Gender and climate change:
Global Set of Climate Change Statistics and Indicators

16th IAEG-GS meeting

New York, 12-14 December 2022 (virtual)

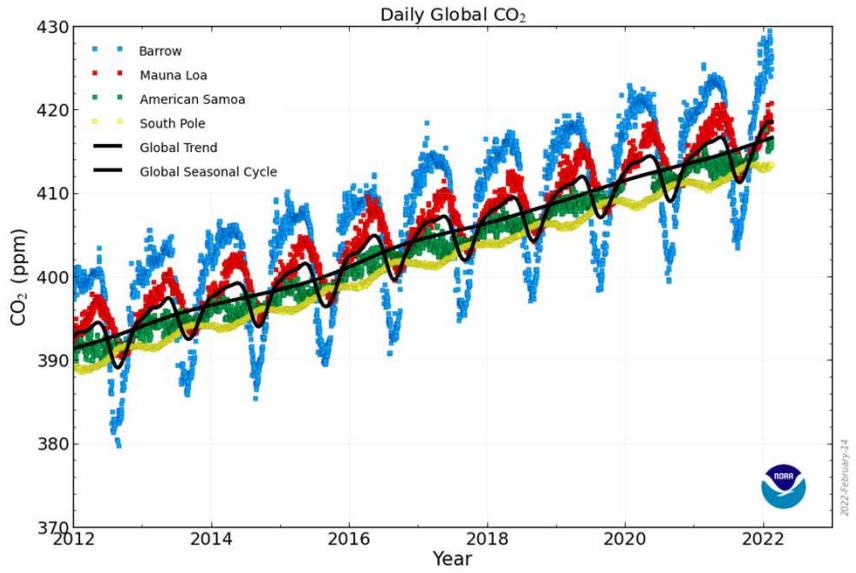
Outline

1. Background
2. Development of the Global Set of Climate Change Statistics and Indicators
3. Gender and climate change
4. Discussion of gender and climate change at the Expert Group on Environment Statistics (October 2022)
5. Future work

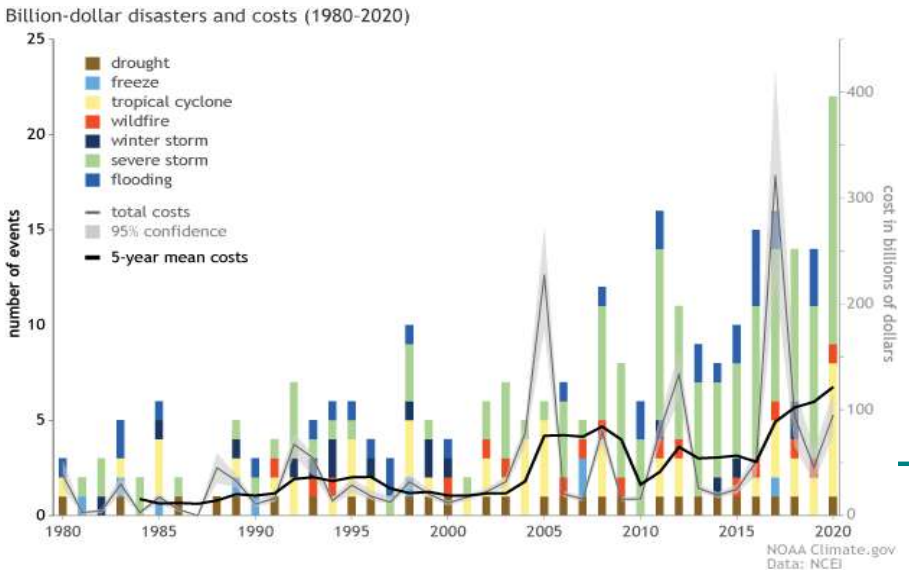
Background

The need for monitoring climate change and disasters is more compelling than ever

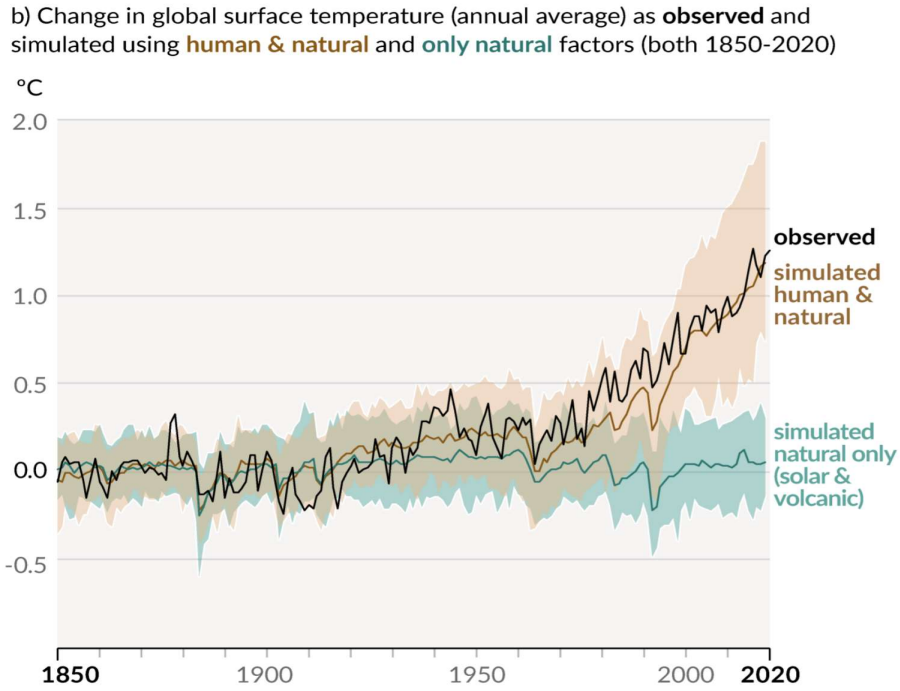
NOAA, [Global Monitoring Laboratory - Carbon Cycle Greenhouse Gases (noaa.gov)]



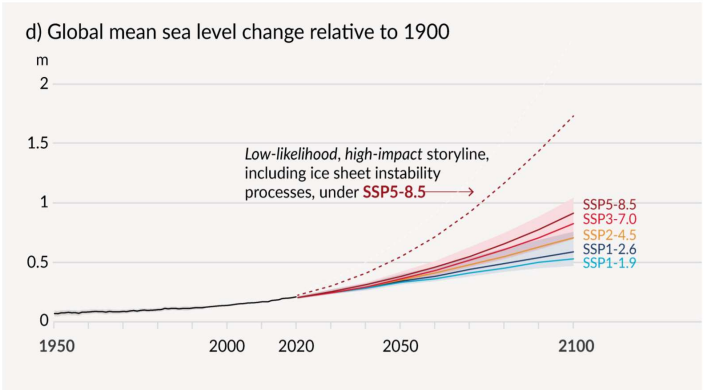
NOAA, [https://www.climate.gov/disasters2020]



[AR6 Climate Change 2021: The Physical Science Basis — IPCC]

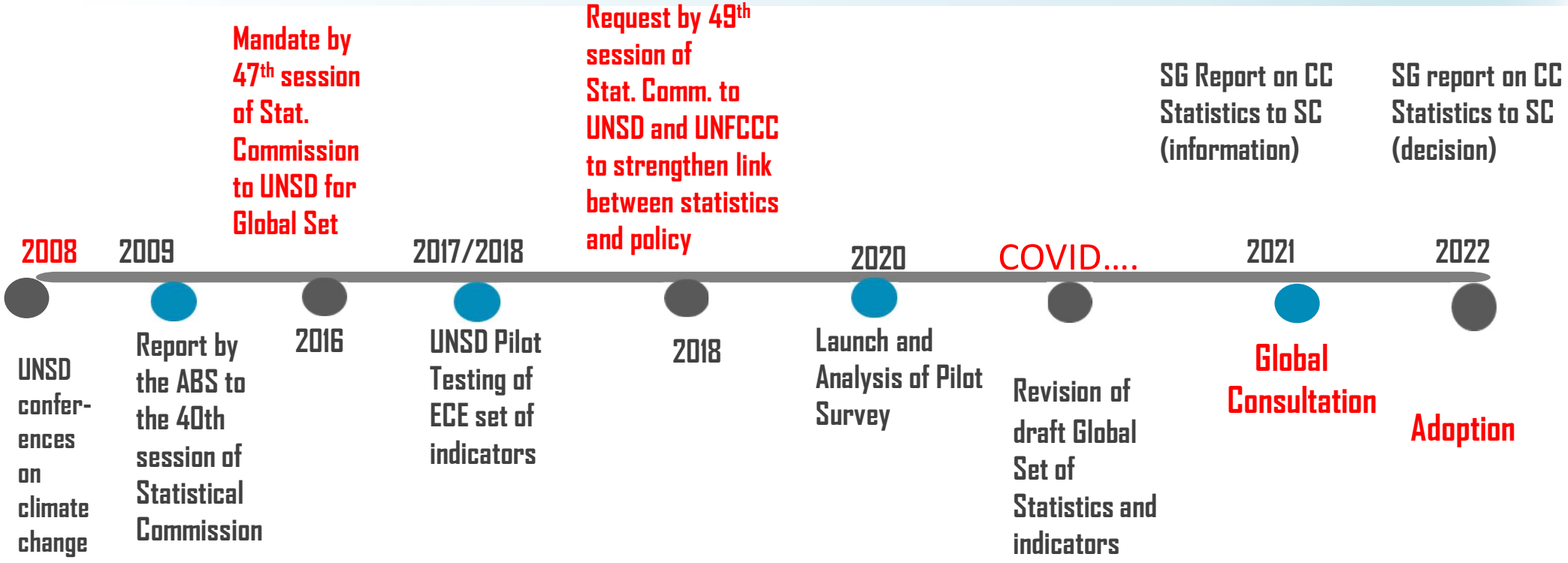


Human activities affect all the major climate system components, with some responding over decades and others over centuries *Figure SPM.8*



Development of the Global Set of Climate Change Statistics and Indicators

More than a decade long process: 2008 – present



Decisions of the Statistical Commission:

Decision 47/112 (2016), UNSD requested to develop a global set of climate change statistics and indicators, applicable to countries at various stages of development:
http://unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf

Decision: 49/113 (2018), UNSD and UNFCCC to strengthen the link between statistics and policy
https://unstats.un.org/unsd/statcom/49th-session/documents/Report-on-the-49th-session-E.pdf

Decision 53/116 (2022), the Global Set was adopted at the 53rd session of the Statistical Commission:
https://unstats.un.org/unsd/statcom/53rd-session/documents/2022-41-FinalReport-E.pdf

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 county 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

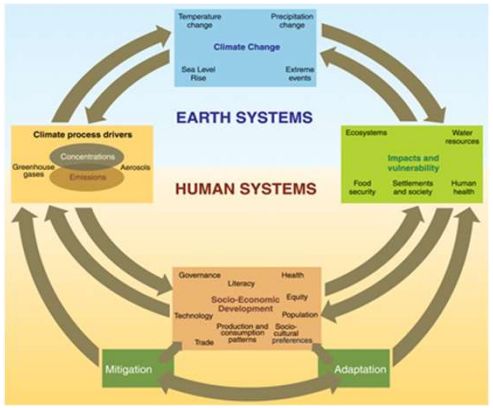
G3. What are the most important needs for a country to develop climate change statistics?

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

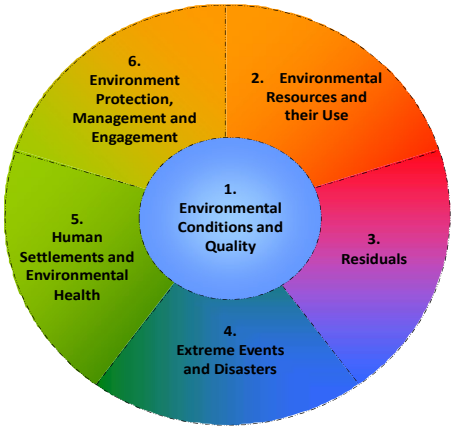
3. Additional reviewers also provided gender-related feedback on several indicators

Methodological foundation

- 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.

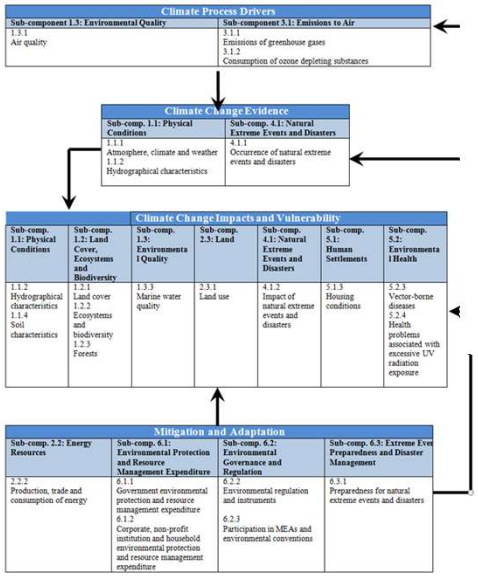


IPCC, 2007, Fourth Assessment Report



Framework for the Development of Environment Statistics (FDES 2013)

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

Goal 13

SENDAI FRAMEWORK
FOR DISASTER RISK REDUCTION 2015-2030

Gender and climate change

Gender and climate change

UNFCCC: women suffer more impacts while having key roles (https://unfccc.int/gender)

IPCC: Fifth and Sixth Assessment Reports contain section on gender in Cross-Chapter Boxes (p 105, https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-PartA_FINAL.pdf) and p 193, Climate Change 2022: Mitigation of Climate Change (ipcc.ch) respectively

- Direct impacts – mortality from disasters
- Indirect effects, depending on age, wealth and social status
- Access to resources required for adaptation: financial resources, land, education, health, and other basic rights
- Exclusion from decision-making processes and labor markets
- Examples cited from countries at different stages of development

Gender and climate change

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 and this is why specialized/new inputs and data collection methods, for example assessing impact of disasters on women is needed.
- Yet, the statistical foundation exists, including: Integrating a Gender Perspective into Statistics https://unstats.un.org/wiki/display/genderstatmanual/

Gender and climate change

UNSD has a mandate to fully integrate gender into all statistical areas and 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.*

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	Indi	Statistic	Tier	Gender	Themes	Method	[possible] National	Type of Data Source
DRIVERS	8	Carl	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 coordinatio	
IMPACTS			Occurrence of hazardous events and disasters	2	3	Disasters	FDES	Disaster agency/Mi	Administrative records
IMPACTS			Occurrence of extremes of temperatures and precipitation	1	3	Disasters	UN-ECE	Meteorological offic	Monitoring systems, administrative reco
IMPACTS	42	Nun	Refer to original source in metadata	1	3	Disasters	Sendai; SDG;	Disaster Agency/Mi	Administrative records
IMPACTS	43		Number of climate refugees, climate migrants and persons displaced by climate change	3	3	Disasters		Disaster preparedne	Administrative records
IMPACTS			Number of people whose destroyed dwellings were attributed to hydro-meteorological disaster	2	3	Disasters	UN-ECE; Senc	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/N	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 w	Household surveys and censuses;Adminis
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 stat	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	Prop	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 ministr	Labour force surveys, household surveys,
ADAPTATION, mitigation			Women's participation in sector-specific environmental governance bodies	3	2	Governance		NSO, labour ministr	Labour force surveys, household surveys,
ADAPTATION, drivers, impacts, vulnerability,	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 A	Surveys, censuses
ADAPTATION, drivers, impacts, vulnerability, mitigation			Number of people reached through climate change public awareness campaigns	3	3	Education		NSO/Environment A	Administrative records
ADAPTATION, drivers, impacts, vulnerability, mitigation			Number of children deprived of education	2	3	Education		Ministry of Educatio	Surveys

Discussion of gender and climate change at the Expert Group on Environment Statistics (October 2022)

Gender and Climate Change at the Expert Group on Environment Statistics (October 2022)

Group work on gender and climate statistics

Gender and climate was allotted a specific time slot for group discussion during the EGES.

The group work aimed to contribute to:

- Integration of climate and gender statistics in the Global Set
- Identify gender issues which are missing from the Global Set
- Better understanding of measurement / data collection issues
- Development of methodology for selected tier 3 indicators (refined definitions, metadata, guidance sources)
- Identify best indicator(s) to illustrate the nexus between gender and climate

Gender and climate change module – UN Women Model Questionnaire

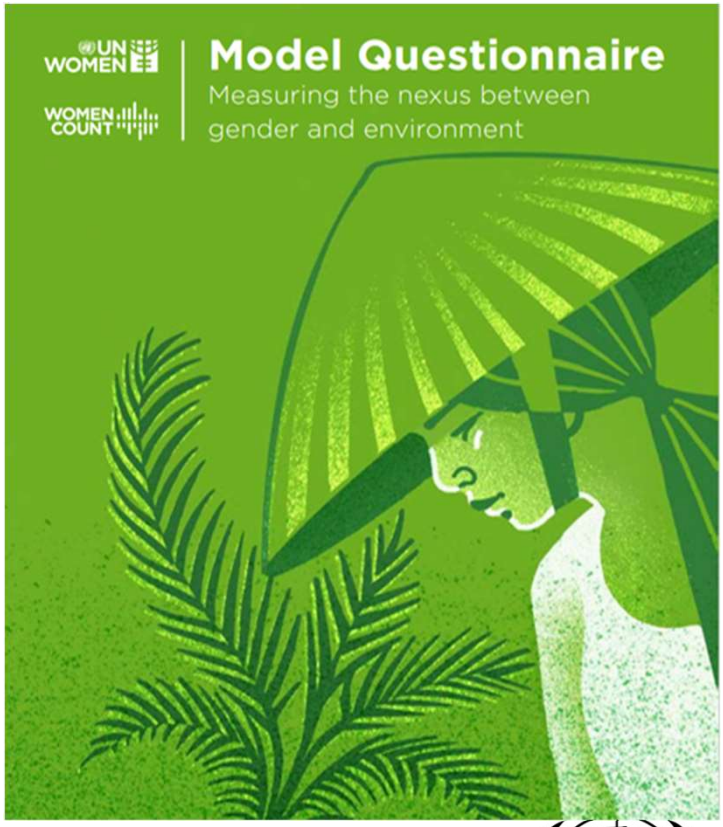
Module 5: Exposure to, and preparedness for, climate change related effects

(Record answer for each respondent. Use respondent ID from module 1)

Record Respondent ID .....

The following questions refer to your own personal experience of slow onset climate events. These events differ from the events we mentioned in the previous module as they typically take place over longer periods of time. In particular, I would like to understand if you have ever observed some of the following phenomena in the environment around you. For each phenomenon you have experienced, I will ask a series of questions. First, let's begin by understanding if you can remember living or working near a place (city, village, beach, field, etc) where the following phenomena were apparent:

CC.1	Increased temperature (sustained) (e.g. Temperatures are higher than they used to be years ago)	Yes	1
		No	0
CC.2	Drop in temperature (sustained) (e.g. Temperatures are lower than they used to be years ago)	Yes	1
		No	0
CC.3	Recurrent heat waves	Yes	1
		No	0
CC.4	Recurrent extreme cold events	Yes	1
		No	0
CC.5	Increased overall precipitation	Yes	1
		No	0
CC.6	Decreased overall precipitation	Yes	1
		No	0
CC.7	Desertification	Yes	1
		No	0
CC.8	Endemic insect borne disease (e.g. Malaria, Dengue, Zika, etc.)	Yes	1
		No	0
CC.9	Recurrent wildfires	Yes	1
		No	0
CC.10	Water scarcity (reduced availability over extended periods)	Yes	1
		No	0
CC.11	River/coast erosion/sand encroachment and other permanent shallow geohazards	Yes	1
		No	0
CC.12	Increased frequency of animal death episodes (birds, land animals)	Yes	1
		No	0
CC.13	Increased frequency of animal death episodes (fish, seafood, freshwater animals, marine animals)	Yes	1
		No	0
CC.14	Loss of land and air biodiversity / Depletion of species (land animals, birds, plants, trees, insects, mushrooms, seeds)	Yes	1
		No	0
CC.15	Loss of water biodiversity / Depletion of species (fish, seafood, seaweed, coral bleaching, etc.)	Yes	1



Asia-Pacific indicators on gender and the environment

ESCAP-UN Women's upcoming paper on the revised list of Asia-Pacific indicators on gender and the environment.

[FROM] V. ANNEX I: GENDER-ENVIRONMENT INDICATORS FOR ASIA AND THE PACIFIC (UPDATED SET AS OF JULY 2022)

Area C: Climate change and disasters [all indicators in Area C are included in the Global Set except GE17]

GE12. Number of deaths, missing persons and directly affected persons attributed to hydrometeorological disasters per 100,000 population, by sex (similar to SDG indicators 1.5.1; 11.5.1; 13.1.1). [indicator 42 in the Global Set, tier 1]

GE13. Number of people whose livelihoods were disrupted or destroyed, attributed to disasters, by sex (similar to Sendai indicator B-5). [statistic under indicator 43 in the Global Set, at tier 2]

Green – Tier 1 and Tier 2 in the Global Set

Asia-Pacific indicators on gender and the environment

[FROM] V. ANNEX I: GENDER-ENVIRONMENT INDICATORS FOR ASIA AND THE PACIFIC (UPDATED SET AS OF JULY 2022)

GE14. Proportion of population whose dwelling unit or land is located in high environmental-risk areas, by sex and location (non-SDG indicator, available from Gender-Environment Surveys). [indicator 92 of the Global Set, tier 3: Buildings (settlements) vulnerable to climate change]

GE15. Proportion of population exposed to hazards in the past 12 months who experienced temporary or permanent displacement as a result, by sex (non-SDG indicator, available from Gender-Environment Surveys). [related to indicator 43 of the Global Set, tier 3]

GE16. Number of climate refugees, climate migrants and persons displaced by climate change, by sex (similar to Global Set of Climate Change Statistics CC43). [indicator 43 of the Global Set, tier 3]

Red – Tier 3 in the Global Set that require methodological development for which questions were asked to get feedback.

Are the indicators at tier 3 well defined and well measurable?

What statistics are needed to compile these indicators?

Can you recommend definitions, data collection methods, references?

Asia-Pacific indicators on gender and the environment

[FROM] V. ANNEX I: GENDER-ENVIRONMENT INDICATORS FOR ASIA AND THE PACIFIC (UPDATED SET AS OF JULY 2022)

GE17. Proportion of population exposed to hazards in the past 12 months who noted that crime or violence have worsened as a result, by sex and type of event (crime/violence) (non-SDG indicator, available from Gender-Environment Surveys).

GE 17 illustrates the nexus between disasters, climate and gender statistics and is not included in the Global Set.

Should it be recommended for inclusion in future revisions, what statistics are needed for its compilation?

If yes, then what statistics are needed to compile it?

Gender and Climate Change at the Expert Group on Environment Statistics (October 2022)

- Concerning data sources, stand-alone surveys were discussed (e.g. gender-environment survey now being applied in the Asia-Pacific [Measuring the Nexus between gender and environment]), as well as adding questions or modules of questions to existing data collection instruments.
- Certain phenomena may require high frequency of data collection, but not so for other slow-moving phenomena.
  - Biennial and even five-yearly censuses may be preferred data sources.
  - Beyond the minimum requirement of disaggregating data sets by sex, integrating a gender perspective requires thorough analysis to identify which phenomena affect men and women disproportionately, and best deciding how to measure and manage such phenomena.

Gender and Climate Change at the Expert Group on Environment Statistics (October 2022)

- Ensuring concepts, definitions and data collection methods are mindful of such phenomena is paramount.
- Environment-related crime and violence (including that against women and girls) should be added to the Global Set of Climate Change Statistics and Indicators.
- Where location characteristics are sought, geospatial information and administrative data sets may be the preferred source. E.g. *Proportion of population whose dwelling unit or land is located in high environmental-risk areas.*
- Gender statistics is a complex field. NSOs involved in the coordination of such work may wish to spend time and resources to research on this topic.

Future work

Future work

The Environment Statistics Section (EVSS) plans to

- continue to collaborate closely with the Social and Gender Statistics Section (SGSS), UN Women and other related institutions through the work of the respective expert groups (EGES and IAEG-GS) to clarify the nexus for gender and climate change statistics and identify data gaps as well as methodological advances made in this area.
- maintain coordination on harmonization of metadata for Gender-Environment Indicators and the Global Set of Climate Change Statistics and Indicators; and explore how the Global Set may, beyond sex-disaggregated data, consider certain statistics and indicators which capture key phenomena for measuring issues pertaining to both climate change and gender.
- engage with the SGSS to refine Tier 3 indicators of the Global Set and explore utilizing more geospatial information and administrative data sets to source information including on locations.

Future work

The Environment Statistics Section (EVSS) plans to

- endeavour to incorporate Environment-related crime and violence in future revisions of the Global Set.
- contribute to research on Gender and climate statistics as much as is feasible.
- continue to encourage at the national level gender mainstreaming throughout environment and climate change statistics and indicators with disaggregation of statistics and indicators by sex as a bare minimum.
- continue contribute to the development of surveys and for data collection on gender and climate data.

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