

 **UNECE**

CES Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters

Michael Nagy, UNECE


Report of the UNECE Task Force on Measuring Extreme Events and Disasters




STATISTICS 

6th Expert Group Meeting on Disaster-related Statistics in Asia and the Pacific, Bangkok 22-25 April 2019


CES Task Force on measuring Extreme Events and Disasters

STATISTICS  Clarified the role of Official Statistics, drafted recommendations

- Established by the Bureau of the Conference of European Statisticians (CES) in 2015
- Objectives:
 - Clarify the role of official statistics
 - Identify practical steps how NSOs can support disaster management and risk reduction
 - Identify main data needs and data sources
 - Identify needs for harmonisation of classifications, terms and definitions
- Members:
 - Armenia, Italy, New Zealand, Republic of Moldova, Mexico, South Africa, Turkey
 - ECLAC, ESA, Eurostat, FAO, GEO, JRC, UNISDR, UNECE, ESCAP, WHO, WMO
- Chair of Task Force: Angela Ferruzza, Istat
- Close collaboration with ESCAP Expert Group
- CES Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters** approved by CES Bureau in February 2019 for electronic consultation with NSOs in the region


 **UNECE**

Structure of the CES Recommendations


STATISTICS 

- Introduction
- Key terms and concepts**
- Policy background
- Scope and measurement framework for statistics on hazardous events and disasters
- The role of the National Statistical System
- Key infrastructure
- Recommendations
- Implementation

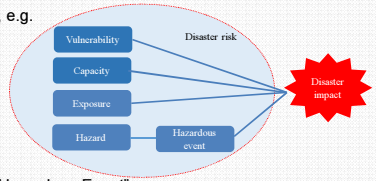
+ **Case Studies**
+ Annexes

 **UNECE**

Key terms and concepts
Chapter 2

STATISTICS 


- Main references:
 - Sendai Framework and related reports (e.g. OIEWG)
 - IPCC (term "extreme weather event")
 - ESCAP DRSF
- Clarification of key-terms, e.g.



```

    graph LR
      subgraph Inputs
        V[Vulnerability]
        C[Capacity]
        E[Exposure]
        H[Hazard]
      end
      subgraph Intermediate
        HE[Hazardous event]
        DR[Disaster risk]
      end
      subgraph Output
        DI[Disaster impact]
      end
      V --> DR
      C --> DR
      E --> DR
      H --> HE
      HE --> DR
      DR --> DI
    
```

- "Extreme Event" versus "Hazardous Event"
- Scales of disasters
- Why the term "Natural Disasters" should not be used
- Phases of DRM

 **UNECE**

Scope and measurement framework for statistics on hazardous events and disasters

Chapter 4


STATISTICS

Scope:

In alignment with the ESCAP DRSF and further information needs for monitoring CC-related extreme events the scope for statistics on Hazardous Events and disasters was defined as

Statistics on the occurrence and magnitude of hazardous events and disasters, exposure to hazards, vulnerability, coping capacity, the impact of hazardous events and disasters on human and natural systems as well as on the efforts to reduce disaster risk.

Measurement Framework: ESCAP DRSF



5


The Role of the National Statistical System (NSS)

Chapter 5, key competencies

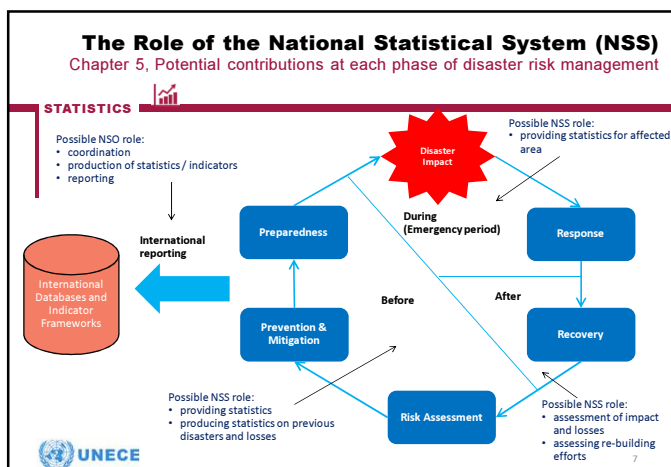
STATISTICS

- Survey carried out by the Task Force showed that involvement of NSOs in DRM-related activities is minor, with the exception of a few countries
- DRM-Agencies are often not aware of possible contributions of the NSS
- Key competencies of the NSS that are useful for DRM:
 - professional independence
 - strict conditions and quality criteria
 - use of sound, transparent and commonly agreed methodologies
 - commitment to data accessibility
 - Development of long consistent time series
 - Etc.
- Challenges that may limit role of NSS in DRM
 - Statistical confidentiality
 - Strong emphasis on quality can reduce timeliness
 - preference for well-established time series rather than production of specialised data files
 - Etc.

Most of these weaknesses can be overcome



6



The Role of the National Statistical System (NSS)

Chapter 5, Core Roles and Additional Roles of NSOs


STATISTICS

Core roles and tasks (all NSOs):

- Providing baseline information for DRM (traditional statistics and new statistics)
- Development of transparent, long, and consistent time series of high quality and internationally comparable
- Producing and communicating information according to DRM needs (e.g. "emergency data kit", procedures and tools that allow small-scale analysis by maintaining statistical confidentiality, etc.)
- Ensuring multiple use of information, interoperability and transparency
- Using well established procedures for communicating and disseminating statistics to decision makers
- Coordination of information flows for SDGs, SF and other indicator frameworks

Additional roles and tasks (depending on DRM institutional environment):


- Leading the work on assessing impacts
- Maintaining a statistical disaster database and exchange of this data with international databases
- Coordination of geographical information services
- Carrying out risk-assessments
- Operating collaborative tools to collect information about damages



8


Recommendations

Chapter 7

STATISTICS 


Aim of recommendations:

- Clarifying roles of NSOs
- Awareness: What do NSOs have to offer, what are the user's needs?
- Gaps: E.g. existing statistics on population and businesses are not always fit for purpose
- Timeliness: in particular in case of emergency
- Accessibility: Disaggregation of data, statistical confidentiality?
- Interpretability: Descriptions of data, statistics and indicators are needed
- Statistical office operations: HED-related information is a cross-cutting issue
- Methods and standards: Additional methods and standards needed (e.g. hazard classification, geo-referencing, etc.)


 9

Recommendations


Chapter 7

STATISTICS 


1. NSOs should **clarify the main purposes** of engaging in the domain of measuring HED: Engage with the user community
2. NSOs should **reach out to national agencies responsible for disaster risk management**: e.g. to identify data needs and gaps
3. NSOs should **review key HED-related information needs**: make optimal use of existing statistics before adapting them
4. NSOs should **improve HED-related data and statistics**, also explore additional sources such as earth observation data
5. NSOs should **consider new development of new HED-related information**: e.g. on frequency, magnitude and impacts of hazardous events and disasters, or on climate change adaptation
6. **Review statistical infrastructure**: knowledge/skills, institutional structures, classifications, statistical frameworks etc.
7. The **international statistical community** should take an active role in contributing to the global system on measuring HED: enhance collaboration, community of practice, etc.

 10

Case Studies

STATISTICS 

1. Brazil: Population in risk areas
2. Turkey: Scope of national disaster statistics
3. Armenia: Information needs, role of the NSO and national scope of disaster-related statistics
4. The Philippines: Role of the Philippine Statistics Authority in measuring hazardous events and disasters
5. Mexico: Role of the NSO in measuring hazardous events and disasters
6. Italy: Istat and integrated information – The Casa Italia
7. Ireland: Climate data rescue project

 11

Thank you very much for your attention!