

Implementation Guidelines



**for the Global Set of Climate Change
Statistics and Indicators**



Implementation Guidelines

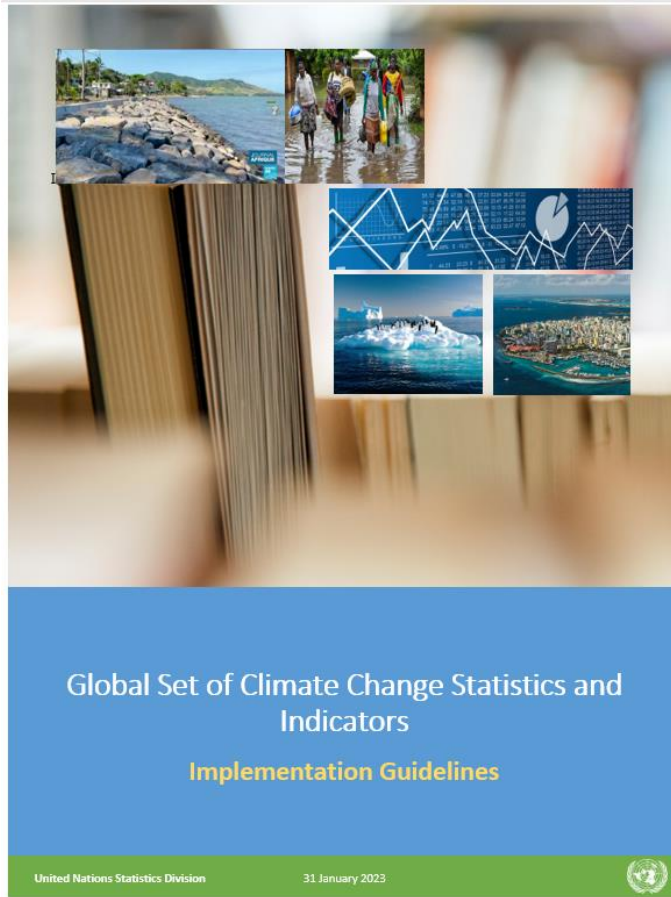


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https://unstats.un.org/unsd/envstats/Climate%20Change/Implementation_Guidelines.pdf

Aims and objectives

The Guidelines aim to help countries improve the monitoring of climate change, its impacts and response actions by better informing the UNFCCC-NFPs about the benefits of official statistics and by guiding the NSOs to increase their engagement in the area of climate change. The overall objectives of the Guidelines are to:

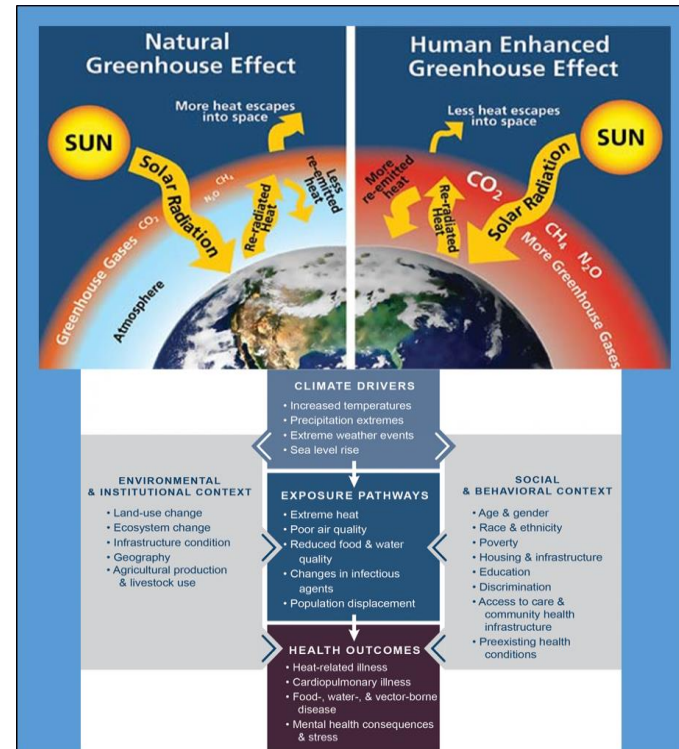
- help countries to set up the national consultation processes which can embrace this multidisciplinary statistical work in a way complementary to the ongoing and future reporting to UNFCCC;
- deepen countries' self-assessment activities using the Global Set; and
- provide the basis for countries to initiate the development of a national programme for sustained production of climate change statistics within the national statistical system (NSS).



2. Understanding Climate Change

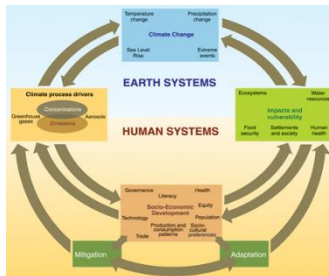
Understanding climate change processes. Source: Adapted from Land Trust Alliance (2021), How Does the Greenhouse Effect Work?, (quoted from W. Elder, NPS), available at:

<https://climatechange.lta.org/get-started/learn/co2-methane-greenhouse-effect/>, and US Global Change research program, available at: <https://health2016.globalchange.gov/temperature-related-death-and-illness>

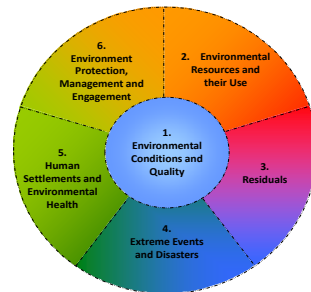


3. Global Set of Climate Change Statistics and Indicators

- Given that there was no underlying framework linking the reporting requirements stemming from the Paris Agreement and the necessary statistics or indicators to support climate policy action, UNSD worked closely with UNFCCC to develop such a framework explicitly for climate change.
- The Global Set, developed in close collaboration with UNFCCC, is structured according to the IPCC framework and FDES, with a tiering system as in the FDES and the SDG indicators.

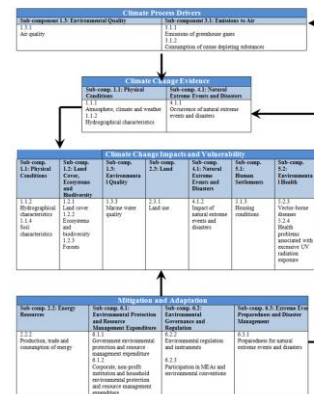


IPCC, 2007, Fourth Assessment Report



Framework for the Development of Environment Statistics (FDES 2012)

Relevant chapters of the Manual of the BSES
https://unstats.un.org/unsd/envstats/fdes/manual_bses.cshtml



FDES cross-cutting application (Chapter 5) links climate change and environment statistics based on the IPCC Framework



4. Developing a national programme of climate change statistics

Institutional dimensions

4.1 Role of NSOs, NFPs and key stakeholders

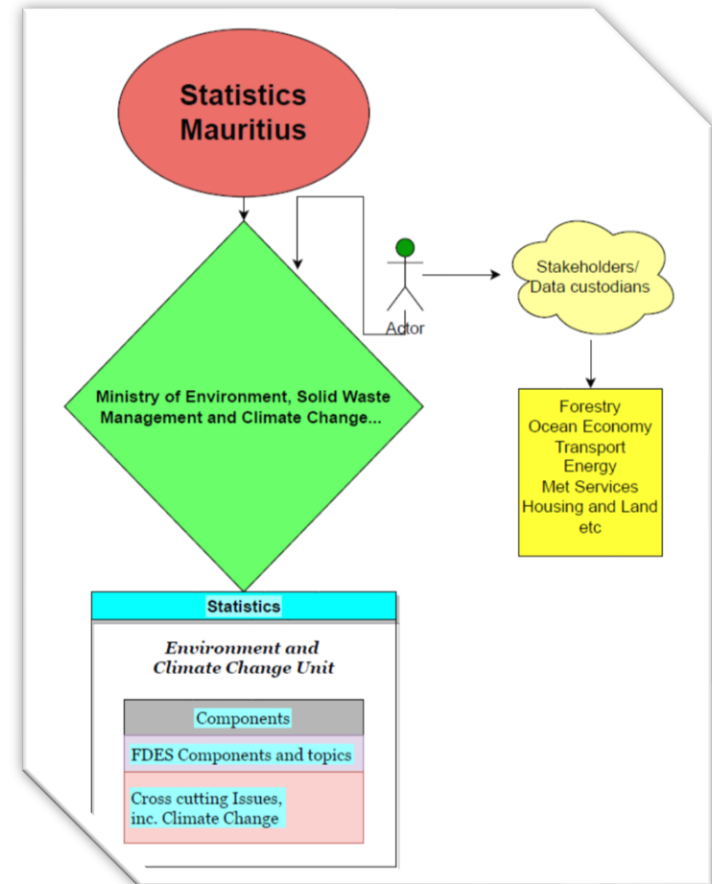
4.1.1 Role of NSOs

4.1.2 Role of National Focal Points and climate policy authorities

4.1.3 Role of other key stakeholders

4.1.4 Collaboration between NSO, NFP and key stakeholders

4.1.5 National examples



4.2.1 Assessment of available and needed resources

- Prioritize the statistics and indicators and statistics to the country;
- Part of a multi-stakeholder consultation and discussion process;
- Highlight any efforts needed to advance the collection of CC stats and indicators in order to support the country's climate policy objectives;
- Apply CISAT

Introduction

English

Part I: Institutional Dimensions of Climate Change Statistics and Indicators

English

Part II: Statistics and Indicators Assessment

English Instructions for Part II

English Global Set of Climate Change Statistics and Indicators *

English Metadata *



4.2.2 National action plan

Self-assessment for building a National action plan on climate change statistics

The self-assessment will produce the needed understanding of what are the available resources (human and technical), available data, data gaps and what is (still) needed to support national climate policies and activities. Prioritisation of the needed data-related activities should be done taking into account the suitability of data collection methods including costs and reliability

Steps	Activities	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Establish/strengthen relationship between NSO and UNFCCC-NFP												
2	Engage stakeholders and complete the self-assessment using the CISAT												
3	Establish a committee, inter-institutional working group or task force or expand an existing one												
4	Define an institution with a legal mandate												
5	Establish collaboration/communication channels between stakeholders and make institutional arrangements												
	Designate national thematic experts												
	Develop ToRs/MoUs												
6	Engage high-level support for TWG - data collection/formation of unit / mobilizing resources												
	Conduct institutional review and skills capacity assessment												
	Develop project proposals/applications												
7	Strengthen human resources												
	Provide training and capacity building												
	Designate desk officers/core team												
	Hire staff/consultants												
8	Improve technical resources												
	Improve IT infrastructure (software and hardware)												
9	Develop a national programme/national action plan on climate statistics												
	Develop national set of climate indicators (consistent/complementary with NDCs/NAPs/NCs) and metadata												
	Map the data sources and assess data quality												
	Define gaps and prioritize work on methods and data collection												
	Develop data collection methods (such as climate change surveys)												
	Integrate the programme/plan into NSDS and national climate policies												
10	Undertake data collection/database building												
	Establish data exchange protocols												
	Compile statistics/indicators												
	Prepare analysis of key findings and draft a report												
	Organize a validation workshop/TWG and stakeholders												
11	Prepare contributions to national policies and the reports for UNFCCC												
12	Disseminate statistics and indicators												
13	Conduct user surveys												
14	Evaluate and define priorities for future improvements												



4.2.3 High-level buy-in – mobilize resources

It is recommended that the NSO and the focal points to the UNFCCC and other focal points obtain high-level support from their heads of ministries and agencies. Stakeholders will be more amenable to participating; provide more support for budgeting for meetings, staffing, etc. This would contribute to ensure the continuity of resources for the activity.

The agencies/funds which may offer direct financial assistance to countries are:

1. **Green Climate Fund (GCF)** was established at COP16, under the UNFCCC, to support developing countries with projects, programmes, policies and other activities related to climate mitigation and climate adaptation.
2. **Global Environment Facility (GEF)**
3. **GIZ** or Deutsche Gesellschaft für Internationale Zusammenarbeit, is a German development agency that provides services in the fields of environmental protection, resource conservation, and climate change mitigation, among others.



Institution with a legal mandate for the production of statistics on climate change

A national (or focal) institution with legal mandate will perform the following functions:

- Set up a department/service or division in charge of climate change statistics;
- Develop a legal framework of collaboration with other institutions (Ministry of the Environment, meteorological institute, research institutes, etc.) with a view to sharing statistics on climate change;
- Submit training needs, a work plan and budget proposal to the government;
- Establish/strengthen a climate change and/or environment statistics committee;

69. A national example of an institution with a legal mandate is presented in [Box 6](#).

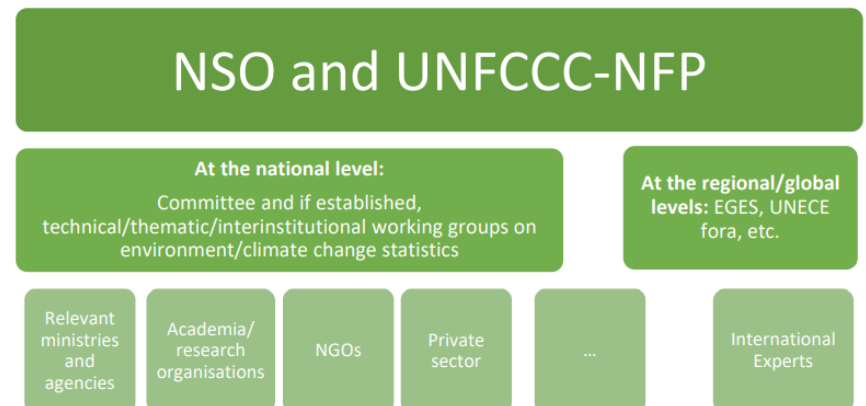
Box 6: The Mexican National Statistics and Geographic Information System

Mexico has a National Statistics and Geographic Information System (SNIEG in Spanish). The responsibility to inform and to coordinate that system was assigned to the National Institute of Statistics and Geography (INEGI). To consolidate this mandate, the National Statistics and Geographic Information System Law was enacted in 2008.

The committee may perform the following functions:

- Develop a roadmap for the implementation of the Global Set and agree on the expected results of the work.
- Organize the validation of the data, statistics, indicators and reports produced by the technical/thematical/interinstitutional working groups (if established) before submission to a higher-level body for approval/information as appropriate
- Develop a communication strategy and agree on the dissemination of the national set of climate change statistics and indicators.
- Integrate the national programme/plan of climate change statistics into the NSDS and national climate policies

Figure 6: Stakeholder engagement in a National Climate Change Statistics Programme



4.2.5 Capacity building at national level

Capacity can be enhanced by operating manuals/technical guides in the language(s) used in the country, through regional, national/sub-regional workshops, country visits/study tours, through bilateral consultations or online training.

Training

- Completing the CISAT;
- Collecting and estimating climate change data;
- Reporting on climate change;
- Developing climate change surveys;
- Developing metadata and indicators for climate change statistics;
- Filling information gaps;
- Establishing baselines for climate change indicators;
- Translating the tools/materials (ESSAT, CISAT, MRV, etc.) to indigenous languages;
- Training of trainers.



5. Production of climate change statistics

Production of statistics

- Key requirement of a national programme on climate change statistics is to inform and support the planning of climate actions as required in the Nationally Determined Contributions (NDCs) and the National Adaptation Plans (NAPs)
- The Global Set can support the above by providing suitable indicators and statistics which will assist with the improved monitoring of the planned actions and can be applied in the revision of the above planning instruments. The Global Set can also be applied to strengthen the establishment and implementation of a national MRV/Transparency system.

5.1 MRV/Transparency system

Theme	Sub-themes and data requirements
 National GHG inventory	<ul style="list-style-type: none"> • National circumstances and institutional arrangements; • National inventory report of emissions by sources and removals by sinks of GHGs; • Information on methods and cross-cutting elements (e.g. information on the category and gas, and the methodologies, emission factors and activity data used at the most disaggregated level; description of key categories; recalculations; uncertainty assessments; assessment of completeness; and QA/QC plan); • Estimates of emissions and removals for all categories, gases and carbon pools considered in the GHG inventory; • Consistent annual time series.
 Mitigation ⁴	<ul style="list-style-type: none"> • National circumstances and institutional arrangements; • Description of the NDC; • Information necessary to track progress made in implementing and achieving its NDC; • Mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans; • Projections of GHG emissions and removals, as applicable; and • Other information relevant to tracking progress.
 Adaptation ⁵	<ul style="list-style-type: none"> • National circumstances, institutional arrangements and legal frameworks; • Impacts, risks and vulnerabilities, as appropriate (current and projected climate trends and hazards, observed and potential impacts of climate change, including sectoral, economic, social and/or environmental vulnerabilities); • Adaptation priorities and barriers; • Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies; • Progress on implementation of adaptation; • Monitoring and evaluation of adaptation actions and processes; • Information related to averting, minimizing and addressing loss and damage associated with climate change impacts; • Cooperation, good practices, experience and lessons learned.
 Support ^{6,7}	<ul style="list-style-type: none"> • National circumstances, institutional arrangements and country-driven strategies; • Description of underlying assumptions, definitions and methodologies used to provide information on support provided, mobilized, needed and received; • Information on financial support provided, mobilized, needed and received under Article 9 of the Paris Agreement; • Information on technology development and transfer provided, needed and received under Article 10 of the Paris Agreement; • Information on capacity-building support provided, needed and received under Article 11 of the Paris Agreement; • Information on support needed and received for the implementation of Article 13 of the Paris Agreement and transparency-related activities, including for transparency-related capacity-building.



5.2 Data sources for climate change statistics

- Define the sources of data on climate change
- Map sources of available indicators/statistics and assess them in terms of quality and utility
- Define and prioritize gaps in data and methods
- Establish data collection processes
- Build database of CC stats and indicators
- Establish Data Exchange Protocols

Box 7: Suriname's Climate Change Knowledge Database and Repository

In June 2022, Suriname launched a knowledge database which serves as a central platform for climate change statistics and indicators and also for national climate change reports. The goal is to publish and disseminate official and formal climate and environment information for national policy and planning. The system will serve as the Measurement, Reporting and Verification (MRV) tool required for the purpose of reporting to the UNFCCC; specifically, it assesses and tracks the implementation of mitigation and adaptation actions including the status of implementation and progress achieved against the national climate change goals.



5.3 Dissemination of national climate change statistics and indicators

- Environment/climate change statistics compendium;
 - Statistical yearbook, including environment statistics or chapter/section within a yearbook;
 - Climate change statistics bulletin/report;
 - State of the environment report; and
 - Websites, databases and portals.
-
- Establish publication guidelines



5.4 Evaluating contribution to national policy demands and international reporting requirements

Contributions and benefits of applying the Global Set will be reflected in the NCs and BRs for Annex I Parties; and NCs and BURs for non-Annex I Parties but mostly in the new BTRs under the Paris Agreement to be submitted from 2024.

Assessment and implementation of the Global Set requires a multi-annual plan/programme and will assist in mobilising resources

- Improved knowledge and understanding of climate science, the direct and indirect impacts of climate change (supported by qualitative and quantitative evidence where possible);
- Changes in data and information;
- Changes in data collection, management and storage of data;
- Economic conditions and the availability and access to funding mechanisms;
- Changes in financial, technical and human resources; and
- Results from a monitoring and evaluation (M&E) framework.



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/>



COMESA experience (1)

- Regional workshop on the SCB V Program

- 37 ADF countries participated in the workshop
- 33 Countries responded to the Online Assessment
- Assessment shows that 19 Implement the Global set

- National capacity building and assessments (CISAT)

Three Countries assisted technically

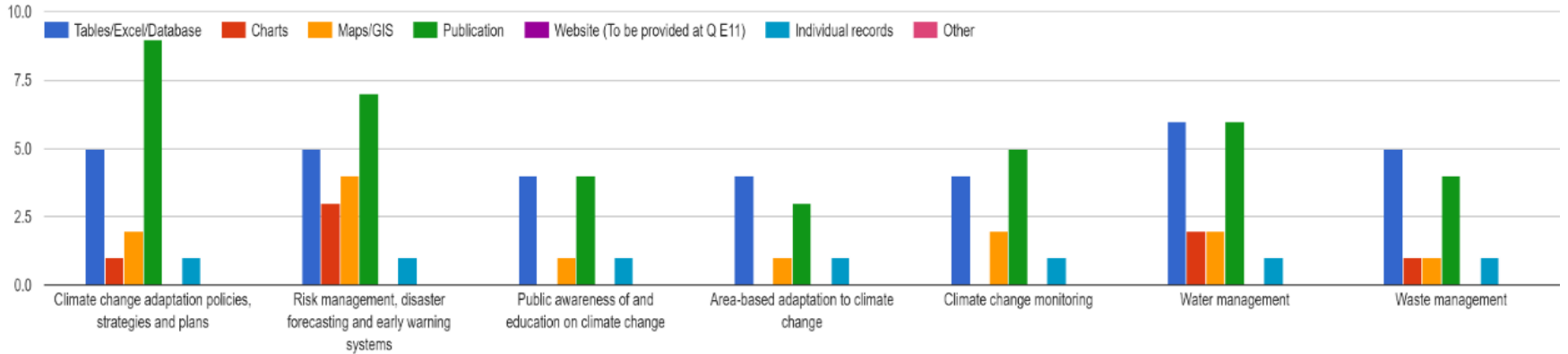
- Kenya
- Burkina Faso
- Zimbabwe



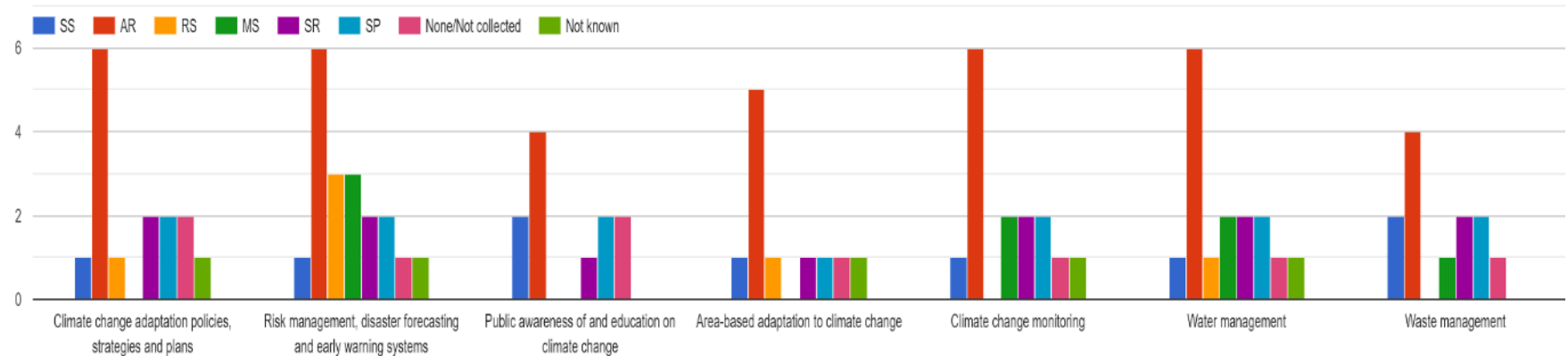
CLIMATE CHANGE STATISTICS AND INDICATORS

- Data on Adaptation

E9. For Climate change Adaptation, does the country have data on the following, if any, at the national level and what are their respective formats in which they are available?



E10. For Climate Change Adaptation, if the country has data on the following, how are they collected?



Other guidelines?

- [Compiling climate change indicators: an accounting approach.](https://www.unsiap.or.jp/online/Guideline/2023/2023_1_CIM.pdf)
Available from
https://www.unsiap.or.jp/online/Guideline/2023/2023_1_CIM.pdf
- https://unfccc.int/sites/default/files/resource/Hand%20book_EN.pdf
developed by UNFCCC to support MRV/transparency of climate action.
- https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/1_Volume1/19R_V1_Ch01_Introduction.pdf developed by IPCC for compiling national GHG inventories
- <https://unece.org/statistics/publications/implementation-guidelines-CES-core-set-CCRSI> developed by the UNECE as a Set of Core Climate Change-Related Indicators and Statistics Using SEEA

