage damaged or destroyed | Refer to origi | 2 | Tourism; Disas | 7; 13.8 | Decision 18/ | Sendai; SDG | | | [Part of] 11 | C-6: Direct economic loss to cultural heritage damaged or destroyed attributed to disasters. | |
| 129 | <i>Share of government adaptation expenditure in relation to gross domestic pr</i> | | 3 | Expenditures; I | 7.9; 7.10 | Decision 18/ | UN-ECE | | | | [Related to] F-1: Total official international support, (official development assistance (ODA) plus other | UN-ECE 35: I |
| 133 | Proportion of local governments that adopt and implement local disaster risk | | 2 | Governance; D | 7.9; 7.10 | Decision 18/ | Sendai; SDG | | | 13.1.3 Pro | [Similar to] E-2: Percentage of local governments that adopt and implement local disaster risk reduction | |
| | | Description of | 2 | Governance; D | 7.9; 7.10 | Decision 18/ | Sendai; SDG | | | [Related to] | [Related to] E-1: Number of countries that adopt and implement national disaster risk reduction strategies in | |
| 136 | <i>Coverage of early warning systems</i> | | 3 | Governance; D | 7.9; 7.10 | Decision 18/ | Sendai | | | | [Related to] G-1 (compound): Number of countries that have multi-hazard early warning systems | |
| | | Existence and | 2 | Governance; D | 7.9; 7.10 | Decision 18/ | Sendai; FDES | [Similar to] FDES | | 6.3.1.a | [Related to] G-1 (compound): Number of countries that have multi-hazard early warning systems | |

The Global Set adds value by indicating:

- How climate change relates with the given Sendai indicator [in relevance, in metadata]
- Which other frameworks (e.g. FDES, SDGs) use this Sendai indicator [either verbatim, or in similar form, or just thematically related]
- What statistical methods may be helpful (FDES, SEEA in metadata) as well as policy and reporting references (Paris Agreement and Katowice package)



Disaster-related indicators

| Area | Topic | Number | Indicator | Statistic | Tier | Themes | Paris Agreement | Paris Climate Package | PAWP-Katowice Climate Package | Method | SDG Reference | Sendai Framework Reference | UN-ECE Reference |
|------|-------|--------|---|---|-----------|------------------|-------------------------|-------------------------|-------------------------------|--------|---------------------------|--------------------------------------|------------------|
| 27 | Dir | 28 | <i>Crop loss due to climate extremes</i> | | 3 | Agriculture; Dis | 7; 13.8 | Decision 18/CMA.1, chap | | | | | |
| 28 | Crop | 39 | Frequency of hazardous events and disasters | | 2 | Disasters | 7; 13.8 | Decision 18/CMA.1, chap | | | | | |
| 39 | Frec | | | Occurrence of hazardous events and disasters | 2 | Disasters | 7; 13.8 | Decision 18/ | FDES | | [Similar to] FDES 4.1.1.a | Occurrence of natural ext | |
| 40 | Dir | 100 | | Occurrence of extremes of temperatures and precipitation | 1 | Disasters | 7; 13.8 | Decision 18/ | UN-ECE | | | | UN-ECE 23: O |
| 41 | Dir | | | Refer to original source in metadata | Disasters | 7; 13.8 | Decision 18/CMA.1, chap | | | | | | |
| 42 | Wam | 102 | | | 2 | Sea and coasts | 7.1; 13.8 | Decision 18/CMA.1, chap | | | | | |
| 43 | Wam | 134 | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 49 | Wam | 139 | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 75 | Dam | 102 | | Proportion of population living in hazard-prone areas | 2 | Disasters | 7.1; 13.8 | Decision 18/ | FDES | | FDES 5.1.3.c | Population living in hazardprone are | |
| 76 | Dir | 134 | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 80 | Dir | 139 | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 100 | Prop | | | | 2 | Disasters | 7.1; 13.8 | Decision 18/ | FDES | | FDES 5.1.3.c | Population living in hazardprone are | |
| 102 | Prop | | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 102 | Cove | | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 102 | Cove | | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 134 | Cove | | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 136 | Cove | | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 139 | Exte | | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 139 | Exte | | | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | |
| 139 | Exte | | | | 2 | Education; Dis | 4 | Decision 17/ | SDG | | 13.3.1 | Extent to which (i) global citiz | |
| | | 139 | Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment | | 2 | Education; Dis | 4 | Decision 17/ | SDG | | 13.3.1 | Extent to which (i) global citiz | |

- The table shows the indicators and statistics retained according to the theme ‘disasters’, and excluding those from the Sendai Framework.
- A wider spectrum of indicators/statistics are covered spanning three areas: impacts (10), vulnerability (5) and adaptation (5).



Disaster-related indicators

| Number | Indicator | Statistic | Tier | Themes | Agreement Paris | PAWP- Katowice Climate Package | Method | FDES Reference | SDG Reference | Sendai Framework Reference | UN-ECE Reference |
|--------|--|---|------|------------------|-----------------|--|-----------------|----------------|--------------------|----------------------------|---|
| 27 | Direct agricultural loss attributed to disasters | Refer to original source in metadata | 2 | Disasters | 7; 13.8 | Decision 18/CMA.1, d | Sendai; SDG, UN | | Part of 11.5.2 Dis | C-2: Direct agricult | [Similar to] UN-E |
| 28 | Crop loss due to climate extremes | | 3 | Agriculture; Dis | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| 34 | Change in coasts affected by erosion | | 2 | Sea and coasts | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Coasts affected by erosion | 2 | Sea and coasts | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Coastal area | 2 | Sea and coasts | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | FDES 1.1.3.d Coastal area | |
| | | Coasts affected by progradation | 3 | Sea and coasts | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| 39 | Frequency of hazardous events and disasters | | 2 | Disasters | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Occurrence of hazardous events and disasters | 2 | Disasters | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | FDES | [Similar to] FDES 4.1.1.a Occurrence of natural e |
| | | Occurrence of extremes of temperatures and precipit | 1 | Disasters | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | UN-ECE | UN-ECE 23: |
| | | Refer to original source in metadata | | Disasters | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| 47 | Sea level rise | | 2 | Sea and coasts | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Relative sea level | 2 | Sea and coasts | 7; 13.8 | Decision 18/CMA.1, chapter III; Decisi | | | | FDES | [Similar to] FDES 1.1.2.e.4 Sea level |
| 100 | Proportion of population living in coastal areas | | 2 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| 102 | Proportion of population living in non-coastal hazard-prone areas | | 3 | Disasters | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Population living in hazard-prone areas | 2 | Disasters | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | FDES | FDES 5.1.3.c Population living in hazardprone ar |
| 106 | Coastal area vulnerable to climate change | | 3 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Coastal area | 2 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | FDES | FDES 1.1.3.d Coastal area |
| | | Sea level rise | 2 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | FDES | [Similar to] FDES 1.1.2.e.4 Sea level |
| 107 | Islands vulnerable to climate change | | 3 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Area of islands | 2 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | FDES | FDES 1.1.3.a.4 Area of islands |
| | | Sea level rise | 2 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter III; Decisi | | | | FDES | [Similar to] FDES 1.1.2.e.4 Sea level |
| 134 | Coverage of disaster shelters per capita | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| | | Number of disaster shelters | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chapter III; Decisi | | | | | |
| 139 | Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education | | 2 | Education; Dis | 12 | Decision 17/SDG | | | | | 13.3.1 Extent to which (i) global cit |

- Still wider coverage of indicators/statistics when also the theme 'sea and coasts' are added, e.g. sea level rise.



Tier 3 indicators

| Number | Indicator | Statistic | Tier | Themes | Paris Agreement | Katowice Climate Package | PAWP- | Method | FDES Reference | SDG Reference | Sendai Framework Reference | UN-ECE Reference |
|--------|---|--|------|------------------|-----------------|---|--------|--------|----------------|---------------|----------------------------|------------------|
| 28 | <i>Crop loss due to climate extremes</i> | | 3 | Agriculture; Dis | 7; 13.8 | Decision 18/CMA.1, chap | | | | | | |
| | | <i>Coasts affected by progradation</i> | 3 | Sea and coasts | 7; 13.8 | Decision 18/CMA.1, chap | | | | | | |
| 43 | <i>Number of climate refugees, climate migrants and persons displaced by climate change</i> | | 3 | Disasters | 7; 13.8 | Decision 18/CMA.1, chap | | | | | [Related to] B-1: | |
| 102 | <i>Proportion of population living in non-coastal hazard-prone areas</i> | | 3 | Disasters | 7.1; 13. | Decision 18/CMA.1, chap | | | | | | |
| 106 | <i>Coastal area vulnerable to climate change</i> | | 3 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chap | | | | | | |
| 107 | <i>Islands vulnerable to climate change</i> | | 3 | Sea and coasts | 7.1; 13. | Decision 18/CMA.1, chapter IV; Decision 9/CMA.1 | | | | | | |
| 129 | <i>Share of government adaptation expenditure in relation to gross domestic product</i> | | 3 | Expenditures; I | 7.9; 7.10 | Decision 18/ | UN-ECE | | | | [Related to] F-1: | UN-ECE 35: |
| 134 | <i>Coverage of disaster shelters per capita</i> | | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | | |
| | | <i>Number of disaster shelters</i> | 3 | Governance; D | 7.9; 7.10 | Decision 18/CMA.1, chap | | | | | | |
| 136 | <i>Coverage of early warning systems</i> | | 3 | Governance; D | 7.9; 7.10 | Decision 18/ | Sendai | | | | [Related to] G-1 | |

- These tier 3 indicators/statistics need methodological development.
- The responses to the Global Consultation provided some inputs.
- Indicator 134 is elaborated in the next slide.



Tier 3 indicator 134 – feedback from Global Consultation

| | A | B | C | D | E | F | G |
|----|-------------|-------------------------|---|---|---|---|---|
| 1 | | Area | ADAPTATION | ADAPTATION | | | |
| 2 | | New Ind Number | 134 | | | | |
| 3 | | Indicator | Coverage of disaster shelters per capita | | | | |
| 4 | | Statistic | | Number of disaster shelters | | | |
| 5 | | RevisedTier | 3 | 3 | | | |
| 6 | | Paris Agreement | 7.9;7.10 | 7.9;7.10 | | | |
| 7 | | Paris Agreement, verb | adaptation planning | adaptation planning | | | |
| 8 | | Katowice climate pact | Decision 18/CMA.1, chapter IV; Decision 9/CMA.1 | Decision 18/CMA.1, chapter IV; Decision 9/CMA.1 | | | |
| 9 | | Methodological guidance | | EEA (DRR and climate change), https://www.eea.europa.eu/publications/eea-drr-and-climate-change | | | |
| 10 | | Themes 2 | Governance; Disasters | Governance; Disasters | | | |
| 11 | | National Data Sources | Disaster agency/Agency responsible for DRR | Ministry of Emergency Situations | | | |
| 12 | UNSD review | | (17 countries/63 (27%) say it's relevant): National methods: Mauritius. | | | | |
| 13 | Armenia | Relevance | | Yes | | | |
| 14 | Armenia | General Comments | | Confidential information | | | |
| 15 | Bolivia | Relevance | Yes | Yes | | | |
| 16 | Bolivia | Methodological Sound | No | No | | | |
| 17 | Bolivia | Data Availability | No | No | | | |
| 18 | Costa Rica | Relevance | Yes | Yes | | | |
| 19 | Costa Rica | Relevance | https://cambioclimatico.go.cr/politica-nacional-de-adaptacion/ | | | | |
| 20 | Costa Rica | Data Availability | | Yes | | | |
| 21 | Costa Rica | Data Availability | | https://www.cne.go.cr/ | | | |
| 22 | Costa Rica | Fuente de informaci | CNE | CNE | | | |
| 23 | Dominacan R | Relevance | Yes | Yes | | | |
| 24 | Dominacan R | Relevance | https://www.coe.gob.do/phocadownload/SobreNosotros/MarcoLegal | https://www.coe.gob.do/phocadownload/SobreNosotros/MarcoLegal | | | |
| 25 | Dominican R | Methodological Sound | No | Partially | | | |

- Multiple resources (national and international) were suggested by countries and agencies. These resources should be used to develop the missing methods.
- For example, 2 countries reported data availability (Lithuania and India) for the indicator; while 9 countries did for the statistic (Costa Rica, Dominican Rep., Zimbabwe, Botswana, North Macedonia, Russian Federation, Mauritius, Grenada and Jamaica). Four out of the 9 countries provided data links.



Integrating health and climate statistics (1)

- Health statistics are based on some of the strongest sciences
- The environmental aspects are more challenging and uncertain, in the case of climate - attribution of cause is a key objective
- Specialized inputs are needed
- UK ONS is leading a project which UNSD supports, entitled 'Standards for Official Statistics on Climate-Health Interactions'
 - 4-year project led by the UK Office for National Statistics and supported by the Wellcome Trust
 - Primary aim is to define a statistical framework and unified methods for official reporting of climate change impacts on health, at national and local levels
 - Will provide tools to operationalize a set of defined indicators consistently and help build expert capacity in NSOs focused on climate and health where there is currently a lack of support.



Integrating climate and gender statistics

- The subject is one of the key themes addressed throughout the Global Set but further work is needed. Gender inequality is a barrier for sustainable development in many areas of the world.
- Integration of environmental and gender data is not well developed, this is why we need specialized/new inputs and data collection methods, for example assessing impact of disasters on women
- Yet, statistical foundation exist, including: Integrating a Gender Perspective into Statistics <https://unstats.un.org/wiki/display/genderstatmanual/>
- UNSD has a mandate to fully integrate gender into all statistical areas, climate change has been prioritized:
 - Working methods of the Statistical Commission, [Report of the Bureau on the working methods of the Statistical Commission: Reassessing the terms of reference and review of other initiatives of the Bureau during the inter-sessional period, 2021-2022](#)
 - *In response to decision 51/115 and in support of the ongoing work of the Bureau, initial efforts at integrating a gender perspective into the work of the Commission were undertaken by the Statistics Division. To support the process and review, the Inter-Agency and Expert Group on Gender Statistics offered to take on the task of investigating how to integrate a gender perspective across the work of the Commission. At its meeting from 6 to 8 December 2021, the Inter-Agency and Expert Group brainstormed ideas on the way forward. The resulting proposal is contained in the background document to item 3 (h) of the agenda, on gender statistics.*
 - The [background document](#) explains that ‘Concrete steps for pilot work will then be identified by the Advisory Group in collaboration with the relevant groups working under the auspices of the Commission (e.g. initially with groups working on trade statistics, business registers, and environment statistics). It is proposed that the results of such pilot work on concrete examples, and lessons learned thereof, will be reported back to the Commission in 2024.’
 - The [Report on the fifty-third session](#) under 53/105 Working methods of the Statistical Commission: (d) Welcomed the initial work on mainstreaming a gender perspective into the work of the Commission, and agreed with the proposal that the Bureau should work closely with the Inter-Agency and Expert Group on Gender Statistics on this topic



Feedback on gender from the Global Consultation

1. Detailed feedback received from UN-Women suggesting many indicators where disaggregation by gender is needed, also that gender-explicit indicators should be included in the Global Set

2. Example of a country response to Part I Global Consultation, with gender-related requests:

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]?

- Data on mortality/morbidity during heat wave periods - from community to national levels, per occupation/age/gender of affected people

G3. What are the most important needs for the country needs to develop climate change statistics?

- To get support to develop gender-disaggregated data for Climate Change-related statistics.

3. Additional reviewers also provided gender-related feedback on several indicators



Gender in the Global Set

- Mostly addressed via disaggregation, however the Global Set includes 2 gender-explicit indicators – SDGs (tier 1) and 2 statistics
- Several tier 3 indicators and statistics require further methodological work on gender

| Area | Number | Indicator Statistic | Tier | Gender | Themes | Method | ([possible] National) | Type of Data Source |
|---|--------|---|------|--------|-----------------|-----------------|--|--|
| DRIVERS | 8 | Equivalent to the indicator | 2 | 3 | GHG emissions | SEEA-CF; UN-ECE | | |
| DRIVERS | 18 | Urban population as a proportion of total population | 1 | 3 | Population | | NSO | Census, survey, population register |
| IMPACTS | 39 | Frequency of hazardous events and disasters | 2 | 3 | Disasters | | | Disaster agency/Ministry responsible for disaster coordination |
| IMPACTS | | Occurrence of hazardous events and disasters | 2 | 3 | Disasters | FDES | Disaster agency/Ministry | Administrative records |
| IMPACTS | | Occurrence of extremes of temperatures and precipitation | 1 | 3 | Disasters | UN-ECE | Meteorological office | Monitoring systems, administrative records |
| IMPACTS | 42 | Refer to original source in metadata | 1 | 3 | Disasters | Sendai; SDG; | Disaster Agency/Ministry | Administrative records |
| IMPACTS | 43 | Number of climate refugees, climate migrants and persons displaced by climate change | 3 | 3 | Disasters | | Disaster preparedness | Administrative records |
| IMPACTS | | Number of people whose destroyed dwellings were attributed to hydro-meteorological disasters | 2 | 3 | Disasters | UN-ECE; Sendai | Ministry responsible for disaster coordination | |
| IMPACTS | 44 | Incidence of cases of climate-related diseases | 3 | 3 | Health | | | |
| IMPACTS | | Airborne diseases and conditions | 2 | 3 | Health | FDES | Ministry of Health | Administrative records |
| IMPACTS | | Water-related diseases and conditions | 2 | 3 | Health | FDES | Ministry of Health | Administrative records |
| IMPACTS | | Incidence of climate-related vector-borne diseases | 2 | 3 | Health | FDES; UN-ECE | Ministry of Health | Administrative records |
| IMPACTS | 45 | Incidence of heat- and cold-related illnesses or excess mortality | 3 | 3 | Health | | Ministry of Health | |
| IMPACTS | | Excess mortality related to heat | 3 | 3 | Health | UN-ECE | Ministry of Health | Administrative records |
| IMPACTS | | Excess mortality related to cold | 3 | 3 | Health | | | |
| VULNERABILITY | 81 | Prevalence of undernourishment | 2 | 3 | Food | SDG | Ministry of Health/NSO | |
| VULNERABILITY | | Number, sex and age of undernourished people | 3 | 2, 3 | Food | | Ministry of Health/NSO | Administrative records |
| VULNERABILITY | 86 | Population relying on subsistence and pastoral farming | 3 | 3 | Agriculture | | | |
| VULNERABILITY | | Population using an improved drinking water source | 2 | 3 | Water resources | FDES | NSO/Ministries of water | Household surveys and censuses; Administrative records |
| VULNERABILITY | 99 | Proportion of population with access to heating/cooling | 3 | 3 | Energy | | | |
| VULNERABILITY | | Population with access to heating | 2 | 3 | Energy | SDG | NSO | Surveys, censuses |
| VULNERABILITY | | Population with access to cooling | 3 | 3 | Energy | SDG | NSO | Surveys, censuses |
| VULNERABILITY | 101 | Proportion of the population living below the international poverty line by sex, age, employment status | 2 | 1, 3 | Poverty | SDG | NSO | |
| VULNERABILITY | 103 | Proportion of urban population living in slums, informal settlements or inadequate housing | 2 | 3 | Poverty | SDG | NSO/Ministry of Lands or Human Settlement | |
| VULNERABILITY | | Population living in informal settlements | 2 | 3 | Poverty | FDES | | Surveys, censuses |
| VULNERABILITY | 105 | Proportion of population with disability | 3 | 3 | Disability | SDG | NSO | |
| MITIGATION | 112 | Refer to original source in metadata | 2 | 3 | Energy | SDG | NSO | |
| ADAPTATION, mitigation | 128 | Proportion of women in managerial positions | 1 | 1 | Governance | SDG | NSO, labour ministry | Labour force surveys, household surveys, censuses |
| ADAPTATION, mitigation | | Women's participation in sector-specific environmental governance bodies | 3 | 2 | Governance | | NSO, labour ministry | Labour force surveys, household surveys, censuses |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 138 | Proportion of population with access to climate information | 3 | 3 | Education | | NSO/Environment Agency/National climate change reporting | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | Number of households with timely access to climate information | 3 | 3 | Education | | NSO/Environment Agency | Surveys, censuses |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | Number of people reached through climate change public awareness campaigns | 3 | 3 | Education | | NSO/Environment Agency | Administrative records |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | Number of children deprived of education | 2 | 3 | Education | | Ministry of Education | Surveys |



Indicators at tier 3 that require surveys and censuses

Both gender and health require surveys as data inputs, there are many more indicators that require such inputs

| | Drivers | Impacts | Vulnerability | Mitigation | Adaptation |
|------------|-------------|-------------|---------------|------------|------------|
| Indicators | 5 (from 32) | 2 (from 61) | 3 (33) | 2 (33) | 3 (36) |
| Statistics | 7 (from 39) | 6 (from 90) | 19 (49) | 5 (42) | 11 (42) |
| All | 12 | 8 | 22 | 7 | 14 |

| | | | | | | | | |
|---|-----|--|---|---|---|--|--|--|
| VULNERABILITY | | Number, sex and age of undernourished people | 3 | Ministry of Health/NSO | Administrative records | | | |
| VULNERABILITY | | Price of water | 3 | National Statistical Office; Ministry of Water; Water Utility Operator | Surveys, censuses | | | |
| VULNERABILITY, adaptation | | Population with access to cooling | 3 | NSO | Surveys, censuses | | | |
| VULNERABILITY | 104 | Indigenous population living in isolated areas | 3 | NSO | | | | |
| VULNERABILITY | 105 | Proportion of population with disability | 3 | NSO | | | | |
| ADAPTATION, mitigation | | Women's participation in sector-specific environmental governance bodies | 3 | NSO, labour ministry | Labour force surveys, household surveys, ad | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 130 | Number of units dedicated to climate change in government structures | 3 | NSO/Ministry of Environment/National climate change reporting authorities | | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | List and description of units | 3 | NSO/Ministry of Environment/National climate change reporting authorities | Administrative records | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 138 | Proportion of population with access to climate information | 3 | NSO/Environment Agency/National climate change reporting authorities | | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | Number of households with timely access to climate information | 3 | NSO/Environment Agency/National climate change reporting authorities | Surveys, censuses | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | Number of people reached through climate change public awareness campaigns | 3 | NSO/Environment Agency/National climate change reporting authorities | Administrative records | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | 141 | Number of reports on climate change statistics and indicators | 3 | NSO/Ministry of Environment/National climate change reporting authorities | | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | List and description of climate change statistical products | 3 | NSO/Ministry of Environment/National climate change reporting authorities | Administrative records | | | |
| ADAPTATION, mitigation | 147 | Buildings adapted to climate change | 3 | NSO/Ministry of Public Works | | | | |

| | | | | | | | | |
|---|--|--|---|---|--|--|--|--|
| VULNERABILITY | | Price of water | 3 | Surveys, censuses | | | | |
| VULNERABILITY | | Area of biofuels production | 3 | Administrative records, surveys | | | | |
| VULNERABILITY | | Area of rainfed agricultural systems | 3 | Farm surveys | | | | |
| VULNERABILITY | | Number of dwellings with adequacy of building materials defined by national or local standards | 3 | Household surveys, censuses | | | | |
| VULNERABILITY, adaptation | | Population with access to cooling | 3 | Surveys, censuses | | | | |
| ADAPTATION, mitigation | | Women's participation in sector-specific environmental governance bodies | 3 | Labour force surveys, household surveys, administrative records | | | | |
| ADAPTATION, drivers, impacts, vulnerability, mitigation | | Number of households with timely access to climate information | 3 | Surveys, censuses | | | | |

Concluding remarks

1. The structure of the Global Set has proven useful not only for capacity building and application in countries but also for supporting methodology development in several topics, including health, gender, disasters
2. NSOs have a special role in the areas of adaptation and vulnerability due to the expertise in surveys and censuses and the amount of data required from these tools
3. Methodology improvements need to follow both international developments in statistics and country-level applications
4. Strong foundations exist, including the FDES, SEEA and the SDG indicators, climate statistics and indicators however require broader thematic spectrum, including many inputs from social and economic statistics



Thank you for your attention!

For more information please contact the Environment Statistics Section
at the United Nations Statistics Division:

E-mail: envstats@un.org

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

