EM-DAT Guidelines:
Data Entry, Field Description/Definition

Date entered: The date (dd/mm/yyyy) when the disaster event is recorded into the database (automatic through the login)

Entered by: The name of the person who recorded the disaster into the database (automatic through the login)

Last updated: The date (dd/mm/yyyy) the disaster event recorded into the database has been updated (automatic)

Entered by: The name of the person who has updated the information on the disaster event (automatic through the login)

Level 1 – Disaster event

Disaster Number: A unique 8 digit disaster number is generated for each disaster event. The "DisN°" includes the year (4 digits) and a sequential number (4 digits) which is unique for each disaster event (i.e. Tsunami 2004 = DisN° 2004-0659).

Disaster group: Two main groups of disasters are distinguished in EM-DAT: natural disasters and technological disasters. This field is automatically linked to the **disaster sub-group** and the **disaster type**. There is a third group 'Complex disasters' which include some major famine situation for which the drought were not the main causal factor. See ***Table 1*** for the Disasters Classification.

Disaster sub-group: The natural disaster category is divided into 6 sub-groups: Biological, Geophysical, Climatological, Hydrological, Meteorological and Extra-terrestrial disasters.

Disaster type: 1 main disaster type is identified per event. This field is automatically linked to the **disaster sub-group** and the **disaster group**. Two or more disasters may be related (a disaster may occur as a consequence of a primary event). For example, a cyclone may generate a flood or a landslide; or an earthquake may cause a gas line to rupture, causing an ecological disaster. The primary disaster type (or triggering event) is recorded first, followed by the **Associated Disaster 1 and 2** fields by the secondary ones.

Disaster sub-type: Subdivision related to the **disaster type**.

Disaster sub-sub-type: Any appropriate sub-division of the disaster sub-type (not applicable for all disaster sub-types).

Table 1 – Disasters classification: The Disasters classification used in EM-DAT is based on and adapted from the he IRDR Peril Classification and hazard Glossary. DATA Project Report #2, March 2014 (click to display)

Disaster Group	**Disaster Sub-Group**	**Disaster Type**	**Disaster Sub-Type**	**Disaster Sub-Sub Type**
Natural	Geophysical	Earthquake	Ground movement	
			Tsunami	
		Volcanic activity	Ash fall	
			Lahar	
			Pyroclastic flow	
			Lava flow	
		Mass Movement		
	Meteorological	Storm	Tropical storm	
			Extra-tropical storm	
			Convective storm	Derecho
				Hail
				Lightning/thunderstorm
				Rain
				Tornado
				Sand/dust storm
				Winter storm/blizzard
				Storm/surge
				Wind
				Severe Storm
		Extreme Temperature	Cold wave	
			Heat Wave	
			Severe winter conditions	Snow/ice
				Frost/freeze
		Fog		
	Hydrological	Flood	Coastal flood	
			Riverine flood	
			Flash flood	
			Ice jam flood	
		Landslide	Avalanche (snow, debris, mudflow, rock fall)	
		Wave action	Rogue wave	
			Seiche	
	Climatological	Drought	Drought	
		Glacial Lake outburst		
		Wildfire	Forest fires	
			Land fire: Brush, bush, pasture	
	Biological	Epidemic	Viral diseases	
			Bacterial diseases	
			Parasitic diseases	
			Fungal diseases	
			Prion diseases	
		Insect Infestation	Locust Grasshopper	
		Animal accident		
	Extra-terrestrial	Impact	Airburst	
		Space weather	Energic particles	
			Geomagnetic storm	
			Shockwave	
Technological	Technological	Industrial accident	Chemical spill	
			Collapse	
			Explosion	
			Fire	
			Gas leak	
			Poisoning	
			Radiation	
			Other	
		Miscellaneous accident	Collapse	
			Explosion	
			Fire	
			Other	
		Transport accident	Air	
			Rail	
			Road	
			Water	

Entry criteria: The reason for recording the disaster event into EM-DAT. At least one of the following criteria must be fulfilled in order for an event to be entered into the database:

- **Deaths:** 10 or more people deaths
- **Affected:** 100 or more people affected/injured/homeless.
- **Declaration/international appeal:** Declaration by the country of a state of emergency and/or an appeal for international assistance

Some secondary criteria are also taken into account when figures are missing, such as "Significant Disaster/Significant damage (i.e. "worst disasters in the decade» and/or " it was the disaster with the heaviest damage for the country").

Event name: Any specification related to the disaster which allow its identification (i.e. "Mitch" for the name of storm, "Boeing 707" for the type of plane in an air crash, name of the diseases such as "Cholera" for an epidemic, "Etna" for the name of the volcano, etc.)

Glide Number: The GLobal IDEntifier number (GLIDE; further information available on www.glidenumber.net) is a globally common Unique ID code for disasters intended to facilitate linkages between records in diverse disaster databases and disaster exchange information websites such as ReliefWeb.

DFO/GVP/USGS: This field is used to link the EMDAT disaster with the ones of other databases: Dartmouth Flood Observatory, Global Volcanism Program, USGS.

Level 2 – Country (ies)

Geographical information

Country: The country in which the disaster has occurred or had an impact; with the name and spelling being taken from standard list of country names published by the International Standards Organization (ISO). If a disaster has affected more than one country, there will be one entry for each country.

ISO Code: The International Organization for Standardization attributes a 3-letter code to each country. CRED uses the ISO 3166 (www.iso.org). This field is automatically linked to the country.

Region: The region to which the country belongs. This field is automatically linked to the country. CRED use the UN regional division (see at unstats.un.org)

Continent: The continent to which the country belongs. This field is automatically linked to the country.

River basin: Name of the river basins of the affected area (used usually for flood event).

Epicenter: Information on the location of the epicenter of an earthquake. E.g. 30 km SW of Naples

Latitude: North-South coordinates; when available (used for earthquakes, volcanoes and floods)

Longitude: East-West coordinates; when available (used for earthquakes, volcanoes and floods)

Location: Geographical specification (e.g. name of a city, village, department, province, state, or district). This allows for the subsequent analysis of disaster occurrence and impact by region, district or any other sub-national administrative boundary.

Temporal information

Start day/month/year: The date when the disaster occurred. This date is well defined for all sudden-impact disasters. For disaster situations developing gradually over a longer time period (i.e. drought) with no onset date, the field « day » can be left blank.

End day/month/year: The date when the disaster ended. This date is well defined for all sudden-impact disasters. For disaster situations ending over a longer time period (i.e. drought) with no definite concluding date, the field « day » can be left blank.

Local time: The local time when the disaster occurred (given for sudden disasters like earthquakes and volcanoes).

Physical characteristics

Origin: The triggering origin of the disaster (i.e. Heavy rains for a flood, drought for a forest fire).

Associated disasters 1 and 2: The secondary and /or associated effects or consequences of a primary event (i.e. Landslide for a flood, explosion after an earthquake, etc ...)

Disaster magnitude scale and value: The "intensity "of a specific disaster (the unit is automatically linked to the disaster type)

- **Earthquake:** Richter Scale
- **Flood:** Km² (area covered)
- **Drought:** Km² (area covered)
- **Insect Infestation:** Km² (area covered)
- **Extreme Temperature:** °C (minimum or maximum value)
- **Epidemic:** Number of Vaccinated
- **Wild fire**: Km2 (area covered)
- **Storm:** kph (speed of wind)
- **Radiation:** curies
- **Chemical spill:** m³

Status

Aid contribution: The total amount (given in 000'US$ current value, i.e. value at the time of the report) of contribution for immediate relief activities given to the country as a response to the disaster (using the Financial Tracking System of OCHA from 1992 onwards).

OFDA response: Whether or not OFDA responded to the disaster.

Appeal for international assistance + date: Was there any request for an international assistance from the affected country(ies) and when was it requested.

Declaration of disaster + date: Was there a state of emergency declared in the country(ies) and when was it declared.

Level 3 – Source of information

Source type and name: The database is compiled from various sources including UN, governmental and non-governmental agencies, insurance companies, research institutes and press agencies (see *Table 2*). As there can be conflicting information and figures, CRED has established a method of ranking these sources according to their ability to provide trustworthy and complete data. In the majority of cases, a disaster will only be entered into EM-DAT if at least two sources report the disaster's occurrence in terms of deaths and/or affected persons.

The final figures in EM-DAT usually originate from the priority source, but they can also be completed by a secondary source. In certain cases, a secondary source can become a primary one. This can be the case, for example, when final figures are made available long after the disaster has occurred. Also, some sources are used for specific disasters (i.e. USGS for earthquakes, WHO for epidemics).

Table 2: Main Sources used in EM-DAT (non exhaustive)

Source Type	**Source Information**	**Type of disasters covered**
United Nations	OCHA	Natural disasters
	IRIN	Natural and technological disasters (Africa)
	WFP	Drought/Famine
	WMO	Natural disasters
	WHO/OMS	Epidemics
	FAO	Drought/Famine
National Governments	National Governments	Natural and technological disasters
US Governments	FEMA	Natural disasters (America)
	NOAA	Natural disasters
	OFDA	Natural and technological disasters
	USGS	Earthquakes
	Smithsonian	Volcanoes
	DFO	Floods, slides and windstorms
	CDC	Epidemics
IFRC	IFRC	Natural and technological disasters
Inter-Governmental Organizations	World Bank	Major natural disasters
ReInsurance Companies	SwissRe	Natural and technological disasters
	MünichRe	Natural disasters
Press	AFP	Natural and technological disasters

Reporting date: Latest reporting date of the source

Reliability score (1/5): A reliability score going ranking from (1) very low - to (5) very high, has been established in order to ensure the quality of the data

Human impact

Deaths: Number of people who lost their life because the event happened.

Missing: The number of people whose whereabouts since the disaster are unknown, and presumed dead based on official figures.

Total deaths: deaths + missing people

Injured: People suffering from physical injuries, trauma, or an illness requiring immediate medical assistance as a direct result of a disaster.

The number of injured people is entered when the term "injured" is written in the source. The injured are always part of the "total affected". Any related word like "hospitalized" is considered as injured. If there is no precise number is given, such as "hundreds of injured", 200 injured will be entered (although it is probably underestimated). Any other specification will be written in the **comments** field.

Affected: People requiring immediate assistance during an emergency situation. The indicator *affected* is often reported and is widely used by different actors to convey the extent, impact, or severity of a disaster in non-spatial terms. The ambiguity in the definitions and the different criteria and methods of estimation produce vastly different numbers, which are rarely comparable.

They are always part of the 'total affected population'. Reporting from the field should give the number of individuals that are affected; if only the number of families affected or houses damaged are reported, the figure is multiplied by the average family size for the affected area (x5 for the developing countries, x3 for the industrialised countries, according to UNDP country classification). Any other specification will be written in the **comments** field.

Specific examples:

- Number of houses damaged = 50 x 5 = 250 affected (although it is probably underestimated)
- If the value ranging from a minimum to a maximum : the average is taken
- Thousands of affected = 2000 affected (although it is probably underestimated)

Homeless: Number of people whose house is destroyed or heavily damaged and therefore need shelter after an event.

They are always part of the 'total affected population'. Reporting from the field should give the number of individuals that are homeless; if only the numbers of families homeless or houses destroyed are reported, the figure is multiplied by the average family size for the affected area (x5 for the developing countries, x3 for the industrialised countries, according to UNDP country list). Any other specification will be written in the **comments** field.

Specific examples:

- Number of houses destroyed = 50 x 5 = 250 homeless (although it is probably underestimated)
- If the value ranging from a minimum to a maximum : take the average
- Thousands of homeless = 2000 homeless (although it is probably underestimated)

Total affected: The total affected is the sum of injured, affected and homeless

Economic impact

Total estimated damages (in 000'US$ in the value of the year of occurrence, unadjusted for inflation): A value of all damages and economic losses directly or indirectly related to the disaster. The information may include the breakdown figures by sectors: Social, Infrastructure, Production, Environment and other (when available).

Reconstruction cost (in 000'US$ in the value of the year of occurrence, unadjusted for inflation): These costs are for the replacement of lost assets. Reconstruction costs are different than total damages as they must take into account present construction or purchase costs of goods, as well as the additional cost of prevention and mitigation measures to reduce damage from future disasters.

Insured losses (in 000'US$ in the value of the year of occurrence, unadjusted for inflation): Economic damages which are covered by the insurance companies.

Total estimated damages (in 000'US$ adjusted value) ;
Reconstruction cost (in 000'US$ adjusted value) and
Insured losses (in 000'US$ adjusted value): ***Same indicators but adjusted to the 2021 US$ value.***

CPI : Consumer Price Index (See more), used to convert the damages (which are given at the time the disaster occured) to the curent US$ value.

Sectorial impact

Check box specifying the different sectors affected by the disaster: Animals, Industry, Electricity, Water supply/sanitation, Communications, Cultural infrastructure, Transportation, Other (+ specifications of what "other" means).

Infrastructural impact

The infrastructure that was damaged or destroyed by the disaster, given in absolute values or percentages: Houses (number), Bridges (number), Commercial/business (number), Roads (km), Rails (km), Education (number of schools), Health (numbers of health centers/hospitals), Forest (ha), Farmland/crops (ha)

Comments: This field includes all other relevant information related to the event:

- Other relevant information related to people recorded as dead, injured, homeless, affected and the breakdown of the estimated damages; any other relevant indicator such as the number of people displaced, evacuated, etc.
- Miscellaneous information related to the event (e.g. worst disaster in the region for the last decade).