Mapping environmental, climate change and disaster risk related statistics – To reduce inequalities, vulnerabilities and empower girls and women and boys and men towards inclusive and sustainable development

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Gender mainstreaming into environmental, climate change and disaster risk related statistics

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Advisory Group on Mainstreaming a Gender Perspective into the work of the Statistical Commission
Inter-Agency and Expert Group on Gender Statistics (IAEG-GS)

Topics covered:

1. Updated global policy frameworks and global aims

2. Mainstreaming gender into environment statistics – 2016

3. What are we looking to gender mainstream? Environment, climate change and /or disaster risk statistics

4. Policy relevant questions – some examples

5. National experiences: environment and climate change

6. Feedback from the Advisory Group

7. Possible next steps

Annex 1. Global aims. References
Annex 2 Existing, updated and new statistical tools
Annex 3. Other statistical tools available
Annex 4. Brief description of key statistical frameworks/sets of indicators: Environmental, climate change, disaster risk reduction related, environmental crimes and governance statistics.

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1. Updated major policy frameworks and global aims[1]

- 2030 Agenda for Sustainable Development (2015)

- Paris Agreement (2015)

- Sendai Framework for Disaster Risk Reduction (2015)[2]

- Kunming-Montreal Global Biodiversity Framework (2022)

- Recognition of the human right to a clean, healthy and sustainable environment (2022)

[1] See Annex 1 for recent global aims linking gender, human rights with the environment, climate change and disaster management.
[2] Disaster Risk Related Statistics were including in this mapping exercise as UNWomen shared inputs developed for Asia.

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Commission on the Status of Women– 2022. Recommendation: Enhancing gender statistics and data disaggregated by sex

— Strengthen the capacity of national statistical offices and government institutions to collect, analyse, disseminate and use data on **climate change, environmental and systemic risks and disaster impacts,**

— **disaggregated by income, sex, age, race, ethnicity, migration status, disability, geographical location and other characteristics,**

— **areas with distinctive impacts on women and girls, and support developing countries.**

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2. Mainstreaming gender into environment statistics

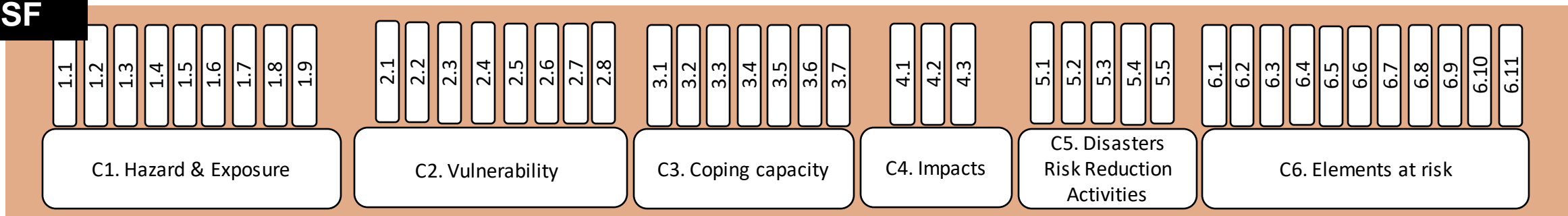- **Gender statistics on environmental aspects with gender-differentiated impacts. 2016.**

Policy-relevant questions	Data needed	Sources of data
When water is not available on household premises, do women and men participate equally in water collection?	Households/population by availability of water on the premises and sex of the person usually collecting water. Persons involved in water collection by sex and age. Time spent on water collection by sex and age.	Household surveys, such as DHS and MICS. Time-use surveys.
Are women more likely than men to develop health problems due to indoor smoke from solid fuels? How many women and men are exposed to indoor smoke from solid fuels used for cooking? Do women and men in the same household have different exposure to indoor smoke?	Relative risks of lower respiratory infections, chronic obstructive pulmonary diseases and lung cancer by sex and age. Population using solid fuels for cooking by type of stove, indoor/outdoor location of cooking and sex. Time spent indoors and time spent near the fire by sex and age. Time spent cooking by sex.	Epidemiological studies and health administrative records. Household surveys, such as DHS and MICS. Small-scale studies. Time-use surveys.
Are female or male deaths overrepresented among deaths due to various natural disasters?	Deaths due to natural disasters by type of hazard, sex and age.	Health and other administrative records, including post-disaster assessments. Population censuses. Household surveys.

- **Updated guidelines for gender mainstreaming in statistical production. 2022**
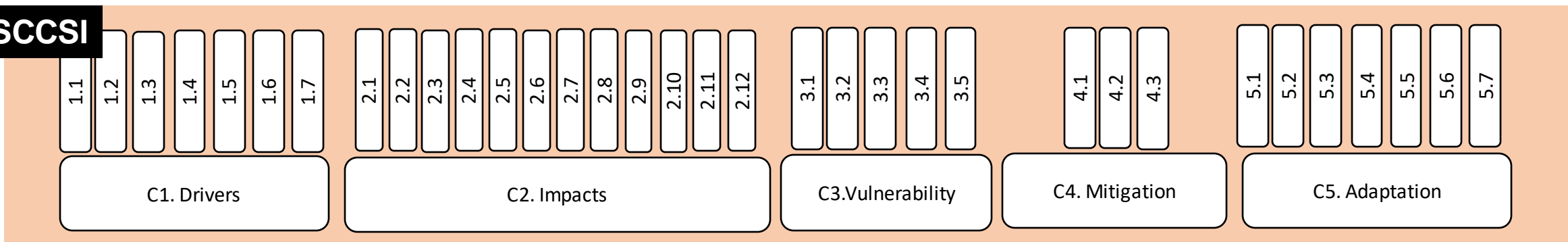
Specification of needs	- Consult the machineries for the advancement of women, and women's and environmental organisations to identify data gaps and needs. Also, consult policymakers and other data users and producers, such as academia. - Revision of SDGs and other relevant indicators - Identifying unused data sources (e.g., administrative registries) that have the potential to produce environmental gender-related data.
Design	- Define output to be produced to meet gender-related data needs. - Design the sample and consider a sample size adequate to provide representative data on gender issues associated with climate change and environment, also considering an intersectional approach. - Include relevant gender training for personnel involved in each phase of statistical production in the design of the process.
Construction	- Evaluate the collection instruments in order to avoid that conventional definitions and concepts, or erroneous wording, may fail to accurately reflect gender differentiations and not capture relevant data for both genders. - Conducting pilot tests to the different instruments for the identification of potential gender biases - Prioritize self-completion or self-reporting, especially in regard to gender-sensitive questions (for example, related to time use)
Collection	- Avoid communication problems using easy and inclusive language - Enumerators have to be appropriately recruited and trained, including training related to gender issues. - Criteria for the selection of personnel may be the ability to speak indigenous languages, experience and training in gender issues, professional profile related to the subject, etc. - Consider extended hours for data collection to ensure that no gender is underrepresented, considering sexual division of labour dynamics.
Processing	- Avoid reproducing gender bias in coding, validation and imputation processes - Identifying and documenting decision-making processes for the input and replacement of missing values, or for addressing data that present problems or inconsistencies (especially in regard to gender-sensitive data)
Analysis	- The analysis should include an examination of gender differences and similarities, going beyond basic sex-disaggregation of data, and including other socio-demographic and contextual variables - Comparison of data with other available data (e.g., trends in similar countries, past data for the same country) - Implementation of peer-reviewing strategies, with an emphasis on identifying gender biases and specific checking for gender-related inconsistencies
Dissemination	- Ensure the dissemination of information disaggregated by sex as a minimum, and considering the dissemination of dedicated products that provide a gender-related analysis of the results - Providing a relevant contextualization of the information, based on previous literature and historical trends related to gender issues - Ensuring that the means used for dissemination and the communication of the contents itself (platforms, graphic design of publications, editorial elements, etc.) do not perpetuate gender stereotypes. - Ensuring that the information is accessible to all publics.
Evaluation	- Consult the machinery for the advancement of women to discuss the results and to consider lessons learned for future processes. - Retrospective review of possible gender biases committed in the process. - Identifying and documenting challenges and difficulties encountered and lessons learned in the process, related to gender mainstreaming.

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3. What are we looking to gender mainstream? Environment, climate change and /or disaster risk statistics

DRSF

1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8
3.1 3.2 3.3 3.4 3.5 3.6 3.7
4.1 4.2 4.3
5.1 5.2 5.3 5.4 5.5
6.1 6.2 6.3 6.4 6.5 6.6 6.7 6.8 6.9 6.10 6.11

C1. Hazard & Exposure | C2. Vulnerability | C3. Coping capacity | C4. Impacts | C5. Disasters Risk Reduction Activities | C6. Elements at risk

GSCCSI

1.1 1.2 1.3 1.4 1.5 1.6 1.7
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 2.11 2.12
3.1 3.2 3.3 3.4 3.5
4.1 4.2 4.3
5.1 5.2 5.3 5.4 5.5 5.6 5.7

C1. Drivers | C2. Impacts | C3.Vulnerability | C4. Mitigation | C5. Adaptation

FDES

1.1 1.2 1.3
2.1 2.2 2.3 2.4 2.5 2.6
3.1 3.2 3.3 3.4
4.1 4.2
5.1 5.2
6.1 6.2 6.3 6.4

C1. Environmental Conditions and Quality | C2. Environmental Resources and their Use | C3. Residuals | C4. Extreme Events and Disasters | C5. Human Settlements and Environmental Health | C6. Environmental management and Engagement

DESA | Statistics Division
- Framework for the Development of Environmental Statistics (FDES)
- Global set of climate change statistics and indicators (GSCCI)
- Disaster risk statistical framework (DRSF)

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Policy relevant questions	Data needed	Sources of data
• Is the environmental quality producing negative health impacts to populations exposed? - Urban, industrial areas - Women / Men - Elder people /Children - Specific utilities/industrial sites	**SDG. 3.9.1:** Mortality rate attributed to household and ambient air pollution **SDG 3.9.2:** Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services) Mortality rate of chronic respiratory diseases in specific geographic areas: - Brick kilns	Death statistics by cause of death. Disaggregated by sex and age and place of occurrence.
• Where and which kind of environmental crimes are being committed? illegal logging, illegal mining	Crimes committed against the environment by sex and place of occurrence.	Administrative records

Policy relevant questions	Data needed	Sources of data
•Are there any discriminatory laws or gendered laws regarding: - Access to water or sanitary services - Ownership of natural resources - Use of natural resources	**SDG - 1.4.2** Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure **SDG - 6.1.1:** Proportion of population using safely managed drinking water services by individual, socioeconomic characteristics and geographic location **SDG- 6.2.1:** Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water **FDES.2.3.1** **a.** Land use **c.** Land ownership	Population census Household surveys Administrative records Agriculture/Forest surveys Satellite images Land registries Time use surveys – with specific sampling for rural and urban populations

Policy relevant questions	Data needed	Sources of data
•Green economy pathways - Green jobs - Green economy - Lower carbon emissions economy	• Gross value added • Employment in specific economic activities and by environmental protection activities. - Energy	System of National Accounts Economic census Economic surveys Administrative records on economic activities
•What are the impacts of climate change? - Environmental conditions - Resources and their use - Economic activities depending on structure, location and use of resources - Hazard identification - Hazard prone areas - Populations: exposed (depending on context) affected by a hazard event - Other elements at risk:Housing, critical	FDES 1.1.1: Atmosphere, climate and weather FDES 1.1.2g Hydrographical conditions. Glaciers FDES2.6.1 Water resources, Gross value added (Tourism) Employment Heatwave Snowmelt /Snowfloods Geographical areas exposed to hazards Age, sex, socioeconomic characteristics, **GSCCSI.99**. Access to heating/cooling. **GSCCSI. 100 and 102** living in coastal and non-coastal-areas Death, injured or affected populations **SDG 11.5.2:** Direct economic loss attributed to disasters in relation to global gross domestic product (GDP) **SDG 11.5.3:** (a) Damage to critical infrastructure and (b) number of disruptions	Monitoring stations Monitoring services (mass balance) System of National Accounts Economic census/surveys Labor force surveys (regional data) Monitoring stations Satellite images/ Geographic Information Systems Population Census / Registers Death Statistics Health Statistics Administrative records of disaster management authorities Cadastres (land taxes, water/energy infrastructure

5. National experiences: statistics relating to environment and climate change

Finland

- Time Use Survey (travels, recycling)
- The Quality of Work Life Survey (2023): Theme: Ecological sustainability
- Finnish National Travel Survey, Finnish Transport and Communications Agency Traficom
- Education statistics
- Consumer survey about environmental impacts of information and communications sector 2020,
- Youth Barometer 2021 Sustainability
- National FinHealth Study (FinTerveys) survey
- Population Structure (register data)
- Employment statistics (register data)
- First registrations of motor vehicles
- Special Eurobarometer 538: Climate change
- Agricultural statistics (Natural Resources Institute Finland)

Jordan

- Environment survey in the economic sectors (industrial / hotels / education / hospitals / government municipalities):Number and Compensation of Employees Working in Environment
- lack of an international classification for green job.
- Administrative Records - Ministry of Health
- Administrative Records - Ministry of Local Administration
- Administrative Records - Ministry of Education
- Administrative Records - Ministry of Higher Education and Scientific Research

Canada

Federal business innovation and growth support for clean technology, 2020 (statcan.gc.ca)

Italy

Citizens' attitudes and behaviours in environmental matters: a gender-based approach (Italy)

México

- Population and Housing Census
- Income and Expenditure Household Survey
- Municipal Government Census (Water and wastes management modules)
- Economic Census
- Agriculture Census
- Time use survey
- Land Tenure Statistics-(National Land Registry)
- Greenhouse Gas Inventory (National Institute of Ecology and Climate Change)
- National Risk Atlas
- Vulnerability Atlas
- Several geospatial datasets

6. Feedback from the Advisory Group

- What is the importance / relation of the Global set of **Climate Change Statistics and Indicators** with the **Core set of gender indicators** and the **SDGs?**

- Set some priorities in methodologies /tools and steps to localize / integrate the Global set of Climate Change Statistics and Indicators with the current core set of gender indicators and SDGs at national level.

- Different kinds of environmental impacts in developed and developing countries.

  - Energy, water and waste are produced by the industry.

  - Industrial structure and what this means on gender equality (for occupations for example).

- Tying environmental statistics to the question of equality could probably happen through economic structure and employment statistics

- In order to convince environment and climate change statisticians to integrate a gender perspective, statements like the following would need to be supported, if some already exist, by facts and results from studies and be accompanied by the appropriate literature references.

- All data referring to persons must be disaggregated by default according to some socio-demographic variables such as gender, age groups, migration status and disability.

- It is unclear how SEEA can be linked to gender statistics, especially since this "System of Environmental-Economic Accounting"

- It is important to note that environment and climate change data collection occurs across different institutional actors beyond the NSS (e.g. Ministries of Environment, MInistries of Agriculture, etc.) as this area is inherently cross-cutting and multisectoral. Thus, it is important to consider the implementation of mechanisms that could facilitate coordination within governmental institutions to find all relevant data sources.

- There is no official classification of green jobs.

- Climate Change Indicators (UNECE) there are many Tier II and Tier III indicators so it is not like the not-disaggregated indicators are widely available.

- There is really no agreed statistical framework on measuring adaptation yet.

5. Possible next steps towards

- To review the Global Set of Climate Change Statistics and Indicators and provide recommendations about:

  - Recommendations on disaggregating existing indicators by populations in vulnerable conditions

  - Using other relevant SDG / socioeconomic indicators, focusing on disaster risk reduction for gender - sensitive adaptation mechanisms

  - Integrating other relevant geospatial datasets with sociodemographic statistics

  - Economic autonomy, autonomy in decision-making and physical autonomy.

  - Agents of change in safeguarding and managing sustainably the environment

- To develop country case-studies

  - Key innovative statistical programs or publications

  - How to integrate and analyze statistical information from different sources relevant to the environment, climate change (environmental, economic and social statistics) or disaster risk related statistics (disaggregation of existing statistics by hazard prone areas, presenting statistics by hazard event)

Annex 1. Global sustainable development aims.

A1.1 UNEP. 2022. Ministerial declaration of the United Nations Environment Assembly at its fifth session. Strengthening actions for nature to achieve the Sustainable Development Goals.

A1.2. CSW. 2022. Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes.

A1.3. UN General Assembly. 2022. Human rights council. Human rights and the environment.

A1.4. UN Security Council. 2021. Women and peace and security.

A1.5. UN General Assembky, 2021. Preventing and combating crimes that affect the environment.

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A1.1. Strengthening actions for nature to achieve the Sustainable Development Goals

- Mainstreaming biodiversity, climate change and pollution concerns into all policies and tools by:

    – making use of **green economy pathways** that emphasize ecosystem- and **knowledge-based management**;

    – by **using gender-sensitive approaches and addressing inequalities**; and

    – **reducing** carbon and non-carbon greenhouse **gas emissions** while **adapting to climate change and its impact.**

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A1.2. Commission on the Status of Women– 2022. Achieving **gender equality and the empowerment of all women and girls** in the context of **climate change, environmental and disaster risk reduction** **policies** and programmes.

- The interlinked crises threaten the **full realization of human rights**, in particular the rights to life and dignity, development, a life free from violence and discrimination, an adequate standard of living, the highest attainable standard of physical and mental health, water and sanitation, a healthy environment and others, **with acute impacts on women and girls, in particular in rural, indigenous and migrant contexts**.

- Climate and environmental **crises** and **disasters exacerbate threats to peace and security**, affecting in **particular fragile or conflict-affected countries and women and girls.**

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CSW. 2022. Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes.
E_CN.6_2022_3-EN.pdf

A1.3. Human Rights Council – 2022. Human rights on the environment.

— Recognizing that the impact of climate change, the unsustainable management and use of natural resources, the pollution of air, land and water, the unsound management of chemicals and waste, the resulting loss of biodiversity .. **May interfere with the enjoyment of a safe, clean, healthy and sustainable environment**…

— Recalling the importance of **women's and indigenous people's rights to have access to and use land** to:

— Increase **opportunities** for climate change adaptation and mitigation

— Applying a **gender perspective** by, inter alia, considering:

- the particular situation of women and girls and identifying **gender-specific discrimination and vulnerabilities when addressing** climate change and environmental degradation,

- strengthening and promoting women's and girls' **leadership, decision making and their full, equal and meaningful participation**, and

- Addressing good practices where women and girls act as **agents of change in safeguarding and managing sustainably the environment**

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A1.4. Security Council – 2021. Women and peace and security /Conflict areas

— The **inter-agency climate security mechanism,** a joint initiative of the Department of Political and Peacebuilding Affairs, UNDP and the United Nations Environment Programme to help the United Nations system address climate-related security risks more systematically, has increased efforts to integrate a gender perspective into its work, including by **applying gender-sensitive risk assessment methodologies** in its field work and reviewing good practices regarding the integration of **climate security and gender linkages into peacebuilding efforts.**

— These include processes to support **nationally determined contributions, national adaptation plans, national climate change action plans, land tenure policies and the reduction of emissions from deforestation and forest degradation.** It also includes **support for the advocacy efforts of women's organizations and networks to address climate-related security risks.**

— As climate change fuels renewed waves of environmental activism, taking action to protect natural resources and defend environmental rights is becoming ever more dangerous. The increase in violence and threats against environmental defenders who are women, in particular indigenous women, is alarming. Their protection should be an integral part of the global agenda for peacebuilding and for sustaining peace.

UN Security Council. (2021) Women and peace and security. S/2021/827.
https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2021_827.pdf

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A.1.5 UN General Assembly. 2021. Preventing and combating crimes that affect the environment

- Urges Member States to adopt effective measures to prevent and combat crimes that affect the environment, such as illicit trafficking:

  - flora and fauna as protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora,

  - in timber and timber products,

  - in hazardous wastes and other wastes and other wastes and

  - in precious metals, stones and other minerals

— To improve and enhance the collection, quality, availability and analysis of data on crimes that affect the environment, consider undertaking national statistical capacity-building.

— in order to strengthen research and analysis on global trends and patterns in crimes that affect the environment and to improve the effectiveness of strategies aimed at preventing and combating them.

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Annex 2 Existing, updated and new statistical tools

A2.1 Global. UN statistical standard-setting bodies.

1. IPCC. 2006. Guidelines for **National Greenhouse Gas Inventories**.
2. UNSD. 2011. International Recommendations for **Energy Statistics**
3. UNSD et al. 2012. System of **Environmental-Economic Accounting** – Central Framework
4. OHCHR.2012. **Human Rights Indicators**. Equality and discrimination analysis (Deprivation, Inequality)
5. UNSD. 2013. Framework for the Development of **Environment Statistics**.
6. OECD. 2013. OECD Guidelines on Measuring Subjective Well-being.
7. ILO. 2013: 19th ICLS. Guidelines concerning a statistical definition of **employment in the environmental sector**
8. UNSD. 2016. International Classification of Activities for **Time-Use Statistics**.
9. UNSD. 2016. Integrating a **gender perspective** into statistics.
10. UNSD. 2016. International Classification of Crime for Statistical Purposes. Acts against the natural environment

11. UNISDR.2017. Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for **Disaster Risk Reduction**

12. ILO. 2018. Guidelines concerning the measurement of **forced labour**

13. UNSD. 2019. Guidelines for Producing Statistics on **Asset Ownership from a Gender Perspective**

14. UNSD. 2020. Handbook on **Governance Statistics** (Non-discrimination and Equality, Participation in political and public affairs, Responsiveness)

15. UNDDR. **Hazard definition and classification** review

16. UNSD. 2021. SEEA-EA: the System of **Environmental-Economic Accounting– Ecosystem Accounting**.

17. UNSD. 2022. Global Set of **Climate Change Statistics and Indicators**.

18. WHO. 2022. International Classification of **Diseases**. (Unsafe water, exposure to forces of nature)

19. International Consortium on Combating Wildlife Crime (2022). Indicator framework for Combating **Wildlife and Forest Crime**.

A2.2 Regional

1. UNECE. 2014. Recommendations on Climate Change-Related Statistics.
2. ESCWA:. 2017 Climate Change-Related Statistics in the Arab Region--A Proposed Set of Indicators.
3. ESCAP. 2018. Disaster-related Statistics Framework.
4. CARICOM 2020. Climate change
5. UNECE. 2021. Guidance for Measuring Intra-household Power and Decision-making
6. UNECE. 2021. Set of Core Climate Change-related Indicators and Statistics.
7. UNECE 2021. Implementation Guidelines for the Conference of European Statisticians' Set of Core Climate Change-related Indicators and Statistics
8. ECLAC. 2022. Guidelines for gender mainstreaming in the working groups of the Statistical Conference of the Americas
9. UNECE 2023. Measuring hazardous events and disasters: set of core disaster-risk-related indicator

Annex 3. Other statistical tools available

A3.1 UNECE

- Climate change related gender and social vulnerability data needed to support a just transition in Armenia (UNDP Armenia)
- Climate Change-Related Statistics in Practice 2021 (August 2021)
- Climate Change-Related Statistics in Practice 2022 (September 2022)
- Draft Guidance on the role of national statistical offices in achieving national climate objectives - for consultation
- In-depth review on the role of the statistical community in climate action (February 2020)

A3.2 UNWomen -ESCAP

- Mainstreaming gender in environment statistics for the SDGs and Beyond: Identifying priorities in Asia and the Pacific
- Model questionnaire: Measuring the nexus between gender and environment
- Women and the environment: An Asia-Pacific Snapshot
- Gendered impacts of climate change: Evidence from Asia
- Sampling methods and survey operations: Measuring the nexus between gender and the environment. (On process)

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Annex 4. Brief description of key statistical frameworks/sets of indicators:

-   Framework for the Development of Environmental Statistics

-   Global set of climate change statistics and indicators

-   Disaster risk statistical framework

-   Environmental crimes

-   Governance statistics.

Framework for the Development of Environmental Statistics (FDES)

Component 1: Environmental Conditions and Quality

1.1: Physical Conditions (Air, water, soil pollution)
1.2: Land Cover, Ecosystems and Biodiversity
1.3: Environmental Quality

Component 2: Environmental Resources and their Use

2.1: Mineral Resources
2.2: Energy Resources (production, final consumption by households)
2.3: Land (land use and land ownership)
2.4: Soil Resources
2.5: Biological Resources
2.6: Water Resources (Precipitation, stocks)

Component 3: Residuals

3.1: Emissions to Air
3.2: Generation and Management of Wastewater
3.3: Generation and Management of Waste
3.4: Release of Chemical Substances
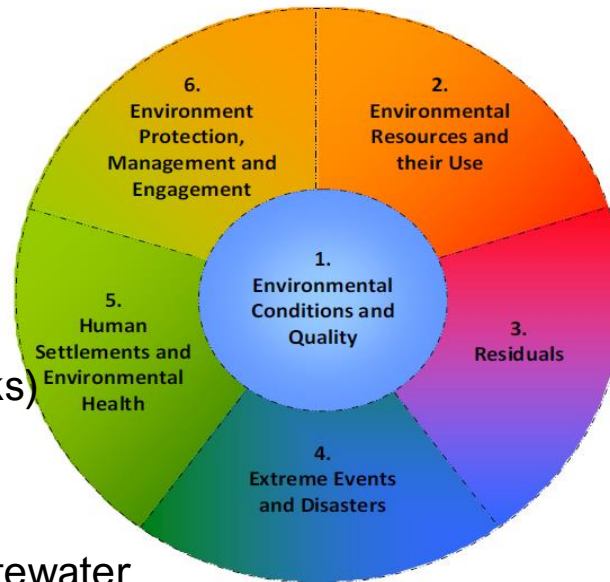
Component 4: Extreme Events and Disasters

4.1: Natural Extreme Events and Disasters
4.2: Technological Disasters

Component 5: Human Settlements and Environmental Health

5.1: Human Settlements
5.2: Environmental Health

Component 6: Environmental Protection, Management and Engagement

6.1: Environmental Protection and Resource Management Expenditure
6.2: Environmental Governance and Regulation
6.3: Extreme Event Preparedness and Disaster Management
6.4: Environmental Information and Awareness

- **Global Set of Climate Change Statistics and Indicators (GSCCIS).***

1. Drivers
1.1. Total greenhouse gas emissions
1.2. Atmospheric concentration of greenhouse gases
   1.3. Energy production, supply and consumption
1.4. Fossil fuels
1.5. Population
1.6. Transport
1.7. Land and agriculture

2. Impacts
2.1. Agricultural production affected by climate change
2.2. Areas affected by climate change
2.3. Freshwater resources
2.4 Hazardous events and disasters
2.5. Climate change and human health
2.6. Climate change evidence
2.7. Soil condition
2.8. Distribution and status of species
2.9. Distribution and status of ecosystems
2.10. Production and consumption of materials
2.11. Climate change impacts on transport and critical infrastructure
2.12. Climate change impacts on tourism

3. Vulnerability
3.1. Water security, food security and agriculture
3.2. Vulnerable species, ecosystems and their services
3.3. Buildings and infrastructure vulnerable to climate change
3.4. Vulnerable population
3.5. Area of country vulnerable to climate change

*The GSCCIS is integrated by Area and topic without numbers. Numbers were provided in this presentation to help as a tool to visualize the scope of each "thematic" area.

4. Mitigation
4.1. Renewable energy
4.2. Climate change mitigation policies, strategies and plans
4.3 Climate change mitigation technology and practice

5. Adaptation
5.1. Climate change adaptation policies, strategies and plans
5.2. Risk management, disaster forecasting and early warning systems
5.3. Public awareness of and education on climate change
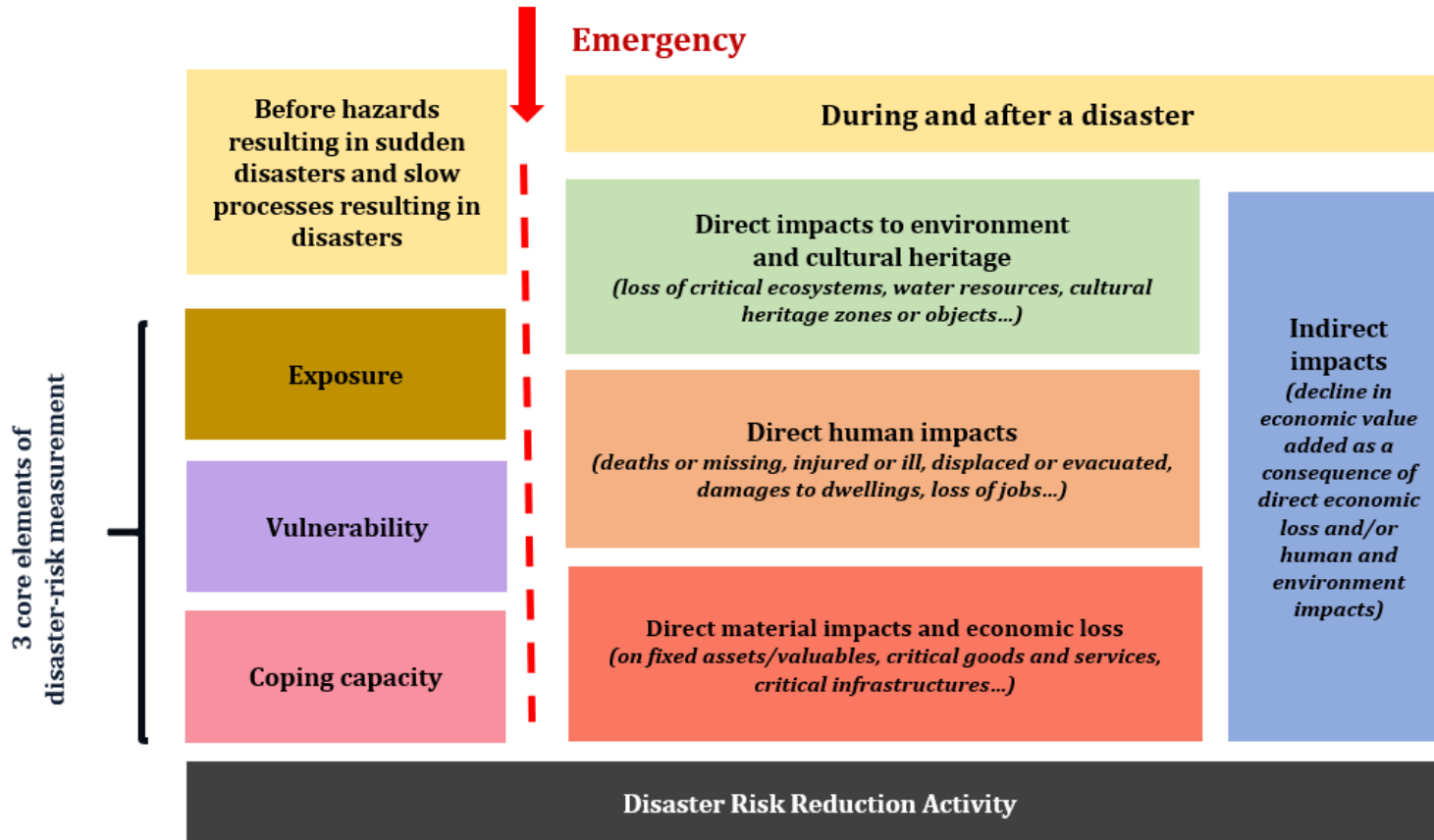5.4. Area-based adaptation to climate change
5.5. Climate change monitoring
5.6. Water management
5.7. Waste management

- **Disaster-Related Statistics Frameowrk.2018.**

A *disaster is a "serious disruption* of the functioning of a community or a society due **to hazardous events interacting with** conditions of **exposure, vulnerability and capacity**, leading to one or more of the following: **human, material, economic and environmental losses and** impacts.

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0. Event identification

- Date
- Geographical location /trajectories
- Hazard type
- Magnitude

1. Hazard (Hazard prone areas) & Exposure (people, infrastructure, etc.)

- Natural
- Floods
- Cyclones
- Earthquakes
- Tsunamis
- Droughts
- Human
- Current conflicts
- Conflict risk

2. Vulnerability (conditions: physical, social, economic and environmental)

- Socio-economic (sex, age, income, education, urban and rural, persons with disabilities, etc.)
- Development
- Inequality
- Aid
- Dependency
- Vulnerability groups
- Uprooted people
- Others Vulnerable groups

3. Coping capacity

- Institutional
- DRR
- Governance
- Infrastructure
- Communication
- Access to health
- Physical Infrastructure

Source: Adapted from ESCAP. 2018. Disaster-related Statistics Framework and UNECE 2023. Measuring hazardous events and disasters: set of core disaster-risk-related indicator.

4. Impacts

- Damage and losses
- Human impacts
  - Deaths or missing persons
  - Injured and ill
  - Displaced
- Livelihoods
  - Employment
  - Water

5. Disaster Risk Reduction Activities

- Disaster risk prevention
- Disaster risk mitigation
- Disaster risk management
  - Preparedness
  - Emergency management
  - Emergency Response
- Disaster recovery
  - Relocation
  - Rehabilitation
  - Reconstruction
- General government, research and development, education expenditure

6. Elements at risk

- People
- Housing
- Basic services*
  - Education
  - Healthcare
  - Energy
  - Sewerage
  - Solid waste management
  - Transport
  - Water supply
  - Information and Communication
  - Emergency Response
- Critical infrastructure
- Economic activities
- Ecosystem security and agriculture
- Water security
- Energy security
- Healthcare
- Cultural heritage
- Governance

- **International Classification on Crime Statistics**

Section 10. Acts against the natural environment

1001. Acts that cause environmental pollution or degradation

1002. Acts involving the movement or dumping of waste

1003. Trade or possession of protected or prohibited species of fauna and flora

1004. Acts that result in the depletion or degradation of natural resources

- **Governance Statistics.**

1. **Non-discrimination and equality**

2. **Participation**

3. Openness

4. **Access to and quality of justice**

5. Responsiveness

6. Absence of corruption

7. Trust

8. **Safety and security**