

# Displacement indicators for DRR

Proposed set of metrics and indicators to integrate displacement dimensions in DRR

## Introduction

The purpose of this document is to propose a set of draft indicators measuring dimensions of displacement that matter to Disaster Risk Reduction planning, implementation and monitoring. In particular, the proposed indicators should support countries in the development and operationalization of:

- Custom indicators to complement ongoing monitoring efforts against the targets of the Sendai Framework and relevant Sustainable Development Goals;
- Disaster risk and impacts indicators that can support disaster prevention, preparedness, response and recovery activities focusing on population movements.

This document outlines the data, metrics and indicators required for estimating and measuring each of the identified displacement dimensions and issues, including occurrence, patterns and impacts of displacement. It aims to guide countries in the development of more robust, comprehensive and standardised approaches to measuring displacement in the context of disasters, and its impacts, and understand how displacement interfaces with vulnerability and risk to disasters.

## Rationale

Displacement is already one of the key consequences of disasters – a concern for countries across the development spectrum and in all regions, and one that is only expected to grow in relevance as disaster risk continues to grow. Reliable data on displacement is vital for all DRR efforts. Having an accurate overview of how many people have been displaced, their characteristics, the reasons and patterns of their movement and the duration and impacts of their displacement is essential to fully understand disaster risk and to design and implementation of disaster-related work. At the same time, gathering data on displacement can also help countries evaluate the effectiveness of their DRR practices, and monitor their progress against DRR objectives.

Data coverage, quality and accessibility remain however key challenges hindering the full integration of displacement issues in DRR planning and implementation. Disaster displacement is a complex phenomenon that is difficult to capture via data. Establishing who is displaced, when displacement starts and ends, how displaced and non-displaced people are affected by displacement are all challenging conceptual questions that are difficult to address through data efforts. Moreover, current displacement data systems often lack coverage and interoperability, do not rely on commonly-agreed definitions and metrics, nor on coordination and synergies among data collection entities. For instance, different countries and institutions do not use the term “displaced” consistently when they collect data or report on disaster displacement. People displaced by cyclone in 2021 were referred to as “sans-abris” (i.e. *homeless*) in Madagascar and “moved” in Iraq.<sup>1</sup> Displaced persons may be included among a broader category of “directly affected”, resulting in invisibility of displacement issues, confusion and inaccurate data.

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<sup>1</sup> Add footnotes

Significant progress has been made over the last decade in strengthening collaboration mechanisms, and enhancing accessibility and quality of data, but there is still much room for improvement.

### Interoperability and standardisation

Standardised collection of data in different disaster displacement situations, across countries and over time is essential to support analyses of trends, sub-national and cross-country comparisons and aggregation of results. This is a precondition to getting a better sense of the scale of the phenomenon and of its evolution over time, and to developing standard indicators to inform and monitor DRR - i.e. to quantify potential, occurrence, patterns and impacts of displacement in disaster risk analyses, disaster preparedness and response planning, and in the assessment of post-disaster recovery.

The Sendai Framework emphasises this need. It recognises that States are responsible for reducing disaster risk, and that this responsibility should be shared with other groups including local governments, the private sector and civil society. UNDRR's Words Into Action on Disaster Displacement says: "Tools and systems used to collect and analyse the data should be interoperable to facilitate sharing, exchange and comparison".<sup>2</sup>

As highlighted in the International Recommendations on Internally Displaced Persons Statistics by the Expert Working Group on Refugee Statistics (EGRIS), "when data are collected, the quality needs to follow international standards as outlined, for example, in the Fundamental Principles of Official Statistics. This includes following agreed-upon statistical frameworks and definitions, generating proper documentation of how data have been collected and processed, ensuring confidentiality of all respondents, and establishing a dissemination plan including information on how the data will be made available to the public. As part of these recommendations, internationally comparable indicators will be developed [...] Implementing comparable global indicators will improve the quality and comparability of national and international statistics and improve capacity for evidence-based decision-making and planning on different levels."<sup>3</sup>

EGRIS' International Recommendations on Internally Displaced Persons Statistics (IRIS) provide a broad framework to guide this effort towards standardization of definition and approaches. In particular they recognise:

1. The need to gather data on displacement comprehensively, consistently with the broad definition provided by the Guiding Principle and widely used in relevant global and national policy streams - i.e. displacement being an umbrella term that captures movements linked with different forms of evacuations, duration;
2. The need for relevant data to be gathered at the individual level;
3. The association between the "end of displacement" and the achievement of durable solutions, measured against multi-dimensional protection and well-being criteria.

### Data variables: a short dictionary

In order to maximise the usefulness of displacement data for DRR, relevant work should take into account a set of key variables. This section provides a suggested set of disaggregation criteria that could be standardised in order to allow for analyses that reveal specific patterns of displacement occurrence and impacts, and the ways they relate to disaster vulnerability. Whenever possible, these suggestions rely on existing and already-determined standards.

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<sup>2</sup> UNDRR "[Words Into Action Guidelines](#)", 2019

<sup>3</sup> Expert Group on Refugees and IDPs Statistics, "[Technical Report on Statistics of Internally Displaced Persons: Current Practice and Recommendations for Improvement](#)", March 2018.

## Hazards

As per UNDRR's definitions and the work of the International Science Council, the below classification of different hazardous processes and events that could trigger displacement is proposed:

Hazard category :

- Biological hazards
  - o Epidemic
  - o Insect infestation
  - o Pandemic
  - o Human-animal interactions
- Environmental hazards
  - o Desertification
  - o Soil erosion
  - o Wildfire
- Geological or geophysical hazards
  - o Earthquake
  - o Landslide (dry)
  - o Tsunami
  - o Volcano
- Hydrometeorological hazards
  - o Avalanche
  - o Coldwave
  - o Cyclone
  - o Drought
  - o Flood
  - o Heatwave
  - o Landslide (wet)
  - o Storm surge
  - o Tornado
  - o Wildfire
- Technological hazards
  - o NBC
  - o Technological disaster
  - o Wildfire

## Demographics

Consistently with the guidance provided by the SFDRR, recommended demographic disaggregation criteria include:

1. Age (0-14; 15-64; >64)
2. Male/Female
3. Disability
4. Income (under the national poverty line)

## Timing of displacement

Displacement occurrence is often categorised based on the timing of the initial movement: prior or following the moment a hazard hits a given area.

Data on this facet of displacement, while potentially useful to disaggregate preventive vs reactive movements, presents some concrete limitations:

- 1) It may be difficult to determine for slow-onset events that have incremental impacts on affected areas;
- 2) It cannot be collected in the case of sudden-onset events that cannot be forecasted (e.g. earthquakes), which trigger exclusively reactive movements.
- 3) Aggregation at national level
- 4) Figures provided once a year (ideally, at Dec 31)
- 5) Information on triggering events (numbers, hazard type)

### Timing/frequency of data collection

Minimum requirements for the collection of data for many of the proposed metrics and indicators recommend yearly cycles. However, collecting data at shorter intervals (e.g. on a monthly or quarterly basis) can support seasonal analyses and planning

### Assistance to movement

Whether or not displaced persons receive assistance to move out of affected areas is an interesting variable to describe different displacement patterns. However, gathering relevant data presents some significant challenges:

- 1) Definition of “assistance”: what actors count for the provision of assistance?
- 2) Threshold for “receiving assistance”: what is the minimum distance/percentage of the movement that need to be assisted in order for the displacement to be qualified as “assisted”?

### Types of settlement

The destination of displacement is a useful descriptor of displacement patterns. Different actors typically use different categorizations, and standardization of these variables could be useful. Relevant categorizations include

- 1) Collective centres/camp-like settings
- 2) Evacuation/transitional/temporary shelters
- 3) Official/unofficial settlements
- 4) Host families & other community settings

### Duration of displacement

Duration of displacement needs to be measured from its start (date/time of initial movement) until its end. The latter is a more elusive concept, lacking a globally agreed definition.

According to EGRIS, the end of displacement is linked to achievement of a durable solution, rather than a specific pattern of movement of displaced persons. However, different national authorities tend to adopt different practices in this regard (e.g. physical return, people leaving displacement sites). The determination of the “end of displacement” is therefore complex and poorly standardised. Data on the duration of displacement might therefore be difficult to compare across contexts.

### Distance of displacement

Distance travelled by displaced persons can be measured in kms. Categories could be built based on distance travelled, keeping in mind that distance will be contingent on local factors (availability of transportation, topography).

In alternative, a more consistent categorization could be built based on the administrative boundaries within/across which movement takes place:

- Within the same municipality
- Within the same district
- Within the same country
- Across borders

### Primary/secondary movements

Disaggregation by primary/secondary movement would allow understanding who was already living in a situation of displacement at the time of their movement. This amounts to understanding the prior displacement status of newly displaced persons.

### Spatial aggregation of data

Minimum requirements for the collection of data for many of the proposed metrics and indicators propose aggregation at national level. However, spatial disaggregation of data by subnational admin levels (down to the municipal and sub-municipal) can help perform more targeted analyses and assessments.

## Metrics vs indicators

Metrics and indicators help measure and quantify results and provide the foundation needed to evaluate and review progress against set objectives. However, they have distinct features and intended uses.

1. **Metrics** are crude and simple composition measures. They commonly refer to quantitative information.
2. **Indicators** are measures of performance calculated based on a set of different metrics.

In the following sections, this publication will list a set of key metrics on displacement and propose some indicators that build on these basic measurements.

DRR needs a comprehensive understanding of disaster displacement, including temporal and geographical considerations, the individual characteristics of those displaced, and the impacts of displacement. This understanding can help contextualise and forecast human mobility trends, inform efforts to address it, and measure the success of strategies to reduce the negative impacts of hazards.

### Metrics

This section proposes a set of key metrics, i.e. the basic elements needed to develop and monitor the indicators proposed in this report.

Most data on displacement tends to fall in one of two categories:

1. Displacement flows: “the number of people who meet the criteria [to be considered displaced] within a particular time period (as opposed to a specific reference date), and whose status as a member of the population in question changes as a result.”
2. Stocks of displaced person: “the total number of people who match [the definition of displaced person] in a determined location at a specific moment”.<sup>4</sup>

Displacement flows feed into the stock of displaced persons - i.e. the total number of people living in displacement at a given point in time. The latter figure increases or decreases over time based on net

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<sup>4</sup> Expert Group on Refugee and Internally Displaced Persons Statistics, “[Technical Report on Statistics of Internally Displaced Persons: Current Practice and Recommendations for Improvement](#)”, 9 March 2018

flows. When new displacements outnumber outflows (i.e. returns, integration, death of displaced persons) the stock of displaced persons grows. When outflows are larger, the size of the stock decreases.

For each metric, an indication of “data requirements” is provided:

- **Minimum data requirements** refer to information that needs to be gathered for the metric to be useful;
- **Desirable disaggregation** criteria refer to variables that could allow for additional analysis to better understand patterns of displacement, their drivers and outcomes.

#### 1) Total number of people displaced by a disaster (absolute value)

Definition: The metric represents the total number of people displaced in the context of a specific disaster.

The most fundamental metric to understand displacement in the context of disaster may be the total number of people displaced by a given event - i.e. the *flow* generated by a given event. Consistently with EGRIS’ recommendations, this metric needs to consider “displacement” in a comprehensive manner, accounting for all forced movements triggered by hazards and disasters, regardless of their timing, distance travelled, means of transportation, whether or not people received movement or shelter assistance etc.

This data should be collected for each disaster and can be aggregated to provide an overall figure of new displacements over a given period (e.g. a calendar year - see below metric).

#### *Minimum data requirements*

1. The triggering event - date, location, hazard type

#### *Desirable Disaggregation*

2. By Sex
3. By Age
4. By Disability
5. By Income
6. Timing of displacement - whether movement happens before or after a given disaster
7. Breakdown of displaced persons by type of displacement location
8. Breakdown of displaced persons by type of movement (Assisted/unassisted)
9. Origin of the displaced person and distance travelled

#### 2) Number of people displaced by a disaster, by different dates (time series)

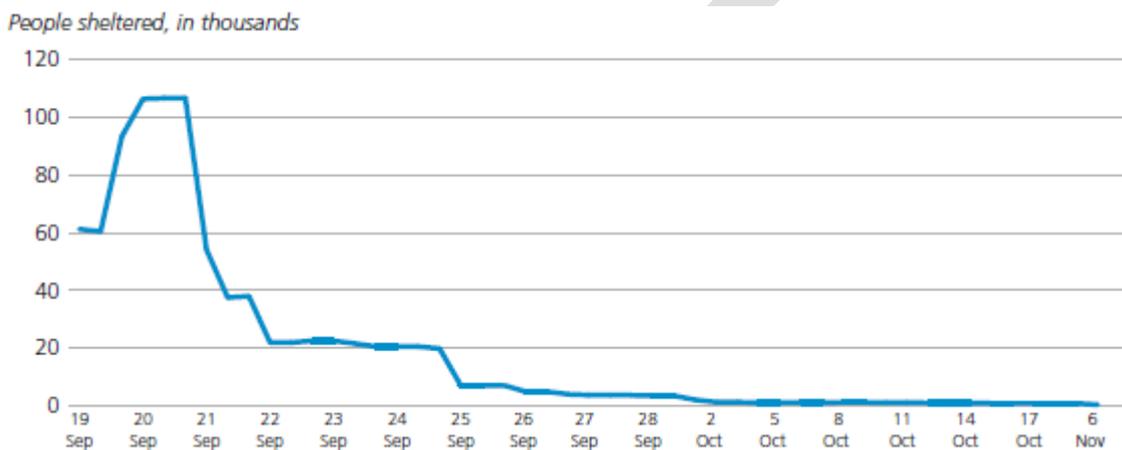
Definition: The metric represents the evolution of the number of people living in displacement following a specific event over time.

Time series of displacement are typically used to inform response and recovery/durable solutions interventions, showing how many people are still displaced (and in need of assistance) at specific points in time after a given event. Having time series data available allows to highlight and analyse the duration of displacement, a key consideration in understanding risks and impacts associated with displacement in the context of disasters. These kinds of analyses can provide useful information for disaster risk reduction and preparedness interventions – including to prevent long-lasting displacement and its impacts.

Box xx : Monitoring displacement through time-series

The Philippines is a rare example of a country where information about the way displacement evolves over time can be obtained, as was the case for typhoon Mangkhut in 2018. As figure xx shows, over half the total displaced persons initially moved on 19 September, before the storm made landfall., as part of pre-emptive mass evacuations. People remained in displacement on 20 September as Mangkhut bore down on the country, but already the following day around 70,000 people left the evacuation centres and returned to their homes. By 28 September, nearly all those initially displaced had left the evacuation sites. This suggests that most people were displaced for only one or two days, and almost nobody for more than ten days. These metrics do not however show where people went, how they were affected, nor whether and to what extent they were able to achieve durable solutions.

Fig xx: Typhoon Mangkhut, Philippines – people in evacuation centres, 2018



Time series are elaborated through iterative assessments that allow to reflect the evolution of the number (and situation) of displaced persons. The recommended schedule to repeat such assessments is the following:

1. Pre-emptive evacuations: Daily to hourly
2. First 10 days after the event: Daily
3. Day 10 to 30: Every two to three days
4. Day 30 to 90: Every 10 days
5. 90+ days after the event: Once a month

Data should be recorded until all displacement is resolved (for the challenges in defining when this determination can be made, refer the glossary. This allows to understand the duration of displacement for different people. This is a key indication for DRR: long-lasting displacement is strongly associated with negative, cumulative impacts on displaced persons as well as collective economic and social costs.

#### Minimum data requirements

1. The triggering event - date, location, hazard type
2. Timing of displacement - whether movement happens before or after a given disaster
3. Breakdown of displaced persons by displacement location

### *Desirable Disaggregation*

4. By Sex
5. By Age
6. By Disability
7. By Income
8. Origin of the displaced person and distance travelled
9. Breakdown of displaced persons by assisted/unassisted movement

#### 3) Total number of displacements attributed to disasters for a calendar year.

Definition: The metric represents the total number of movements of people occurring in the context of disasters over a calendar year.

This metric refers to individual, forced movements. Over the course of a calendar year, some people may be displaced more than once: the same person fleeing disasters twice would be counted twice for the determination of this metric. This is a key prerequisite for the feasibility of this indicator: displacement data is collected in such a way that it is often impossible to determine whether those counted have been displaced for the first time or their movement is a case of repeated or secondary displacement. Moreover, this is consistent with other metrics expressing aggregate disaster impacts under the Sendai Framework Monitor (e.g. affected or injured persons), which allow for double counting in case of multiple disasters affecting the same population.

IDMC's yearly estimates already rely on the aggregation of these numbers at country level to provide national, regional and global analyses.

### *Minimum data requirements*

1. Relevant figures provided at a minimum every year.
2. Information on triggering events (numbers, date, location, hazard type)

### *Desirable Disaggregation*

3. Relevant figures collected on a monthly or quarterly basis, to allow for seasonal analyses and planning
4. Timing of displacement - whether movement happens before or after a given disaster
5. Breakdown of displaced persons by displacement location
6. Breakdown of displaced persons by assisted/unassisted movement
7. Origin of the displaced persons and distance travelled
8. By Sex
9. By Age
10. By Disability
11. By Income

#### 4) Total number of disaster displaced persons, at specific date

Definition: This metric represents the total number of people living in displacement due to disasters in a given administrative area (e.g. a country) and at a specific point in time.

This metric measures the size of the stock of disaster displaced persons at a specific point in time. All disaster displaced persons should be accounted for in this number, regardless of the duration of their displacement at the date of measurement and the kind of setting in which they are hosted (e.g. official centres and camps, community locations, informal sites).

Ideally, information on the stock of *disaster* displaced persons should be gathered as part of broader exercises regularly assessing the total size of the stock of displaced persons in a given area, including

those displaced by other causes. This information can support contextual understanding and further analyses (e.g. inclusion of displacement considerations in risk/vulnerability assessments, analyses of the relevance of disaster displacement vs total displacement in a given context).

#### *Minimum data requirements*

1. Aggregation at national level
2. Figures provided once a year (ideally, at Dec 31)
3. Information on triggering events (numbers, hazard type)

#### *Desirable disaggregation*

4. Aggregation by sub-national administrative unit
5. Aggregation by duration of displacement
6. Data collected on a monthly or quarterly basis
7. Breakdown of displaced persons by displacement location
8. Origin of the displaced persons and distance travelled
9. Breakdown of displaced persons by Sex
10. Breakdown of displaced persons by Age
11. Breakdown of displaced persons by Disability
12. Breakdown of displaced persons by Income
13. Breakdown of displaced persons by assisted/unassisted movement
14. Timing of displacement - whether movement happens before or after a given disaster

### Displacement indicators

The following section proposes a set of displacement indicators to monitor and track progress of disaster risk reduction as well as response and recovery efforts. The indicators in the following list can be grouped in two different (and overlapping) ways:

- **Aggregate** indicators, which are produced cumulating information on multiple disasters, that are more indicated for broad monitoring and evaluation of DRR efforts;
- **Event-specific** indicators, which build on displacement data for a single disaster and provide information that is more relevant to specific preparedness/recovery/risk analyses;

and

- **Priority** indicators, which are particularly relevant for the purpose of integrating displacement in DRR monitoring and evaluation and rely on widely available or essential data;
- **Additional** indicators, which provide information that is not as crucial for DRR purposes, or that rely on data that is not readily available in most contexts.

Indicators belonging to these different groups are identified with relevant tags.

For each indicator, an indication of “data requirements” is provided:

- **Minimum data requirements** refer to information that needs to be gathered for the indicator to be viable;
- **Desirable disaggregation** criteria refer to variables that could allow for additional analysis to better understand patterns of displacement, their drivers and outcomes.

1. Yearly displacements attributed to disasters, per 100,000 population  
*Aggregate, priority*

**Definition:** This indicator measures the cumulative number of displacements occurring in the context of the disasters occurring in a country during a specific time frame, over the total population of that country.

This metric mirrors existing indicators within the SFM, and in particular under target B (i.e. B-2 to B-5). It is very likely that people falling within the “displaced” category would also be counted under those with damaged or destroyed dwellings or damaged livelihoods (or otherwise affected). Breakdown by displacement provides a specific lens of analysis and monitoring of disaster impacts.

*Minimum data requirements*

1. Relevant figures provided at a minimum every year (ideally on December 31)
2. Information provided at the national level
3. Information on triggering events (numbers, date, location, hazard type)

*Desirable Disaggregation*

4. Information provided at the sub-national level
  5. Data collected on a monthly or quarterly basis
  6. Timing of displacement - whether movement happens before or after a given disaster
  7. Breakdown of displaced persons by sex, age, disability, income and other variables
  8. Breakdown of displaced persons by location/admin area in which their displacement was triggered
  9. Breakdown of displaced persons by assisted/unassisted movement
  10. Breakdown of displaced persons by type of site in which they are displaced
  11. Distance travelled
2. Ratio of deaths and missing persons versus displaced persons attributed to a disaster, expressed as a percentage

*Disaster-specific, priority*

**Definition:** This indicator measures the ratio (%) between the total number of deaths and missing persons and the total number of displaced persons caused by that disaster.

Data on deaths and missing persons is compiled by countries as part of their disaster loss accounting, including to report against indicators A-1a and A-1b of the SFM.

This indicator could show to what extent people and response systems rely on movement in the face of a hazard to reduce direct impacts: a higher number of movements, accompanied by a more limited number of people dead or missing, would help frame the risk reduction value of moving. More effective early warning and evacuation system, typically, help reduce mortality and protect people, and this indicator could help quantify these benefits.

The usefulness of this indicator depends largely on the triggering hazards. The ratio might be significantly different for events that:

- can and cannot be anticipated, and for which early warning systems respectively can or cannot support lifesaving measures (e.g. cyclones vs earthquakes);
- have different magnitude/impacts (more or less acutely threatening exposed persons' lives), their magnitude and impacts on a given area and community.

#### *Minimum data requirements*

1. Information on the event triggering displacement
  - a. Date/time
  - b. Location
  - c. Hazard type

#### *Desirable Disaggregation*

2. Timing of displacement - whether movement happens before or after a given disaster
3. Breakdown of displaced persons by sex, age, disability, income and other variables
4. Breakdown of displaced persons by location/admin area in which their displacement was triggered
5. Breakdown of displaced persons by assisted/unassisted movement
6. Origin of the displaced persons and distance travelled

2.1 Ratio of deaths and missing persons attributed to a disaster versus people displaced before a disaster, expressed as a percentage

#### *Disaster-specific, additional*

2a. Ratio of deaths and missing persons attributed to disasters versus displacements attributed to disasters, expressed in percentage, over a calendar year

#### *Aggregate, priority*

Definition: This indicator measures the ratio (%) between the total number of displacements associated with all disasters occurring and the number of deaths and missing persons caused by those disasters, over a calendar year.

This indicator is compiled based on the information gathered for indicator 2.

#### *Minimum data requirements*

1. Aggregation of data at national level
2. Figures provided once a year (ideally, as of Dec 31<sup>st</sup>)
3. Information on triggering events (number, date, location, hazard type)

#### *Desirable Disaggregation*

4. Disaggregation by sub-national administrative unit
5. Data collected on a monthly or quarterly basis
6. Timing of displacement - whether movement happens before or after a given disaster
7. Breakdown of displaced persons by sex, age, disability, income and other variables
8. Breakdown of displaced persons by displacement location
9. Breakdown of displaced persons by assisted/unassisted movement
10. Origin of the displaced persons and distance travelled

2a.1 Ratio of people displaced before disasters versus number of deaths and missing persons attributed to disasters over a calendar year, expressed as a percentage

#### *Aggregate, additional*

*(To be developed in July 2022)*

3. Ratio of displaced persons attributed to a disaster versus number of people affected by a disaster, expressed in percentage.

*Disaster-specific, priority*

**Definition:** This indicator measures the ratio (%) between the total number of displacements occurring for a specific disaster and the number of people affected in that disaster.

Data on affected persons is compiled by countries as part of their disaster loss accounting, including to report against indicator B-1 of the SFM.

This indicator could show the specific relevance of displacement as an impact of disasters, and potentially help better estimate how many people could be displaced by potential, future disasters (for which the total number of affected persons might be easier to estimate) – and better plan for response and recovery efforts.

*Minimum data requirements*

1. Information on triggering event (date, location, hazard type)

*Desirable Disaggregation*

2. Timing of displacement - whether movement happens before or after a given disaster
3. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
4. Breakdown of displaced persons by displacement location
5. Breakdown of displaced persons by assisted/unassisted movement
6. Origin of the displaced persons and distance travelled

- 3.1 Ratio of displacements attributed to a disaster versus number of people injured or ill due to a disaster, expressed in percentage (Target B).

*Disaster-specific, additional*

**Definition:** This indicator measures the ratio (%) between the total number of displacements occurring for a specific disaster and the number of people injured or ill, caused by that disaster.

Data on people injured or ill is compiled by countries as part of their disaster loss accounting, including to report against indicator B-2 of the SFM.

This indicator could show to what extent moving might help preserve people's physical integrity. The usefulness of this indicator could be however affected by the type of triggering hazards (more or less acutely threatening exposed persons' lives), their magnitude and impacts on a given area and community.

*Minimum data requirements*

1. Information on triggering event (date, location, hazard type)

*Desirable Disaggregation*

2. Timing of displacement - whether movement happens before or after a given disaster
3. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
4. Breakdown of displaced persons by displacement location
5. Breakdown of displaced persons by assisted/unassisted movement
6. Origin of the displaced persons and distance travelled

3.2 Ratio of displacements attributed to a disaster versus number of people whose dwellings have been damaged/destroyed in a disaster, expressed in percentage (Target C).

*Disaster-specific, additional*

**Definition:** This indicator measures the ratio (%) between the total number of displacements occurring for a specific disaster and the number of people whose dwellings have been damaged or destroyed in a disaster.

Data on the impacts of disasters on people's dwellings is compiled by countries as part of their disaster loss accounting, including to report against indicator B-3 and 4 of the SFM.

This indicator could show the extent to which structural housing damage and/or destruction is a good overall predictor of displacement occurrence or trends over time. The usefulness of this indicator is limited to hazards that affect the built environment.

*Minimum data requirements*

1. Information on triggering event (date, location, hazard type)

*Desirable Disaggregation*

2. Timing of displacement - whether movement happens before or after a given disaster
3. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
4. Breakdown of displaced persons by displacement location
5. Breakdown of displaced persons by assisted/unassisted movement
6. Origin of the displaced persons and distance travelled

3.3 Ratio of displacements attributed to a disaster versus number of people whose livelihoods have been disrupted in a disaster, expressed in percentage.

*Disaster-specific, additional*

**Definition:** This indicator measures the ratio (%) between the total number of displacements occurring for a specific disaster and the number of people whose livelihoods have been disrupted or destroyed in a disaster.

Data on deaths and missing persons is compiled by countries as part of their disaster loss accounting, including to report against indicator B-5 of the SFM.

This indicator could show the extent to which livelihood disruption relates to displacement in the context of disasters.

*Minimum data requirements*

1. Information on triggering event (date, location, hazard type)

*Desirable Disaggregation*

2. Timing of displacement - whether movement happens before or after a given disaster
3. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
4. Breakdown of displaced persons by livelihood profile
5. Breakdown of displaced persons by displacement location
6. Breakdown of displaced persons by assisted/unassisted movement
7. Origin of the displaced persons and distance travelled

3a. Ratio of displacements attributed to disasters versus number of people affected by disasters, expressed in percentage, over a calendar year  
*Aggregate, priority*

**Definition:** This indicator measures the ratio (%) between the total number of displacements attributed to all disasters over a calendar year and the number of people affected in those disasters.

Data on affected persons is compiled by countries as part of their disaster loss accounting, including to report against indicator B-1 of the SFM.

This indicator could show the specific relevance of displacement as an impact of disasters, and potentially inform scenarios that rely on the number of people affected by potential, future disasters to plan for responses.

*Minimum data requirements*

11. Aggregation of data at national level
12. Figures provided once a year (ideally, on Dec 31<sup>st</sup>)
13. Information on triggering events (number, date, location, hazard type)

*Desirable Disaggregation*

14. Disaggregation by sub-national administrative unit
15. Relevant figures collected on a monthly or quarterly basis
16. Timing of displacement - whether movement happens before or after a given disaster
17. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
18. Breakdown of displaced persons by displacement location
19. Breakdown of displaced persons by assisted/unassisted movement
20. Origin of the displaced persons and distance travelled

Similarly to the disaster-specific indicators presented above, this aggregate indicator can be broken down by specific impacts in 3 sub-indicators:

3a.1 Ratio of displacements attributed to disasters versus number of people injured or ill due to disaster, expressed in percentage, over a calendar year.

*Aggregate, additional*

3a.2 Ratio of displacements attributed to disasters versus number of people whose dwellings have been damaged or destroyed by disasters, expressed in percentage, over a calendar year.

*Aggregate, additional*

3a.3 Ratio of displacements attributed to disasters versus number of people whose livelihoods have been disrupted in disasters, expressed in percentage, over a calendar year

*Aggregate, additional*

4. Ratio of disaster displaced persons remaining in displacement at different intervals versus total number of people displaced by a disaster, expressed in percentage

*Disaster-specific, priority*

**Definition:** This indicator measures the ratio between the total displacements attributed to a disaster and the number of people remaining displaced at set intervals after a disaster occurred. Proposed intervals are 6 and 12 months after the disaster.

This indicator is based on the time series metric proposed in the section above. It allows to identify the percentage of people displaced by a disaster who have yet to find a durable solution to their displacement. This is a telling sign of the effectiveness of disaster recovery processes, and a key concern to avoid indirect, cascading impacts on people and communities.

This indicator is likely to be affected by the type and magnitude of initial hazard, in addition to the resources and capacities available to communities and local disaster management and recovery/reconstruction systems. Disaggregation of this indicator by individual variables and displacement patterns is particularly important to informing displacement-specific vulnerability analyses.

#### *Minimum data requirements*

1. Information on triggering event (date, location, hazard type)
2. Data gathered 6 month after a disaster
3. Data gathered 12 months after a disaster

#### *Desirable Disaggregation*

4. Additional data points (see section on “time series” for more details)
5. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
6. Breakdown of displaced persons by displacement location
7. Breakdown of displaced persons by the timing of their initial movement (before or after the disaster)
8. Breakdown of displaced persons by whether their initial movement was assisted or unassisted
9. Origin of the displaced persons and distance travelled
10. Breakdown by reason of prolonged displacement
  - a. Dwelling damaged/destroyed or no access to rental option
  - b. Livelihood disrupted/destroyed
  - c. Unsafe area
  - d. Departure of family/community members

4.1 Ratio of people displaced before a disaster versus number of disaster displaced persons remaining in displacement, expressed in percentage at different intervals.

*Disaster-specific, additional*

4.2 Ratio of people whose displacement has been assisted versus number of disaster displaced persons remaining in displacement, expressed in percentage at different intervals.

*Disaster-specific, additional*

4.3 Ratio of people who are displaced in formal vs informal displacement sites versus number of disaster displaced persons remaining in displacement, expressed in percentage at different intervals.

*Disaster-specific, additional*

Displacement behaviors can reveal specific patterns of agency and resilience. Breaking down data on prolonged displacement by these variables can help reveal some of these patterns.

These indicators are based on the time series metric and its “recommended disaggregation” criteria.

5a. Ratio of disaster displaced persons remaining in displacement for more than 6 and 12 months versus the total number of people displaced by disasters over the previous 3 years, (moving percentage)

*Aggregate, priority*

Definition: This indicator represents the ratio between the number of people experiencing prolonged displacement versus the total of people displaced by disasters over a given period of time (proposed: 3 years)

This indicator aggregates data from the event-specific time series produced accordingly to above proposed metric and indicator 5. The use of a time period longer than a calendar year for this moving ratio is needed to capture displacements that last longer than the typical SFM reporting period.

Potential issues with the use of a set period to calculate this indicator include:

- Impossibility to include recent displacement (i.e. occurred less than 6/12 months before the reporting date)
- Impossibility to capture prolonged displacement due to disasters occurred before the reporting period (i.e. 3 years).

5.b Moving average of the duration of disaster displacement, min 3 years

*Aggregate, priority*

Definition: This indicator represents the average duration of the displacement associated with disasters occurring over the last 3 years (or for other relevant period): how long, on average, people have been displaced by disasters.

This indicator is based on the time series metric proposed in the section above. It provides an average that can be compared to previous reporting points (baseline 3 years) to measure progress on recovery process and coping capacity against prolonged or protracted displacement.

5.c Average duration of displacement for disaster displaced persons who have lived in displacement for more than 3 months, at a given date

*Aggregate, priority*

Definition: This indicator measures the average duration of displacement for the stock of disaster displaced persons who have been living in displacement for a prolonged period (more than 3 months) in a given country.

This indicator is based on the stock of disaster displaced persons in a given country, and only captures displacement longer than 3 months to avoid skewing through consideration of short-term, massive displacement occurring close to the reporting date.

This indicator allows to measure progress on recovery process and coping capacity against prolonged or protracted displacement.

The use of an indicator such as 7 ( 7alt) is essential to capture the duration of displacement.

*Minimum data requirements*

1. Information on triggering event (date, location, hazard type)
2. Data gathered 6 month after a disaster
3. Data gathered 12 months after a disaster
4. Information aggregated at national level

### *Desirable Disaggregation*

5. Disaggregation by sub-national units
6. Additional data points (see section on “time series” for more details)
7. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
8. Breakdown of displaced persons by displacement location
9. Breakdown of displaced persons by the timing of their initial movement (before or after the disaster)
10. Breakdown of displaced persons by whether their initial movement was assisted or unassisted
11. Origin of the displaced persons and distance travelled
12. Breakdown by reason of prolonged displacement
  - a. Dwelling damaged/destroyed or no access to rental option
  - b. Livelihood disrupted/destroyed
  - c. Unsafe area
  - d. Departure of family/community members

6. Ratio of disaster displaced persons receiving temporary shelter assistance versus the total of displaced persons attributed to disasters, expressed in percentage.

### *Disaster-specific and aggregate, additional*

Definition: The indicator represents a ratio between the total number of people that receive temporary shelter assistance and the total of number of displacements attributed to disasters.

This indicator could be further broken down to highlight relative presence of people in different types of locations (see dictionary: in official shelters, hotels, with relatives or in community accommodations).

Using this indicator could inform DRR in specific (but potentially contradictory) ways:

1. Showing the effectiveness of a disaster response system that manages to provide shelter assistance to a significant number of disaster displaced persons;
2. Showing the resilience of disaster-affected persons that do not need to resort to official shelter assistance to protect themselves from, and cope with, the impacts of hazards.

Moreover, this indicator, if further disaggregated by key demographic variables, should help quantify differences in need of/access to shelter assistance by different population groups.

### *Minimum data requirements*

1. Information on triggering event (date, location, hazard type)
2. Information aggregated at national level

### *Desirable Disaggregation*

3. Disaggregation by sub-national units
4. Breakdown of displaced persons by sex, age, disability, income and other variables
5. Breakdown of displaced persons by the timing of their initial movement (before or after the disaster)
6. Breakdown of displaced persons by whether their initial movement was assisted or unassisted
7. Origin of the displaced persons and distance travelled

7. Ratio of disaster displaced persons receiving assistance to move versus the total of displaced persons attributed to disasters, expressed as a percentage.

*Disaster-specific and aggregate, additional*

**Definition:** The indicator represents a ratio between the number of people that receive evacuation or movement assistance (before or after a disaster) and the total of number of people displaced by disasters.

Using this indicator could inform DRR in specific (but potentially contradictory) ways:

3. Showing the effectiveness of a disaster response systems that manages to provide movement assistance to a significant number of disaster displaced persons;
4. Showing the resilience of disaster-affected persons that do not need to resort to assisted movements to leave an area at risk of or affected by a hazard.

Moreover, this indicator, if further disaggregated by key demographic variables, should help quantify differences in need of/access to movement assistance by different population groups.

This indicator (receiving assistance to move) is expressed as a simple sum of a binary value (0 or 1), for each individual, where 0 means not receiving assistance and 1 receiving assistance.

*Minimum data requirements*

1. Information on triggering event (date, location, hazard type)
2. Information aggregated at national level

*Desirable Disaggregation*

3. Disaggregation by sub-national units
4. Breakdown of displaced persons by sex, age, disability, income and other variables
5. Breakdown of displaced persons by displacement location
6. Breakdown of displaced persons by the timing of their initial movement (before or after the disaster)
7. Origin of the displaced persons and distance travelled
8. Percentage of displacements attributed to a disaster in relation to the distance travelled

*Disaster-specific and aggregate, additional*

**Definition:** This indicator breaks down the total number of displacements by different thresholds related to the distance travelled (from habitual place of residence) by those moving.

Distance thresholds should be defined and actualized by each country in relation to their area, available transportation networks and access to transportation means, efforts to support the movement of affected persons in disasters, and other relevant policies in place. In the absence of measures of the distance travelled by people, this indicator can be formulated accounting for movement within/across administrative boundaries instead.

This indicator measures a key dimension of displacement (I.e. distance) and would allow to understand specific patterns of population displacement. Distance travelled, however, may or may not be a direct outcome of vulnerability to hazards and/or impacts suffered in disasters.

In alternative to distance, the indicator could be broken down into different components, by administrative unit of origin/destination.

### *Minimum data requirements*

1. Information on triggering events (numbers, date, location, hazard type)
2. Distance of displacement – suggested values
  - a. Displacement less than 1km
  - b. Displacement beyond 1 km and less than 5km
  - c. Displacement beyond 5 km and less than 20km
  - d. Displacement beyond 20 km and less than 100km
  - e. Displacement beyond 100km
3. Alternative geographic variable: administrative unit
  - a. Displaced person stays in the same municipality
  - b. Displaced person moves to nearby municipality
  - c. Displaced person moves to other admin region
  - d. Displaced person moves abroad.

### *Desirable Disaggregation*

4. Breakdown of displaced persons by mode of transportation (car, foot, multimodal, bus or train, bike and other)
5. Breakdown of displaced persons by sex, age, disability, income and other variables
6. Breakdown of displaced persons by type of displacement location
7. Breakdown of displaced persons by the timing of their initial movement (before or after the disaster)
8. Breakdown of displaced persons by whether their initial movement was assisted or unassisted

### 9. Displacement governance (index)

#### *Aggregate, priority*

**Definition:** This indicator captures the presence of key policy, frameworks and institutions on disaster displacement in the country.

This indicator is inspired by a variety of existing assessment tools that assess the existence of key frameworks and capacities on displacement at national levels, and how they are embedded into disaster risk governance. These tools (listed in the “state of the art” report) are important in supporting progress towards target E of the SFDRR and to provide a foundation for all operational efforts. The indicator is presented as a scale that account for the presence of the key governance/capacities elements listed below

#### Elements to include

- 1) Does the country have a system in place to systematically gather, analyse and publish data on disaster displacement?
- 2) Does the country have a policy or framework on displacement that accounts for disaster displacement?
- 3) Do the country's disaster-related policies and legal frameworks contain elements that address disaster displacement?
- 4) Does the country have an institution mandated to address displacement in the context of disasters?
- 5) Does the country have an institution mandated to support durable solutions for people displaced by disasters?

Countries will assess the level of implementation for each key element. The 5 key elements are proposed to be weighted equally by assigning 20% (or 0.2) to each element. As each element in itself may be composed of multiple sub-elements, countries will benchmark according to the following weighting:

1. Comprehensive implementation (full score): 1.0,
2. Substantial implementation, additional progress required: 0.75,
3. Moderate implementation, neither comprehensive nor substantial: 0.50,
4. Limited implementation: 0.25,
5. If there is no implementation or no existence, it will be 0

## Optional Indicators

### Economic impact of internal displacement (compound indicator)

**Definition:** The indicator represents the estimated economic impacts of internal displacement, including the additional costs displacement causes that are born either by IDPs, host communities, aid providers or other actors, as well as estimated losses as a comparison to the economic potential of the displaced community, had displacement not occurred.<sup>5</sup>

The most common source of information on the economic impacts of internal displacement is plans and budgets for emergency response and support to IDPs, such as humanitarian response plans, post disaster needs assessments, appeals from aid providers, emergency shelters budgets and so on. While measuring these impacts comprehensively is a challenge due to the unavailability of data, proxy indicators may be used in the absence of more precise information. As much as possible, it is recommended to try and estimate costs and losses linked with internal displacement in the following areas:

- **Livelihoods:** loss of income due to IDPs' inability to pursue their habitual income-generating activity. This can be estimated, for instance, using the average income per capita, multiplied by the number of displaced people who are unable to work for the duration of their displacement.
- **Housing:** cost of securing temporary or new housing for all IDPs. Depending on the situation, this can be estimated using the host area's average rental price if IDPs are mostly renting; the average price of hotel accommodation; the cost of running collective shelters or setting up tents or other types of temporary shelters.
- **Health:** depending on the situation, displaced people may require healthcare to cope with the impacts of displacement on their nutrition, sanitary conditions, mental well-being and more. This is particularly true in the case of protracted displacement. Information on the cost of providing them with primary healthcare, nutritional supplements, psychosocial support and other forms of care should be accounted for.
- **Security:** under certain circumstances, displaced people's security can require specific investments. Women, children and other groups of people at higher risk of abuse, neglect or violence in displacement situations may receive dedicated support, either in the form of security forces, legal advice and more. When relevant and available, this information should be accounted for in the economic impact of internal displacement.

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<sup>5</sup> IDMC - <https://www.internal-displacement.org/research-areas/economic-impacts-of-displacement>

- Education: displaced children often experience an interruption in their education as a result of their displacement and may require specific support to catch-up upon their return to class, or may need temporary educational facilities and services to be set up if their displacement endures. When such educational support is provided, related costs should be accounted for.

#### *Minimum data requirements*

1. Aggregation at national level
2. Figures provided once a year (ideally, at Dec 31)

#### *Desirable Disaggregation*

1. Information on triggering event (date, location, hazard type)
2. Breakdown by sub-indicators (economic impacts on livelihoods, housing, health, security, education)

#### Percentage of disaster displaced persons achieving durable solutions (compound indicator)

##### *Aggregate, priority*

**Definition:** The indicator supports target B especially target B4 – “Number of people whose destroyed dwellings were attributed to disasters”, in order to understand, following disasters, the achievement of durable solutions for those displaced (due destroyed dwellings), a key indicator of recovery and building back better.<sup>67</sup> This indicator encompasses also planned relocation, when disaster impacts or risks render places uninhabitable or unsafe, governments and communities may decide to permanently relocate people out of harm’s way. Planned relocation has gained traction as a disaster risk reduction and climate change adaptation measure.

#### *Minimum data requirements*

Data to be collected for each disaster and each family suffering from destroyed dwellings

and/or

Data to be collected for each family from planned relocation where risks render places uninhabitable or unsafe.

Through sample surveys covering in a representative manner the displaced population, count the number of family which have achieved full “durable solutions” (check indicators) after relocation or having been resettled elsewhere. This will be the sum of a binary value (0 or 1) for sub-indicators.

This compound indicator is expressed as a simple sum of a binary value (0 or 1), where 0 means not achieved and 1 achieved.<sup>8</sup>

Elements to include

1. Safety and security

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<sup>6</sup> **IASC Framework on Durable Solutions for Internally Displaced Persons** – “A durable solution is achieved when internally displaced persons no longer have any specific assistance and protection needs that are linked to their displacement and can enjoy their human rights without discrimination on account of their Displacement”

<sup>7</sup> **Guiding principles – Sendai framework – para 19 - k** “In the post-disaster recovery, rehabilitation and reconstruction phase, it is critical to prevent the creation of and to reduce disaster risk by “Building Back Better” and increasing public education and awareness of disaster risk;” - [https://www.preventionweb.net/files/43291\\_sendaiframeworkfordrren.pdf](https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf)

<sup>8</sup> Durable solutions analysis guide - <https://inform-durablesolutions-idp.org/wpcontent/uploads/2018/01/Interagency-Durable-Solutions-Analysis-Guide-March2020.pdf>

- a. victims of violence
  - b. freedom of movement
- 2. Adequate standard of living
  - a. Food
  - b. Shelter and housing
  - c. Medical services
  - d. Education
- 3. Access to livelihoods
  - a. Employment and livelihoods
  - b. Economic security
- 4. Restoration of housing, land and property
  - a. Property restitution and compensation
- 5. Access to documentation
  - a. Documentation
- 6. Family reunification
  - a. UAMs
  - b. Percentage of split households

#### *Desirable Disaggregation*

Breakdown by resettled / relocation / local integration (return)

Insurance penetration (to be defined)

Duration of displacement before relocation/reconstruction

Total number of beneficiaries of post-disaster housing programmes

Total number of beneficiaries of reconstruction programmes

- 1. Origin of the displaced persons and distance travelled
- 2. Breakdown by reason of prolonged displacement
  - a. Dwelling damaged/destroyed or no access to rental option
  - b. Livelihood disrupted/destroyed
  - c. Unsafe area
  - d. Departure of family/community members
- 3. Additional data points (see section on “time series” for more details), duration of displacement before relocation/reconstruction
- 4. Breakdown by reason of prolonged displacement
  - a. Dwelling damaged/destroyed or no access to rental option
  - b. Livelihood disrupted/destroyed
  - c. Unsafe area
  - d. Departure of family/community members
  - e. Insurance ??
- 5. Breakdown of displaced persons by whether their displacement was assisted by post-disaster housing programmes or reconstruction programmes

Number of people living in risk areas and exposed to the risk of displacement

Definition: The indicator represents the number of people at risk of becoming displaced (homelessness, or suffering for severe housing damages)

“Risk” is a forward-looking concept that implies an eventuality of something that can occur. Therefore, assessing risk means looking at what are the possible events that can occur, quantifying how likely they are to happen and appraising the potential consequences should they occur.<sup>9</sup>

In 2013, adapted from Insurance sector, UNDRR has undertaken a probabilistic risk assessment approach, to estimate the expected economic losses at risk of sudden-onset hazards. These losses are calculated by taking into account all the components of the risk: hazard, exposure and vulnerability. IDMC has built upon the risk analysis developed by the United Nations Office for Disaster Risk Reduction to look at future displacement risk associated with sudden-onset hazards such as earthquakes, tsunamis, cyclonic winds and storm surges. The analysis considered a wide range of hazard scenarios, their likelihood and their potential to cause housing damage, which serves as a proxy for displacement.<sup>10</sup>

#### *Minimum data requirements*

Elements to include:

1. By hazard type
2. PMD (Probable Maximum Displacement) - Probable maximum number of people at risk of becoming displaced aggregated at national level at different return period (20, 50, 100, 500, 1000 years return periods)

#### *Desirable Disaggregation*

1. Disaggregation by sub-national administrative unit
2. Breakdown of displaced persons by sex, age, disability, income and other variables to highlight over/underrepresentation of specific groups within the displaced population
3. Disaggregation by urban and rural area
4. Integrate RCPs and SSPs to understand change in 20, 50 and 100 years regarding population distribution, frequency and intensity of weather related hazards. Only RCPs for geophysical hazards.

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<sup>9</sup> UNDRR - [https://www.preventionweb.net/english/hyogo/gar/2013/en/gar-pdf/Annex\\_1.pdf](https://www.preventionweb.net/english/hyogo/gar/2013/en/gar-pdf/Annex_1.pdf)

<sup>10</sup> IDMC - <https://www.internal-displacement.org/publications/global-disaster-displacement-risk-a-baseline-for-future-work>

Table2: Proposed set of indicators to integrate displacement dimensions in DRR

issue	indicator	sub-indicator	disaster-specific	aggregate	priority level
1	occurrence of disaster displacement	Yearly displacements attributed to disasters, per 100,000 population	NO	YES	priority
2	life-saving value of displacement	Ratio of deaths and missing persons vs number of people displaced	YES	YES	priority
2.1		Ratio of deaths and missing persons vs number of people displaced before disasters	YES	YES	additional
3		Ratio of displacements vs number of people affected	YES	YES	priority
3.1	displacement as a	Ratio of displacements vs number of people injured or ill	YES	YES	additional
3.2	specific disaster impact	Ratio of displacements vs number of people whose house has been damaged/destroyed	YES	YES	additional
3.3		Ratio of displacements vs number of people whose livelihoods have been disrupted	YES	YES	additional
4		Ratio of displaced persons remaining in displacement at different intervals vs total number of people displaced in a disaster	YES	NO	priority
4.1		Ratio of people displaced before a disaster vs number of people remaining in displacement at different intervals	YES	NO	additional
4.2		Ratio of disaster displaced whose movement has been assisted vs number of people remaining in displacement at different intervals	YES	NO	additional
4.3	Duration of displacement	Ratio of people displaced in formal settlements vs number of people remaining in displacement at different intervals	YES	NO	additional
5a		Ratio of people displaced by disasters over the last 3 years remaining in displacement for more than 6 months	NO	YES	priority
5b		Moving average of the duration of disaster displacement triggered over the last 4 years	NO	YES	priority
5c		Average duration of displacement for people displaced by disasters for more than 3 months, at a given date	NO	YES	priority
6		Ratio of disaster displaced persons receiving temporary shelter assistance vs total displaced	YES	YES	additional
7	Patterns of disaster displacement	Ratio of disaster displaced persons receiving movement assistance vs total displaced	YES	YES	additional
8		Percentage of disaster displacements in relation to the distance travelled	YES	YES	additional
9	Governance of disaster displacement	Presence of key institutional frameworks (index)	NO	YES	priority
10	Economic losses due to displacement	Amount of economic losses incurred as a consequence of disaster displacement	YES	YES	additional
11	Durable solutions	Ratio of disaster displaced persons achieving durable solutions	YES	YES	additional
11		Achievement of different durable solutions criteria	YES	YES	additional
12	Risk of displacement occurring	Number of people facing the risk of being displaced from hazard-prone areas	YES	YES	additional

[Link to the document](#)