Goal 13: Take urgent action to combat climate change and its impacts[b]
Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Indicator 13.1.2: Number of deaths, missing persons and persons affected by disaster per 100,000 people[a]

Institutional information

Organization(s):

United Nations Office for Disaster Reduction (UNISDR)

Concepts and definitions

Definition:

Death: The number of people who died during the disaster, or directly after, as a direct result of the hazardous event

Missing: The number of people whose whereabouts is unknown since the hazardous event. It includes people who are presumed dead although there is no physical evidence. The data on number of deaths and number of missing are mutually exclusive.

Affected: People who are affected, either directly or indirectly, by a hazardous event.

Directly affected: People who have suffered injury, illness or other health effects; who were evacuated, displaced, relocated or have suffered direct damage to their livelihoods, economic, physical, social, cultural and environmental assets.

Indirectly affected: People who have suffered consequences, other than or in addition to direct effects, over time due to disruption or changes in economy, critical infrastructures, basic services, commerce, work or social, health and psychological consequences.

* In this indicator, given the difficulties in assessing the full range of all affected (directly and indirectly), UNISDR proposes the use of an indicator that would estimate “directly affected” as a proxy for the number of affected. This indicator, while not perfect, comes from data widely available and could be used consistently across countries and over time to measure the achievement of the Target B of the Sendai Framework.

[a] An open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction established by the General Assembly (resolution 69/284) is developing a set of

indicators to measure global progress in the implementation of the Sendai Framework. These indicators will eventually reflect the agreements on the Sendai Framework indicators.

Rationale:

The disaster loss data on mortality is significantly influenced by large-scale catastrophic events, which represents important outliers in terms of mortality, as they normally imply considerable numbers of people killed. UNISDR recommends Countries to report the data by event, so complementary analysis to determine true trends can be done by both including and excluding such catastrophic events that can represent important outliers in terms of mortality.

Concepts:

See under Definition.

Comments and limitations:

Not every country has a comparable national disaster loss database that is consistent with these guidelines (although current coverage exceeds 89 countries). Therefore, by 2020, it is expected that all countries will build/adjust national disaster loss databases according to the recommendations and guidelines by the OEIWG.

As stated by Member States in the First and Second Sessions of the OEIWG, data of "Missing/Presumed dead" is not consistently collected. For many countries, the separation of data on "Missing/Presumed dead" from "Deaths/Deceased", or the collection of data on "Missing/Presumed dead" will require to report against the two separate indicators.

Methodology

Computation Method:

Note: Computation methodology for several indicators is very comprehensive, very long (about 180 pages) and probably out of the scope of this Metadata. UNISDR prefers to refer to the outcome of the Open Ended Intergovernmental Working Group, which provides a full detailed methodology for each indicator and sub-indicator.

The latest version of these methodologies can be obtained at:

http://www.preventionweb.net/documents/oiewg/Technical%20Collection%20of%20Concept%20Notes%20on%20Indicators.pdf

A short summary:

Summation of data on related sub-indicators from national disaster loss databases divided by the sum of relative figures of global population data (e.g. World Bank or UN Statistics information).

Affected people will be calculated as summation of sub-indicators. Several of sub-indicators will be calculated based on country averages of inhabitants per household, number of workers per hectare of agriculture, per livestock, per industry and per commerce.

Disaggregation:

"Further to the recommendations of both the OEIWG and the IAEG-SDGs, the Secretariat recommends disaggregating data:

-By country, by event, by hazard type, by hazard family (e.g. using the IRDR classification, natural hazards can be disaggregated as climatological, hydrological, meteorological, geophysical, biological and extra-terrestrial)

-By deaths / missing

- Additionally, the OEIWG proposed disaggregation by age, sex, location of residence and other characteristics (e.g. disability) as relevant and possible, in order to align with SDG's requirements. The Secretariat encourages the adoption of these recommendations.

- Aggregation of “location of residence”: ideally by sub-national administrative unit, similar to municipality."

Treatment of missing values:

- At country level

  In National Disaster Loss database data missing values and 0 or null are considered equivalent. This is a consequence of the typical form of disaster situation reports, which account only for those impacts that occurred. Normally impacts that not occur are simply not reported (i.e. there are no explicit reports that something didn't happen, for example if no agricultural damage occurs in a disaster, the associated report simply does not have a section on agriculture, instead of a section stating no impact occurred).

- At regional and global levels

  NA

Regional aggregates:

See under Computation Method.

It will be calculated as the summation of mortality per country divided by the total population.

Sources of discrepancies:

Threshold (e.g. including/excluding small/large scale disasters): International Data Sources record only events that surpass some threshold of impact. For example, EMDAT records only events with mortality greater than 10, affected greater than 100 or an international declaration. Private Insurance or Reinsurance global disaster databases record only events that have insured losses, which affects negatively countries with low insurance market penetration.

Methodology / definition: International data sources use secondary data sources to assemble their datasets. These data sources usually have non uniform or even inconsistent methodologies, producing heterogeneous datasets.

Observation (national level data is more comprehensive): International data collectors, due to limitations on access to information, do not record a large number of events that are not publicised internationally, or are never 'seen' by the secondary data sources used.

Data Sources

Description:

National disaster loss database, reported to UNISDR

Collection process:

The official counterpart(s) at the country level will build/adjust national disaster loss databases according to the recommendations and guidelines by the OEIWG.

Data Availability

Description:

Around 100 countries

The number of countries with national disaster loss databases using the DesInventar tools and methodology currently stands at 89 countries. Given the requirements for disaster loss data enshrined in reporting on the SDGs and the targets of the Sendai Framework, it is expected that by 2020, all member states will have built or adjusted their national disaster loss databases according to the recommendations and guidelines by the OEIWG.

Time series:

From 1990 to 2013: National Disaster Loss Database

Calendar

Data collection:

2017-2018

Data release:

Initial datasets in 2017, a first fairly complete dataset by 2019

Data providers

Name:

In most countries national disaster loss databases are established and managed by special purpose agencies including national disaster management agencies, civil protection agencies, and meteorological agencies, and disaster data collected by line ministries. Some exceptions include Academic institutions conducting long term research programs, NGO's engaged in DRR and DRM, and insurance databases or data sources when market penetration is very high.

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Data compilers

UNISDR

References

URL:

http://www.preventionweb.net/documents/oiewg/Technical%20Collection%20of%20Concept%20Notes%20on%20Indicators.pdf

References:

The Open-ended Intergovernmental Expert Working Group on Indicators and Terminology relating to Disaster Risk Reduction (OEIWG) was given the responsibility by the UNGA for the development of a set of indicators to measure global progress in the implementation of the Sendai Framework, against the seven global targets. The work of the OEIWG shall be completed by December 2016 and its report submitted to the General Assembly for consideration. The IAEG-SDGs and the UN Statistical Commission formally recognizes the role of the OEIWG, and has deferred the responsibility for the further refinement and development of the methodology for disaster-related SDGs indicators to this working group.

http://www.preventionweb.net/drr-framework/open-ended-working-group/

The latest version of documents are located at:

http://www.preventionweb.net/drr-framework/open-ended-working-group/sessional-intersessional-documents

Related indicators

1.5; 11.5; 11.b; 13.1; 2.4; 3.6; 3.9; 3.d; 4.a; 6.6; 9.1; 9.a; 11.1; 11.3; 11.c; 13.2; 13.3; 13.a; 13.b; 14.2; 15.1; 15.2; 15.3; 15.9.