

# Use of Censuses and surveys for climate change data collection



12th Meeting of the EG-ECCS; London UK; 23-25 September 2025

Session 5.2: Climate change data collection support

# Outline

1. Overview of the process
2. ToR, meetings and initial pilot exercise
3. Consultancy outputs
4. Supporting data collection on the Global Set
5. Country examples
6. Way forward

# Overview of the process

1. The EG-ECCS recommended the establishment of a subgroup on Climate Change Questions for Censuses and Surveys.
2. This recommendation was in response to a request from countries to develop a core set of climate change questions suitable for censuses and surveys and especially to support the Global Set as appropriate.
3. Experts expressed their interest in this subgroup; UNSD serves to provide technical inputs, coordinate, process, and disseminate outputs as well as perform Secretariat functions.

## Overview of the process (2)

4. UNSD undertook a pilot exercise with inputs of the group.
5. UNSD hired a consultant to complement this work undertaken by the subgroup.
6. Experts of the subgroup engaged in a detailed review and provided feedback.

# Terms of Reference (ToR)

- ToR outlined the objectives, scope of work and membership
- A chair and co-chair were nominated
- The group currently has members from 16 countries and 5 agencies
- 6 meetings were held in 2024 and 3 so far in 2025
- The next meeting is scheduled for October.

# Meetings

	Date	Objective
	<b>2024</b>	
1	11 January 2024	Agree on scope, deliverables and outputs, and timeframe
2	15 February 2024	Compiling national examples addressing also gender issues
3	27 March 2024	Compiling national examples addressing also gender issues
4	23 April 2024	Compiling national examples addressing also gender issues
5	27 September 2024	Review of proposed structure of questions and indicators, as communicated for the GGA
6	10 December 2024	Review draft document on consolidating climate questions
	<b>2025</b>	
7	16 April 2025	Determine the best utility of the assessment document and materials collected
8	9 June 2025	Review of working document, present and discuss feedback by subgroup members, propose way forward
9	13 August 2025	Define expected outputs; preparation of material for 12th EG-ECCS
10	22 October 2025	Review of recommendations from 12th EG-ECCS meeting and prioritise further work. Review repository of questions, present and review best practices.



# Consultancy and Outputs

Global Webinar, December 2024

- UNSD hired a consultant to complement the work of the subgroup on developing a core set of questions.
- The output, including a comprehensive overview, general findings as well as valuable insights and recommendations, was presented at a global webinar on 18 Dec 2024.
- The report was shared with the EG-ECCS and feedback collected was reviewed and served to enhance its utility.



# Consultancy and Outputs (2)

## Contents of the Report

1. Introduction
2. Surveys and Censuses that Incorporate Climate Change-Related Questions: A Review of Direct Inquiry Approaches
  - 2.1 Mapping of Climate Change Questions Included in Censuses and Surveys
    - 2.1.1 Population and Housing Censuses, including environment and climate change-related data
    - 2.1.2 Agricultural Censuses, including climate change-related data
    - 2.1.3 Household Surveys
    - 2.1.4 Stand Alone Surveys in Natural Disasters and Climate Change
  - 2.2 Analysis of Existing Climate Change Questions in Censuses and Surveys and Data Gaps

3. Proposed Climate Change Group of Widely Applicable Questions
  - 3.1 Introduction to Applicable Questions
  - 3.2 Categories of Applicable Questions
  - 3.3 Main Features of National Censuses and National Surveys: Suitability for Inclusion of Climate Change-Related Questions
    - 3.3.1 National Censuses
    - 3.3.2 National Surveys

# Consultancy and Outputs (3)

## Contents of the Report

### 4. Use of Other Information Sources and Tools

#### 4.1 UNECE Guidance on Leveraging

Administrative Microdata for Climate Change Statistics

#### 4.2 Statistical Register of Places: Opportunities for Climate Change and Disaster Risk Related Indicators

#### 4.3 Data Innovations for Combining Alternative and Official Data to Map Informal Settlements

#### 4.4 Integrating Diverse Data Streams for Global Early Warning Systems

### 5. Conclusion

Annex 1: Climate change topics covered by PHC, 2000-2025

Annex 2: Climate change topics covered by Agricultural Censuses, 2016-2025

Annex 3: Mapping of the MICS 6 in countries and regions

# Consultancy and Outputs (4)

## Contents of the Report - (Excel files)

Mapping climate change questions in PHCs  
2000-2024

Mapping climate change questions,  
Agricultural Censuses, 2000-2025

Mapping climate change questions, Living  
Standards Measurement Studies-Integrated  
surveys on Agriculture (LSMS-ISA)

Mapping climate change questions in National  
Socioeconomic Surveys in Forestry (Forestry  
Modules)

Mapping Multiple Indicator cluster survey  
(MICS 6)

Mapping Labour Force Surveys (LFS)

Mapping World Health Survey (WHS), WHO  
Mapping Demographic Health Survey  
(DHS), USAID

Household Income and Expenditure Survey  
(HIES)

Survey of Living Conditions (SLC)

Comprehensive Food Security and  
Vulnerability Analysis (CFSVA)

Emergencies Hub Household Survey

Mapping of the 50x2030 initiative,  
FAO/IFAD

Mapping of the Questions included in the  
Bangladesh and Nepal Climate Change  
Surveys

# Consultancy and Outputs (5)

## Key insights and findings

- **PHCs** provide essential socio-economic data that supports the objectives of the 2030 Agenda for Sustainable Development.
- Recent censuses demonstrate an increasing trend in including environmental and climate-related questions, such as those on renewable energy and waste management
- Despite the limited availability of climate-specific data, PHCs provide vital baseline socio-economic information—covering demographics, housing, health and income—that can inform targeted environmental and climate change research.
- **Agricultural censuses** yield essential data for understanding food security and economic growth, particularly in Least Developed Countries.

- The World Census of Agriculture 2020 emphasized the necessity for comprehensive climate change data, including metrics on greenhouse gas (GHG) emissions, fertilizer use, manure management, rice cultivation, and associated environmental factors.
- A promising trend is emerging, as some agricultural censuses (e.g., those in Fiji and Benin) are now incorporating dedicated sections for climate change.
- Future censuses must substantially enhance the collection of environmental and climate data to enable robust monitoring and effective policy responses to climate challenges.

# Consultancy and Outputs (6)

## Key insights and findings

- Census data serve as a foundational element for establishing **robust statistical frameworks**, essential for targeted studies and effective decision-making.
- Systematic updates to statistical frameworks are imperative to ensure effective integration of climate data into population and agriculture censuses.
- Effective **integration of census data with administrative records** can enhance monitoring of affected populations and their agricultural needs regarding climate resilience.
- Comprehensive baseline data from censuses can facilitate the monitoring of affected populations and enhance understanding of their evolving needs in the context of climate change.

- While Living Standards and Measurement Surveys (LSMS) provide extensive socio-economic data and occasionally include climate-related questions, the collection of comprehensive environmental and climate change data remains inconsistent across countries and surveys
- The use of standardized questionnaires in the **MICS 6** enables consistent data collection, facilitating reliable assessments of socio-economic conditions and correlation analysis of climate impacts.
- **Labour Force Surveys LFS**: A new module is being tested to evaluate the effects of climate-related events on employment and livelihoods.
- **Living Condition Surveys (LCS/SLC)**: Have the potential to include questions on climate change and natural disasters; however, in many cases, these topics are only touched upon. Expanding the inquiries could enhance our understanding of these important issues.

# Supporting Data Collection on the Global Set – using traditional sources

## Chapter 3: Examples of Climate Change Questions for integrating into censuses and surveys (working document)

### Examples of Potential Climate Change Questions for Integration into Population and Housing Censuses

Category	Advantages	Disadvantages	Types of questions suitable for inclusion in questionnaires
<b>Mitigation</b>	<p>Provides data on mitigation behaviours directly related to GHG emission reductions;</p> <p>Helps evaluate the effectiveness of mitigation efforts.</p>	<p>Data may not capture all mitigation activities.</p> <p>Complex questions are often better suited for dedicated surveys.</p>	<p>- Does your household use any energy-saving practices to reduce your energy consumption? (Check all that apply): <input type="checkbox"/> Solar panels <input type="checkbox"/> Energy-efficient appliances <input type="checkbox"/> Improved insulation <input type="checkbox"/> Other (please specify)_____;</p> <p>- Does your household practice any waste reduction methods? (Check all that apply): <input type="checkbox"/> Recycling <input type="checkbox"/> Composting <input type="checkbox"/> Reducing food waste <input type="checkbox"/> Reducing packaging use <input type="checkbox"/> Using reusable bags/containers <input type="checkbox"/> Other (please specify)_____;</p> <p>Does your household use any renewable energy sources? (Check all that apply): <input type="checkbox"/> Solar power <input type="checkbox"/> Wind power <input type="checkbox"/> Geothermal energy <input type="checkbox"/> Biofuels <input type="checkbox"/> Other (please specify)_____;</p> <p>How do you typically travel to work?<sup>40</sup> (Choose one):<input type="checkbox"/> Public Transportation (bus, train, subway, etc.); <input type="checkbox"/> Bicycle; <input type="checkbox"/> Car (Please specify type below); <input type="checkbox"/> Other (please specify)_____;</p> <p>If you chose "Car", what type of vehicle do you use? (Choose one):<input type="checkbox"/> Gasoline-powered vehicle, <input type="checkbox"/> Hybrid vehicle; <input type="checkbox"/> Electric vehicle;</p> <p>- Has your household made any changes to reduce its carbon footprint in the last year? (provide response of alternative practices not covered above).</p>

# Supporting Data Collection on the Global Set – using traditional sources (2)

## Chapter 3: Examples of Climate Change Questions for integrating into censuses and surveys (working document)

Examples of Potential Climate Change Questions for Integration into Agricultural Censuses			
Category	Advantages	Disadvantages	Types of questions suitable for inclusion in questionnaires Example
<b>Impacts</b>	<p>Enables assessment of the long-term impacts of climate change on agricultural productivity and livelihoods;</p> <p>Allows for the identification of regions and farming systems particularly vulnerable to climate change;</p> <p>Provides a basis for evaluating the effectiveness of adaptation and mitigation measures.</p>	<p>May not capture the full extent or immediacy of climate change impacts, particularly extreme events (e.g., floods, droughts);</p> <p>Attributing changes solely to climate change can be difficult without supplementary data;</p> <p>Analysis of long-term impacts can be hindered by changes in survey methodology over time.</p>	<p>- Over the past decade, have you experienced significant crop losses due to extreme weather events? If so, please specify the events and the extent of crop losses;</p> <p>- Did the [specify event] weather event affect your farming operations? (Yes/No; If yes, how?);</p> <p>- Over the past [Number] years, how has climate change affected the profitability of your farm operation, considering impacts on harvests, tools, and infrastructure?" (Response options: Significantly increased profits; Slightly increased profits; No significant change; Slightly decreased profits; Significantly decreased profits; Don't know);</p> <p>- Over the past [Number] years, please estimate the total monetary value of losses and damages to your farm due to [specify event]. Also, indicate the main areas affected (check all that apply):Harvested crops, Farm tools and equipment, Farm infrastructure, Other (please specify);</p> <p>- Have you observed any long-term changes in your agricultural yields or livestock production? Please describe these changes;</p> <p>- Have you noticed any changes in soil health (e.g., erosion, fertility) over the past decade?;</p> <p>Have you observed any long-term changes in your water access for irrigation?</p>

# Supporting Data Collection on the Global Set – using traditional sources (3)

## Chapter 3: Examples of Climate Change Questions for integrating into censuses and surveys (working document)

Examples of Potential Climate Change Questions for Integration into Household Surveys (LSMS, Living Condition and HIES)

Category	Advantages	Disadvantages	Types of questions suitable for inclusion in questionnaires
<b>Adaptation</b>	<p>Identifies adaptation strategies employed by households;</p> <p>Enables detailed analysis of adaptation strategies and their effectiveness;</p> <p>Allows analysis of adaptation across demographic groups;</p> <p>Provides a richer understanding by linking adaptation strategies with other socioeconomic factors.</p>	<p>Data collection may be inconsistent<sup>43</sup> across surveys;</p> <p>Assessing the effectiveness of adaptation strategies can be challenging;</p> <p>Extensive questionnaires may lead to respondent fatigue;</p> <p>Data collection can be expensive.</p>	<ul style="list-style-type: none"> <li>- Has your household taken any actions to reduce its vulnerability to climate change or extreme weather events? (provide a multiple-choice list with adaptation actions customized to the country conditions);</li> <li>-How effective do you think these adaptation measures have been in protecting your household/livelihoods? (1=Not at all effective, 5=Extremely effective);</li> <li>In the past [Number] years, has your household received any loans, grants, or other financial assistance specifically to help recover from or adapt to climate-related events (e.g., floods, droughts, storms)?" (Yes/No), if so, please describe the type of assistance received, its source, and how helpful it was in your recovery or adaptation efforts (provide alternatives of response);</li> <li>- How satisfied are you with the availability of financial support for climate-related emergencies? (1=Very satisfied, 5=Very dissatisfied);</li> <li>- If your household faced an income reduction due to climate-related events, what strategies did you use to cope? (provide a multiple-choice list),</li> <li>-How effective were these coping strategies in helping your household recover? (1=Not at all effective, 5=Extremely effective);</li> <li>- In the past [Number] years, has your household received any support to adapt to climate change impacts (e.g., from extreme weather, changing water availability)? (Yes/No), If yes, please specify the source of support (e.g., government, NGO, family/community) and the type of support provided (e.g., financial assistance, training, materials), (provide alternatives of response).</li> </ul>

# Country examples

Uganda (UBOS) has taken a decision to add a section on Climate Change in every census and survey; fewer questions in censuses and expanded in surveys.

Cabo Verde will present their experience with climate change data collection just after this presentation.

# Way forward

Current efforts include:

- targeting the completion of a draft guidance document on the use of traditional data collection instruments, e.g., censuses and surveys, in support of a core set of questions suitable for the compilation of climate change statistics and indicators at the national level.
- Continuing consultations with population section, HH surveys Coordinator, gender experts (UNSD) and others.
- Collaborating further with agencies such as FAO, to assist countries in collecting climate change data.

# Countries with experience in collecting climate change data

Country	PHC 2000-24	Agri census 2016-25	Regular survey 1992-24	Specialized survey 2015-23	CFSVA 2014-16	50x30 Initiative 2019-24	Emergencies hub 2023-24
Afghanistan							
Armenia							
Bangladesh							
Belize							
Benin							
Bhutan							
Burkina Faso							
Burundi							
Cabo Verde							
Cambodia							
Canada							
Cook Islands*							
Cote D'Ivoire							

\*The Cook Islands added the Climate Module developed by SPC to their LFS in 2023-2024.

# Countries with experience in collecting climate change data (2)

Country	PHC 2000-24	Agri census 2016-25	Regular survey 1992-24	Specialized survey 2015-23	CFSVA 2014-16	50x30 Initiative 2019-24	Emergencies hub 2023-24
Djibouti							
Eswatini							
Ethiopia							
Fiji							
Gambia							
Georgia							
Ghana							
Guinea-Bissau							
Guyana							
Haiti							
Iraq							
Italy							
Kenya							

# Countries with experience in collecting climate change data (3)

Country	PHC 2000-24	Agri census 2016-25	Regular survey 1992-24	Specialized survey 2015-23	CFSVA 2014-16	50x30 Initiative 2019-24	Emergencies hub 2023-24
Kiribati	Yes	No	Yes	Yes	No	No	No
Laos	Yes	Yes	No	No	No	No	No
Marshall Islands	Yes	No	No	Yes	No	No	No
Mauritius	Yes	No	No	No	No	No	No
Mexico	Yes	No	No	No	No	No	No
Liberia	No	No	Yes	No	No	No	Yes
Malawi	No	No	Yes	No	No	Yes	No
Mali	No	No	Yes	No	No	No	Yes
Micronesia	No	Yes	No	No	No	No	No
Mongolia	No	No	Yes	Yes	No	No	No
Myanmar	No	No	Yes	No	No	No	Yes
Nauru	No	No	No	Yes	No	No	No
Nepal	No	No	No	Yes	No	Yes	No

## Countries with experience in collecting climate change data (4)

Country	PHC 2000-24	Agri census 2016-25	Regular survey 1992-24	Specialized survey 2015-23	CFSVA 2014-16	50x30 Initiative 2019-24	Emergencies hub 2023-24
Netherlands							
Niger							
Nigeria							
Rwanda							
Saint Lucia							
Samoa							
São Tomé and Príncipe							
Senegal							
Serbia							
Sierra Leone							
Suriname							
St Vincent and the Grenadines							

## Countries with experience in collecting climate change data (5)

Country	PHC 2000-24	Agri census 2016-25	Regular survey 1992-24	Specialized survey 2015-23	CFSVA 2014-16	50x30 Initiative 2019-24	Emergencies hub 2023-24
Timor Leste							
Togo							
Turkey							
Tonga							
Tuvalu							
Uganda							
United Kingdom							
United Republic of Tanzania							
Uruguay							
Zambia							
Zimbabwe							

## Questions for Group Work

- Are any important country practices missing?
- Which references are less trustworthy?
- How can the contents of the report (Review of National Surveys and Censuses Incorporating Environment and Climate Change-Related Questions) be used to gain maximum utility; and support countries initiatives including exchange of good practices and lessons learnt?
- Is the report in its current form useful to countries/agencies?
- Is this report helpful in defining the draft core set of questions which countries can include in traditional data collection instruments?