# Natural Extreme Events and Disasters Statistics

(Sub-component 4.1 Natural Extreme Events and Disasters)

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# Why was there a need to revise the existing chapter?

## The policy environment has developed since 2015

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- Policy environment
  - **Sendai Framework for Disaster-Risk Reduction 2015-2030**: 7 targets with 38 indicators
  - **SDGs**: Several disaster-related targets and indicators, e.g.
    - 1.5.1, 11.5.1, 13.1.2: Number of deaths, missing persons and persons affected by disaster per 100,000 people.
    - 11.5.2: Direct disaster economic loss in relation to global GDP, including disaster damage to critical infrastructure and disruption of basic services.
  - **Paris agreement**

- Important international activities, e.g.
  - UNISDR: Clarification of important terms, definitions and classifications and guidelines for production of Sendai Framework Indicators
  - ESCAP: Disaster-related Statistics Framework (DRSF)
  - ECE: Clarification of the role of NSOs in measuring extreme events and disasters

# Now international guidelines exist

## FDES manual was updated accordingly

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- **Clarified key terms**


**Difficulties with term "extreme event":** mostly used in relation to extreme climate- and weather events. It is an outlier in a series of events, but is not necessarily resulting in a disaster.

- **Use of the IRDR peril classification of hazards**
- **Cut-off periods for post-disaster reporting**

| Hazard | Cause of death | Time-span or recommended cut-off period | Source of data |
|---|---|---|---|
| **Drought** | Infectious diseases, malnutrition | 6 months after emergency state ceases, and Yearly cut-offs for multi-year events | Ministry of Health, Disaster management offices, Relief organizations, |
| **Flood** | Drowning, trauma | 4 weeks after event | Ministry of Health, Disaster management offices, Relief organizations |
| **Earthquake** | Trauma, fire | 4 weeks after event | Ministry of Health, Disaster management offices, Relief organizations |
| **Epidemic** | Infectious disease | Period when no new cases are recorded (disease specific e.g. Ebola 42 days based on incubation period) | Ministry of Health or health authority |
| **…** | … | … | … |


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# ESCAP DRSF is a big step foreward

Final draft available since 4 May 2018

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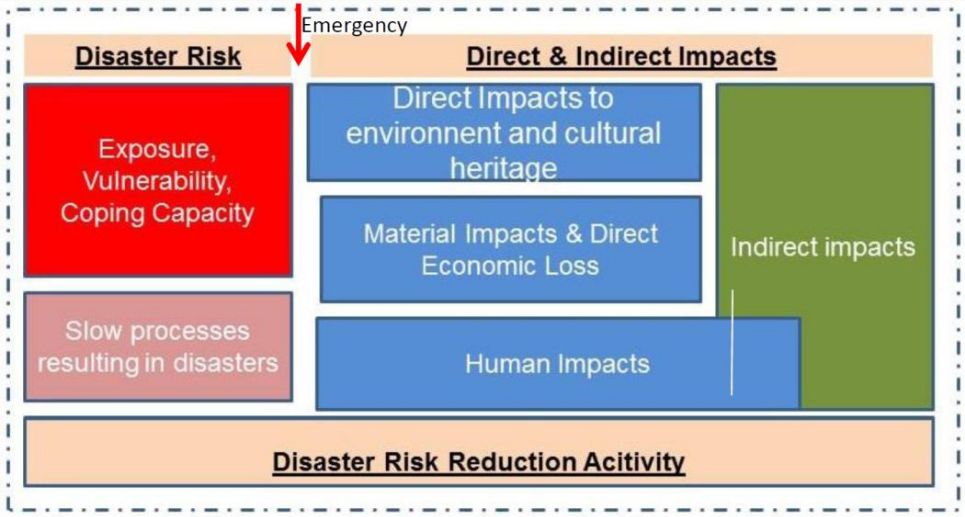
## ESCAP developed a disaster-related statistics framework and a basic range of disaster-related statistics

http://communities.unescap.org/asia-pacific-expert-group-disaster-related-statistics/content/drsf




**A:** Summary tables of disaster occurrences
**B:** Selected Background Statistics and Exposure to hazards
**C:** Summary tables of affected population
**D:** Summary tables of direct material impacts in physical terms
**E:** Summary tables of direct material impacts in monetary terms
**F:** Summary table of direct environmental impacts
**DRRE:** Disaster risk reduction expenditure accounting

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# Roles of NSOs have been defined

## Depending on the disaster-risk management phase

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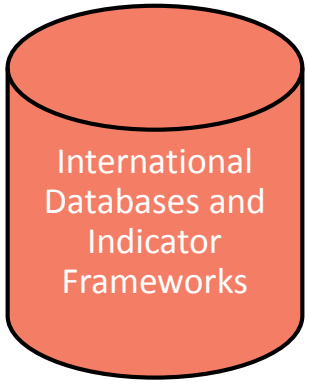
Possible NSO role:
- Coordination among institutions
- Production of statistics / indicators
- Reporting




**International reporting**

**Disaster Impact**

Possible NSO role:
- providing statistics for affected area

**During (Emergency period)**

**Preparedness**

**Response**

**Before**

**After**

**Prevention & Mitigation**

**Recovery**

**Risk Assessment**

Possible NSO role:
- providing statistics and reports
- producing statistics on previous disasters and losses

Possible NSO role:
- assessment of impact and losses
- assessing re-building efforts

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# Involvement of NSOs in measuring extreme events and disasters

## A set of roles for NSOs in disaster-risk statistics

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**Minimum (core) roles:**

- Providing baseline information for DRM (traditional statistics and new statistics)
- Emergency protocol for disaster response (also clarifying statistical confidentiality)
- Coordination for preparing post-disaster statistics
- Coordination of information flows for SDGs, SF and other indicator frameworks
- Ensure use of international standards and classification

**Additional possible roles:**

- Leading the work on assessing impacts
- National Reporting
- Maintaining a national 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

# Some challenges when revising the manual

## And how we tried to overcome them

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### Important reference documents are drafts or initial versions:

- DRSF: Submitted to the ESCAP Commission for its meeting on 11-16 May 2018
- Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction
- UNECE work on defining the role of NSOs completed by end of 2018

### Some concepts and terms used by the FDES and older reference documents (e.g. from ECLAC) differ slightly from those developed later, e.g.

- Terms “extreme event” and “natural disaster” are not used in the Sendai Framework
- “Number of people homeless” is a misleading term in the context of disasters. According to CES Recommendations for the 2020 Censuses of Population and Housing” homelessness refers to persons who do not usually live in either private or institutional households. It is recommended to use here the concepts of “displaced persons” and “people whose destroyed or damaged dwellings are attributed to disasters”

# Comments received on the draft methodological document

## Proposals for discussion

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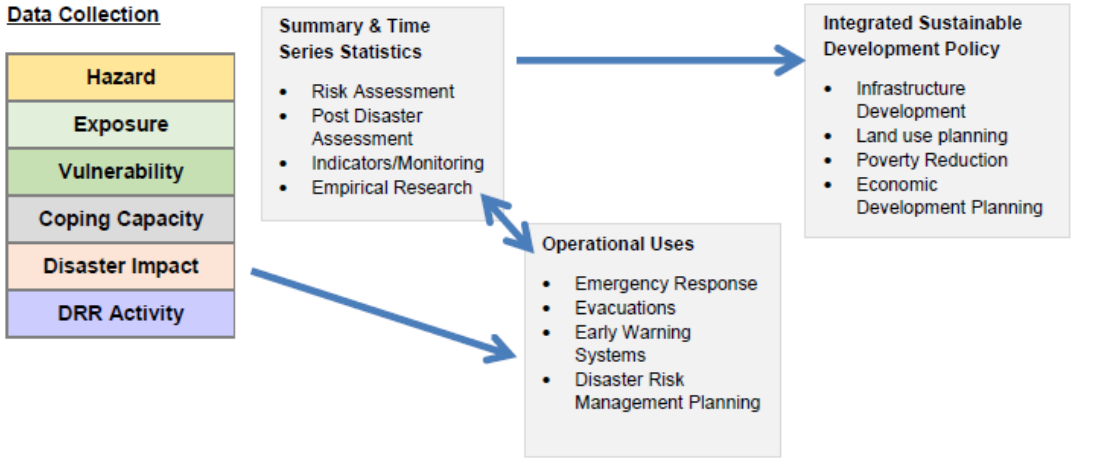
Comment: Scope of the statistics needs to be discussed:

- Proposal: To be aligned with DRSF, define it by the uses of disaster-related data

*Figure 1.4: Uses of disaster-related data*




- Question to Expert Group: Does this also cover the scope of "natural extreme events" or do we need to enlarge it (e.g. by climate change-related policies)?

# Comments received on the draft methodological document

Proposals for discussion

STATISTICS

Comment in 3B: When to record natural disasters?

- Proposal:

a) Distinguish between "when to record natural disasters" and "when to record extreme weather and climate events";

b) For natural disasters refer to DRSF;

c) For extreme weather and climate events refer to WMO/IPCC definition: *The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. In many cases, a weather or climate event with high impact is also deemed as extreme event. In this guideline, frequently occurring high impact weather and climate extremes such as heat wave, cold wave, extreme precipitation and drought are the main focus* (see Guidelines on the definition and monitoring of extreme weather and climate events)

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## Proposals for discussion

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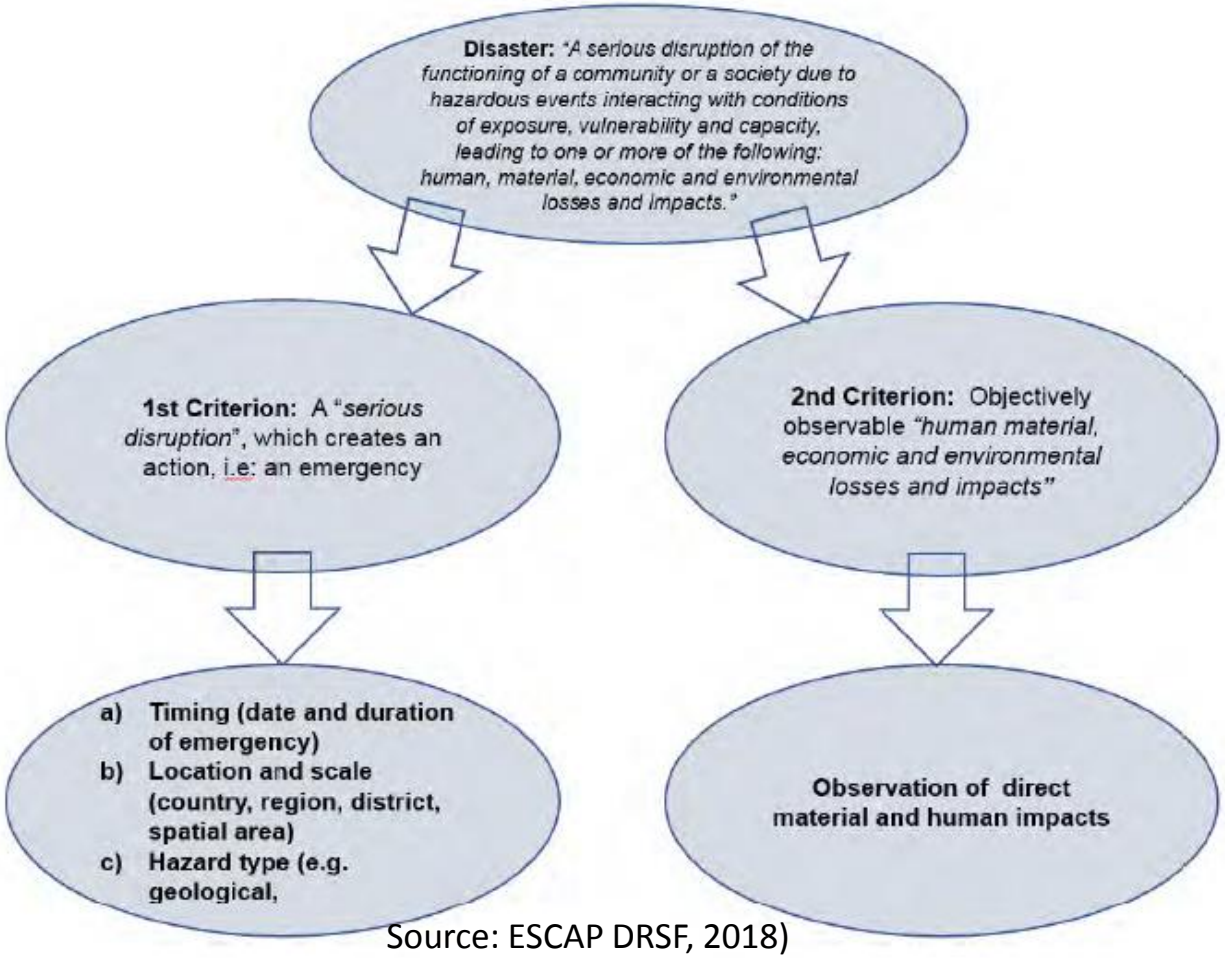


Source: ESCAP DRSF, 2018)

+ WMO/IPCC definition for extreme events

# Comments received on the draft methodological document

## Proposals for discussion

STATISTICS

Comment on sentence *Keep a consistent treatment of data when assessing impacts, even if this varies from country to country:* Does this mean across countries or for all data on a particular hazard within a country?

- Proposal: Use recommendations of UNISDR technical guidance per type of hazard:

| Hazard | Cause of death | Time-span or recommended cut-off period | Source of data |
|---|---|---|---|
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## Proposals for discussion

STATISTICS

Comment: Should deaths and missing be recoreded separately to report on Sendai Framework?

- Answer: Yes – they are needed for different indicators

| | |
|---|---|
| **Global target A: Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared with 2005-2015.** | |
| **A-1 (compound)** | Number of deaths and missing persons attributed to disasters, per 100,000 population. |
| **A-2** | Number of deaths attributed to disasters, per 100,000 population. |
| **A-3** | Number of missing persons attributed to disasters, per 100,000 population. |

# Comments received on the draft methodological document

Proposals for discussion

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Magnitude of hazard: how we can estimate the magnitude of drought because in some countries death and injured from flood or drought are not considered in extreme events

- Proposal: If no state of emergency declaration, use criteria of WMO Guidelines on the definition and monitoring of extreme weather and climate events

Houses damaged may not be recorded as economic burden on families because of a disaster. Can we benefit from household surveys in this regard?

- Proposal: Household surveys could be mentioned as an appropriate tool

# Other important suggestions

## To be considered in the next version of the text

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- Definition of impact, disaster and disaster impact have some overlap. To discuss how to reconcile these.
- UNISDR does not define “Natural Disaster”: Add a sentence defining NATURAL DISASTER as: Disaster caused from a Natural Hazard.
- Explanation given about “Measurement units” is not clear.
- The definition of the concept exposure is vague and limited.


# Thank you very much for your attention!

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