**CES Steering Group on Climate Change-Related Statistics**

**TEMPLATE FOR CASE STUDIES ON MEASURING CLIMATE CHANGE ADAPTATION**

**Explanatory note**

Climate change adaptation, that is, the process of adjusting to actual or expected climate and its effects, is an increasingly important component of climate change response, but its measurement is particularly challenging. Vulnerability, exposure, risk appetite and adaptation actions vary between and within countries and regions and over time, and are interconnected. What matters for climate change adaptation is highly context-specific, and it is not possible to define a fully harmonized, internationally agreed set of statistics and indicators.

In August 2020, the Steering Group on Climate Change-Related Statistics conducted [a survey](https://unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.33/2020/mtg3/S2_1400_CCAdaptation_UNECE_QuestionnaireResults_MCwiek.pdf) to determine what NSOs do in this area. Many countries reported that they undertake some statistical activities related to climate change adaptation, such as producing statistics, linking and disseminating data from other producers or supporting monitoring of national adaptation plans. The 2020 Expert Forum for Producers and Users of Climate Change-Related Statistics concluded that further work should include sharing best practices, starting with available relevant indicators, analyzing interlinkages, clustering relevant thematic areas and creating taxonomies.

At the beginning of 2021, a small subgroup chaired by Italy, including also Mexico, Netherlands, UNFCCC, UNSD, UNECLAC, Midsummer Analytics and UNECE was created under the Steering Group to brainstorm on how to make collective progress in measuring adaptation. The subgroup proposed collecting **case studies with practical examples of statistical activities related to measuring climate change adaptation relevant in different country contexts** to share experience, enable mutual learning and improve understanding of statistical challenges of measuring climate change adaptation and vulnerability.

The subgroup has developed this case study template, including a set of keywords to tag the examples, which provides a structure for the collection but allows to share a variety of approaches. The template and the [first example of a case study prepared by the Netherlands](https://unece.org/sites/default/files/2021-08/S2_SGCC_Adaptation_NL_Impact%20unusual%20weather%20on%20GDP.pdf) were presented in the [2021 Expert Forum](https://unece.org/statistics/events/expert-forum-producers-and-users-climate-change-related-statistics-2021).

**All countries are invited to submit their case studies describing contexts, tools and methodologies, including experimental approaches and practical solutions using available statistical information.** The focus should depend on what is relevant in each country. The case studies may:

* include indicators and (meta) data, but also the context, qualitative information and analysis.
* relate to one or more hazards, address exposure or vulnerability of population or territory
* focus on specific geomorphological territories such as coastal or mountain areas or areas with different levels of urbanization (urban/rural) or the whole national territory

**Please submit the filled template to the UNECE secretariat (****cwiek@un.org****).** Collected case studies will be analyzed by the Steering Group and shared with the expert community.

**Template**

|  |  |
| --- | --- |
| **Country** |  |
| **Title of the work** |  |
| **Short description** |  |
| **Date of submission** |  |

# Description of the example

**Please describe your statistical activity related to climate change adaptation:**

* *What was the output of your activity?*
* *Why was it relevant in the context of climate change adaptation in your country?*
* *What were the conclusions?*
* *What is the plan for the way forward?*

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What stakeholders or partners were involved in the work?

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If you can please provide below an example from your statistical output e.g. an estimate, a table, a figure, a map or other.

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# More details

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| --- | --- |
| **Data sources used** |  |
| **Is it a regular or one time activity?** |  |
| **Coverage (national/subnational)** |  |
| **Links where the results and more information about your work can be found** |  |
| **References to methodology you followed or other bibliography** |  |

# Keywords

*Please highlight the keywords from each category (if possible) which describe your example, if relevant. You can also add your own keywords in the last box.*

*Climate change adaptation is highly country-, context-, locality- specific. The keywords will help others to find examples relevant for their circumstances and will help understand and systematize statistical activities related to measuring climate change adaptation.*

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| --- | --- |
| **Thematic area** | **Characteristics of the reference area** |
| * Agriculture, forestry and fishery
* Energy
* Financial services sector
* Health
* Human settlements and housing
* Land cover, ecosystems and biodiversity
* Land use
* Living conditions, poverty, social issues
* Mining, manufacturing and construction
* Science, technology and innovation
* Political and other community activities
* Production and consumption patterns
* Population and migration
* Tourism
* Trade
* Transport
* Water resources
* Other:
 | * Mountain
* Coastal
* Urban
* Rural
* Other:
 |
| **Type of statistical product or activity** |
| * Indicator(s)
* Linking data from several sources
* Data analysis
* Providing data for risk assessments
* Modelling impact
* Scenarios assessment
* Assessment of data needs
* Interlinkages between phenomena
* Other:
 |
| **Adaptation approaches[[1]](#footnote-2)** |
| * **“Grey” adaptation** – technological and engineering solutions
* “**Green” adaptation** – nature-based or ecosystem-based solutions
* **“Blue” adaptation** – solutions including water elements, like rivers, canals, ponds, wetlands, floodplains, water treatment facilities
* **“Soft” adaptation** – policy, legal, social, management and financial measures
* Other:
 |
| **Concepts covered/measured[[2]](#footnote-3)** |
| * **EXPOSURE to hazard** (*The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas, e.g. number of people or types of assets in an area)*
* **VULNERABILITY** *(The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.)*
* **ADAPTATION MEASURES**
* **EXPENDITURE ON ADAPTATION**
* **IMPACTS**
* Other
 |
| **Hazard type covered****[[3]](#footnote-4)** |
| * **Multiple hazards**
* **METEOROLOGICAL and HYDROLOGICAL**
	+ Thunderstorms
	+ Coastal flood
	+ Fluvial (riverine flood)
	+ Snowmelt flood
	+ Dust storm or Sandstorm
	+ Ocean acidification
	+ Sea water intrusion
	+ Drought
	+ Hail
	+ Snow storm
	+ Cold wave
	+ Heatwave
	+ Avalanche
	+ Mud flow
	+ Rock slide
	+ Gale (strong gale)
	+ Tornado
	+ Wind
	+ Other meteorological and hydrological hazards:
 | * **ENVIRONMENTAL**
	+ Biodiversity loss
	+ Deforestation
	+ Forest declines and diebacks
	+ Forest disturbances
	+ Forest invasive species
	+ Wildfires
	+ Desertification
	+ Wetland loss/degradation
	+ Sea-level rise
	+ Other environmental hazard
* **BIOLOGICAL**
	+ Algal bloom
	+ Insect pest infestation
	+ Invasive weeds
	+ Invasive species
	+ Foodborne diseases
	+ Waterborne diseases
	+ Vector borne diseases
	+ Other biological:

**Other:3** |
| **Additional keywords** |
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# Your contact information

1. Name \*

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1. Country \*

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1. E-mail address \*

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1. Name of the organization \*

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1. Definitions of adaptation options from EU Climate ADAPT: [Adaptation options — Climate-ADAPT (europa.eu)](https://climate-adapt.eea.europa.eu/knowledge/adaptation-information/adaptation-measures) [↑](#footnote-ref-2)
2. Definitions of exposure and vulnerability from the [Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction](https://www.undrr.org/publication/report-open-ended-intergovernmental-expert-working-group-indicators-and-terminology). [↑](#footnote-ref-3)
3. Hazards selected from the initial hazard list from [UNDRR/ISC Hazard definition and classification review](https://www.undrr.org/publication/hazard-definition-and-classification-review), where the full list of meteorological and hydrological, environmental, and biological hazards can be found in the document. When adding other hazards please use the hazards from the list if possible. [↑](#footnote-ref-4)