

CRED Crunch

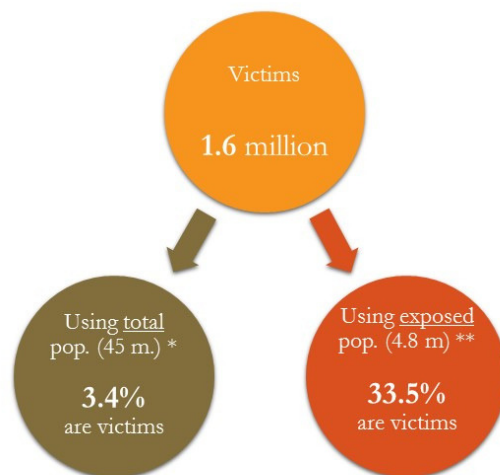
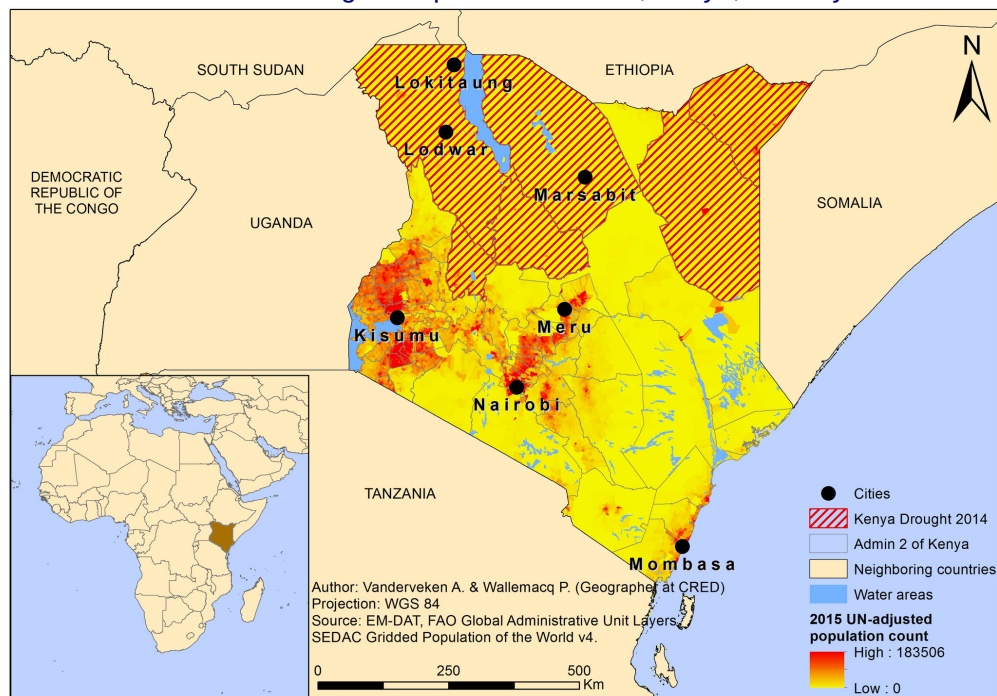


Issue No. 47

"Local data on disaster losses"

July 2017

A - Drought footprint and its PPE, Kenya, January 2014



As reporting and assessment become more precise (cf: SFDRR, Paris Agreement or SDG processes), especially from the development perspective, the challenge now is to compile data on impact and losses at higher resolution within a country. CRED is now making an active effort to compile data at subnational levels. The team is geocoding impact footprints at detailed administrative level, using gridded population layers to assess exposed populations. They will provide data support to countries for reporting to the global monitoring processes using geocoded shapefiles.

The accuracy and completeness of the georeferenced data are directly linked to the information reported by the various sources used within EM-DAT.

In recent years, the occurrence of a disaster and the geospatial location of its footprint has become easier as more sources report on disasters at 1st and possibly 2nd administrative unit level. This allows EM-DAT to geolocate the imprint of the event at a higher resolution and provides policymakers with improved knowledge of the risk zones within a country.

Of the total recorded disasters (5,937), a little less than half are georeferenced at 2nd Administrative Unit Level (2,537) while the rest are coded at 1st Administrative Unit Level (3400). About 2% of disasters have no spatial location information and are typically events such as droughts or extreme temperature.

$$* \text{ SIDI: } \frac{\text{Victims}}{\text{Total Pop.}}$$

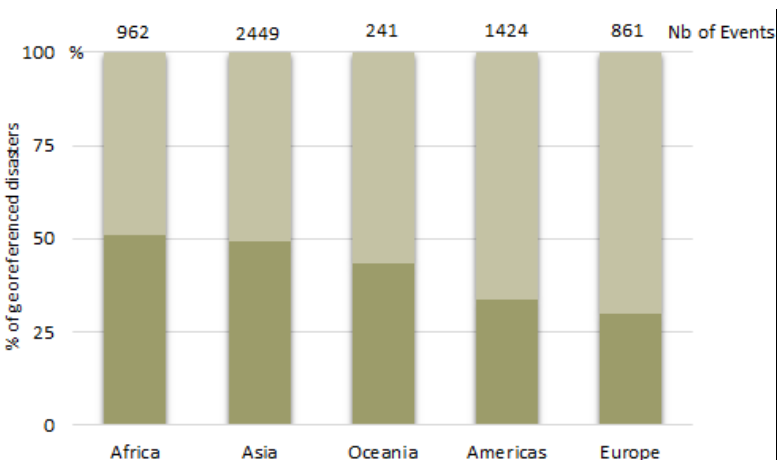
$$** \text{ Adjusted SIDI: } \frac{\text{Victims}}{\text{PPE}}$$

SIDI: Standardized Index for Disaster Impact
 Victims incl. deaths, missing, affected
 Total Pop. incl. country pop. at time of the disaster
 PPE incl. Population potentially exposed
 (Population source: GPWv4)

Standardizing disaster loss often involve dividing the indicator by a denominator such as population, GDP, age/sex groups. This approach, attractive as it is, can be very misleading as these factors can differ widely across subnational zones.

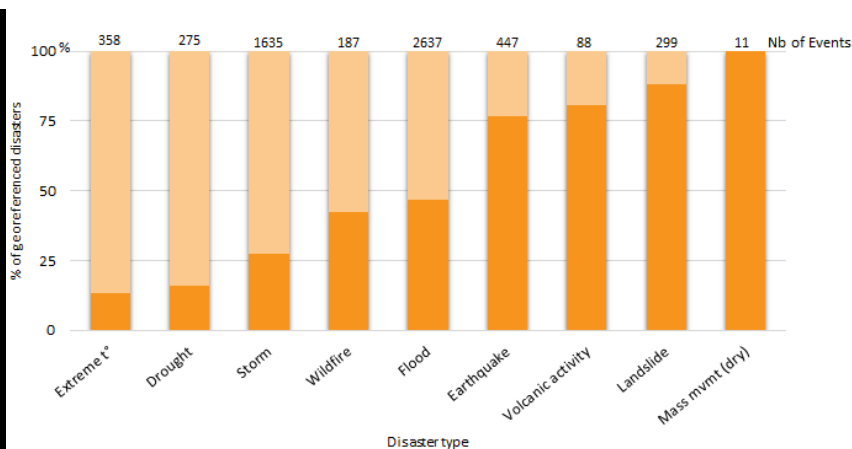
Subnational data provides a more accurate picture of the disaster loss burden

The quality of subnational location data depends on continent (Fig. B), disaster type (Fig. C), and country in which the disaster occurs.



B – Percentage of disasters georeferenced at 2nd Administrative Unit level by continent.

The source of reporting (ie. continents and country) often explains variability in the quality of subnational location data. For example, the African and Asian continents report location in greater detail than do the Americas or Europe.



C – Percentage of disasters georeferenced at 2nd Administrative Unit level by disaster type.

Acute disasters such as earthquakes are easier to delimit and therefore reporting is at higher resolution. Equally important disasters such as ext. temp. and drought urgently require improved geolocalisation.

Although overall reporting of disaster impact has improved substantially in the last 30 years, reporting at subnational levels is still deficient.

Accurate assessment of damage and losses from disasters are critical elements for risk reduction, preparedness, and resilience among affected communities. In almost all countries, statistics have improved significantly as a result of improved knowledge of the obstacles created by disasters and their impact on the development process. Today, thanks to better database capacities, reporting, and communications, few catastrophic events go unrecorded in global data repositories.

Global monitoring mechanisms (eg. Sendai monitoring system, Paris Agreement or the Sustainable Development Goals) will be enhanced by disaster loss data reporting from regional sources with higher resolution spatial footprints of both location and losses.

To have good subnational data, we need regional hubs. Data hubs can be created in Regional Technical Institutions who have the capacity for sound data management and analysis.

Analyses for this issue were done by Pascaline Wallemacq and Alizée Vanderveken with the cooperation of Debarati Guha-Sapir

CRED News

- CRED has launched a new system to access EM-DAT Database. Register on <http://www.emdat.be/database>
- CRED has launched a satisfactory survey on the EM-DAT website : <http://www.emdat.be/>
- Two new articles published in scientific peer reviewed journals:
 - CHERRI Z., GIL CUESTA J., RODRIGEZ-LLANES J., GUHA-SAPIR D. (2017) Early marriage and barriers to contraception among Syrian Refugee women in Lebanon : A qualitative study ? Int J. Environ Res Public Health; 14 (8): 836
 - DARGE DELBISO T., ALTARE C.; RODRIGUEZ-LLANES, J., DOOCY, S., GUHA-SAPIR D. (2017) Drought and child mortality: a meta-analysis of small-scale surveys from Ethiopia. Nature : Scientific Report. 7: 2212