CRED CRUNCH

EM-DAT's new disaster classification

One of the major current challenges in the field of disaster data is to overcome the limitations induced by the lack of clear standards and definitions, which lead to inconsistent reliability and poor inter-operability of different disaster data compilation initiatives.

CRED militates since years for the creation of internationally recognized standards and definitions. That's why we are particularly happy to announce a major step forward in the development of a standardized international classification of disasters. Indeed, CRED and MünichRe have recently led a collaborative initiative, agreed on and implemented a common "Disaster Category Classification for Operational Databases". This new common classification has been established through several technical meetings that brought together CRED, MünichRe, SwissRe, ADRC and UNDP and represents a first step in the development of a standardized international classification of disasters.

This new classification distinguishes two generic categories for disasters (natural and technological), the natural disaster category being divided into six sub-groups: Biological, Geophysical, Climatological, Hydrological, Meteorological and Extra-Terrestrial disasters. Each sub-group in turn covers 12 disaster types and more than 32 sub-types (the listing and definitions of the different disaster types and sub-types has been included in the annexes of Annual Disaster Statistical Review available here).

The hierarchy of the new classification was constructed based on a "triggering hazard" logic. Indeed the triggering hazard is used as the reference root to classify the disaster. For example, a mass movement can be triggered by either a geophysical or a hydrological phenomenon. The triggering hazard will then determine if the disaster is assigned to in mass movement dry or wet category. Due to this change in logic, two previous categories - Slide and Wave/Surge – were disaggregated and reorganized.

During the retrofitting work, over 17000 entries were reviewed individually and reclassified according to the new classification. Most of the changes induced by the new classification are at the level of the disaster sub-types and therefore do not affect the distribution of disasters between the main disaster groups or types.

The harmonizing of the classification between two of the most important disaster databases (NatCat and EM-DAT) and the definition of common standards is a important contribution to the improvement of the quality and the reliability of these international disaster databases.

Dr. Debarati Guha-Sapir

Number of records in EM-DAT by disaster groups and types: from 1900 to 2007

Number of records in EM-DAT	
Biological	**1220**
Epidemic	1137
Insect infestation	83
Climatological	**1236**
Drought	549
Extreme temperature	352
Wildfire	335
Geophysical	**1351**
Earthquake	1095
Mass movement dry	52
Volcano	204
Hydrological	**3851**
Flood	3349
Mass movement wet	502
Meteorological	**3090**
Storm	3090
Technological	**6403**
Industrial Accident	1146
Misc Accident	1101
Transport Accident	4156
Total	**17151**

Natural disasters in EM-DAT by disaster groups

- Biological — 11%
- Climatological — 11%
- Geophysical — 13%
- Hydrological — 36%
- Meteorological — 29%

Technological disasters in EM-DAT by disaster groups

- Industrial Accident — 18%
- Misc Accident — 17%
- Transport Accident — 65%
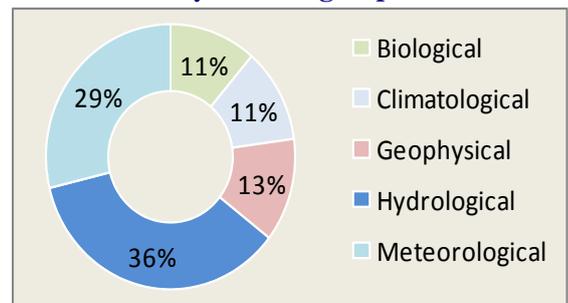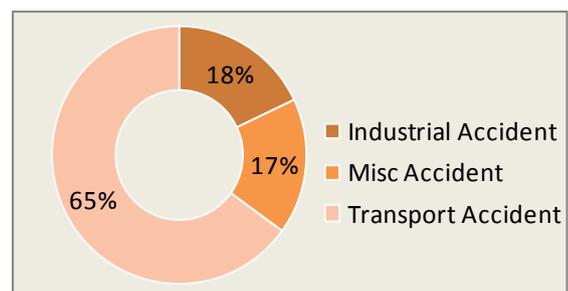
Natural Disasters

Biological

- **Epidemic**
  - *Viral Infectious Disease*
  - *Bacterial Infectious Disease*
  - *Parasitic Infectious Disease*
  - *Fungal Infectious Disease*
  - *Prion Infectious Disease*
- **Insect Infestation**
  - *Grasshopper*
  - *Locust*

Geophysical

- **Earthquake**
  - *Earthquake*
  - *Tsunami*
- **Volcano**
  - *Volcanic Eruption*
- **Mass Movement Dry**
  - *Rockfall*
  - *Landslide*
  - *Avalanche*
  - *Subsidence*

Climatological

- **Extreme temperature**
  - *Heat wave*
  - *Cold wave*
  - *Extreme winter condition*
- **Drought**
  - *Drought*
- **Wildfire**
  - *Forest fire*
  - *Bush/brush fire*
  - *Scrub/grassland*
  - *Urban fire*

Hydrological

- **Flood**
  - *General flood*
  - *Flash flood*
  - *Storm surge/coastal flood*
- **Mass Movement Wet**
  - *Rockfall*
  - *Landslide*
  - *Avalanche*
  - *Subsidence*

Meteorological

- **Storm**
  - *Tropical cyclone*
  - *Extratropical cyclone*
  - *Local storm*

Hydrometeorological

CRED News

- CRED is pleased to present the second edition of the **Annual Disaster Statistical Review: Numbers and Trends 2007**. This second edition analyses the 2007 disaster figures with comparisons to previous years. ([download](#))

- CRED is currently carrying out a **census of all existing disaster data collection initiatives**. If you are in charge of a disaster related information database or if you know an interesting initiative, please do not hesitate to share your information with us. ([contact us](#))

- The EM-DAT team is currently undertaking an evaluation of its website (www.emdat.be). To better serve your needs in the future, we would like to invite you to take a short **survey on your EM-DAT experience** . ([Survey](#))

Technological Disasters

Industrial Accident

- **Collapse**
- **Explosion**
- **Fire**
- **Gas Leak**
- **Poisoning**
- **Radiation**
- **Other**

Miscellaneous Accident

- **Collapse**
- **Explosion**
- **Fire**
- **Other**

Transport Accident

- **Rail**
- **Road**
- **Water**
- **Air**