



Displacement due to natural hazard-induced disasters

Global estimates for 2009 and 2010

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Cover illustration: A man evacuates his children through waist-deep waters after heavy flooding in Nowshera, in Pakistan's Khyber-Pakhtunkhwa Province, August 2010. (*Photo: REUTERS/Adrees Latif, courtesy www.trust.org/alertnet*)

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June 2011

Foreword

Foreword by Valerie Amos, UN Under-Secretary for Humanitarian Affairs and Emergency Relief Coordinator:

The forced displacement of men, women and children from their homes as a result of natural hazard-induced disasters is occurring on a huge scale and affecting all regions of the globe. Sudden-onset disasters displaced at least 36 million people in 2008 alone, according to the 2009 study on disaster-induced displacement by IDMC and the Office for the Coordination of Humanitarian Affairs (OCHA) – the first such study of its kind. Some 20 million of those 36 million people were displaced by climate-related disasters.

I am pleased that IDMC is seeking to build understanding and knowledge about the impact of sudden onset disasters. Their monitoring helps to identify global trends and patterns which is useful in helping us to focus our prevention efforts and minimise the impact of displacement.

I very much hope that the findings of this latest report will contribute to convincing all governments and other relevant actors of the importance of acting quickly and decisively to respond to disaster-induced displacement.



Valerie Amos
Under-Secretary-General for Humanitarian Affairs
and Emergency Relief Coordinator
May 2011

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Summary

Millions of men, women and children around the world are displaced from their homes each year by sudden-onset disasters caused by natural hazard events. This study finds that 17 million people were newly displaced by sudden-onset disasters worldwide in 2009, and over 42 million people in 2010. 36 million people were displaced in 2008 by such disasters.

The sheer scale of displacement should leave no doubt as to the seriousness and immediacy of the challenge this poses for affected populations, governments and the international community. People at risk of displacement, and those already displaced and seeking solutions to their displacement, have a right to be protected and assisted. To meet this challenge, greater collaboration is required between those working in the fields of humanitarian action, disaster risk reduction, climate change adaptation and development.

Global data from the last few decades shows that the number of natural hazard-induced disasters and the number of people affected by them are on the rise. In the context of climate change, this challenge is expected to continue to grow, as the frequency and intensity of extreme climate-related events increases and the patterns of their occurrence change.

Climate-related disasters – primarily floods and storms – continued to be the main sudden-onset triggers responsible for most of the displacement in 2009 and 2010. They caused the displacement of over 15 million people in 2009 and over 38 million people in 2010. The largest disasters of 2009, floods and storms in India, together displaced at least five million people. However, these disasters were dwarfed by the 2010 floods in China and Pakistan, which displaced at least 15 million and

11 million people respectively. In 2008, climate-related disasters displaced at least 20 million people.

Displacement triggered by geophysical disasters – volcanic eruptions, earthquakes and tsunamis – was also significant, with at least 1.5 million people uprooted in 2009 and over four million in 2010. Such disasters included the devastating earthquakes in Sumatra, Indonesia in 2009 and in Haiti and Chile in 2010. The 2008 earthquake in Sichuan, China alone displaced over 15 million people.

Asia was, by far, the continent where the highest total numbers of people were displaced each year. It was also the continent where most of the biggest disasters causing the most displacement occurred. China, India and the Philippines were the countries worst affected in terms of the number and scale of large disasters experienced. However, all continents were affected, and beyond the largest events, disasters in a very wide range of countries displaced significant numbers of people.

Large-scale disasters dominated the global figures and the world's attention. They caused more than 90 per cent of total displacement reported in 2009 and 2010. Over three years from 2008 to 2010, 86 disasters displaced 100,000 or more people, including 18 “mega-disasters” which each displaced from one million people up to over 15 million in the case of the 2008 Sichuan earthquake and the 2010 floods in China. These “mega-disasters”, despite being relatively few, strongly influenced the total global estimate for each year and their impacts accounted, in large part, for differences between the years.

There is wide agreement that accessible information and analysis of the extent and impact of displacement are needed to inform coherent and consistent policy and action by the international community and governments of affected countries, including both the wealthiest and the poorest in the world.

The first global estimate of the scale of displacement caused by extreme natural hazard events was produced in 2009 by IDMC and the UN's Office for the Coordination of Humanitarian Affairs (OCHA), covering events in 2008. The methodology developed at that time has

Summary of global estimates 2008 - 2010

Number of people displaced (millions)			
Cause of displacement	2008	2009	2010
Climate-related disasters	20.3	15.2	38.3
Geophysical disasters	15.8	1.5	4.0
Total	36.1	16.7	42.3

been applied in this study, to produce estimates for 2009 and 2010 and to continue building knowledge of the issue. The focus on new displacement triggered by sudden-onset disasters has been maintained, including both geophysical events – volcanic eruptions, earthquakes and tsunamis – and climate-related events such as floods, storms, extreme temperatures and wildfires. Slow-onset disasters such as drought are not included, nor are disasters caused by biological hazards, such as epidemics.

These studies should be built on to enable a fuller understanding of both the scale and impact of displacement due to different types of natural hazard. Further quantitative studies are needed for the development of a baseline of information to test and analyse global patterns and trends in displacement over a longer period of time. Improved data collection and increased sharing of information should be promoted to strengthen monitoring and response to displacement, and to increase global awareness that includes less reported events and regions of the world.

At the same time, complementary qualitative studies should be carried out to understand the evolution of displacement situations over time, the specific protection issues and needs of disaster-displaced people, and the barriers to their achievement of durable solutions to their displacement.

Greater knowledge is needed of the dynamics of displacement related to complex natural disasters, such as the repeated and cascading series of floods which tend to displace high numbers of people in some regions each year. This will help identify the best approaches for monitoring and reporting on the displacement they cause, and inform more effective responses.

Country-specific data needs to be considered in its specific regional and national contexts if the risk which displacement poses, especially to the most vulnerable people and populations, is to be better understood. It should be considered in relation to population size and density, and to the pre-existing vulnerability of populations and their capacity to cope with extreme hazard events.

While the global estimates highlight the largest disasters and their impact on the scale of displacement globally, smaller-scale disasters are far less visible. National and international actors must work towards a greater understanding of the cumulative impacts of frequent, small-scale events on the most vulnerable communities and individuals, and of their coping strategies.

In addition, the challenges of identifying and monitoring displacement due to slow-onset disasters, in particular drought, needs to be tackled and brought into the picture, as displacement due to slow-onset natural hazards is less well understood.

Increased understanding of the scale and impact of disaster-induced displacement is an essential step to inform coherent and consistent policy and action, and the global estimates provide a reference point for taking this forward.

1. About the study

Forced displacement due to natural hazard-induced disasters is a large-scale, global phenomenon. The Guiding Principles on Internal Displacement identify natural disasters as one of the main causes of internal displacement, along with conflict, infrastructural projects and human rights violations.¹ The Intergovernmental Panel on Climate Change (IPCC) reported in 2007 that, in the context of global climate change, the frequency and intensity of disasters triggered by extreme weather or climate-related hazards was increasing and the patterns of their impact was changing.² Global data from the last few decades shows that the number of natural hazard-induced disasters and the number of people affected by them are on the rise.³ In 2008, sudden-onset disasters newly displaced at least 36 million people, including 20 million displaced by climate-related disasters.⁴

As increased attention is paid internationally to disaster risk reduction, climate change adaptation and the protection of displaced people in natural disaster situations, there is wide agreement that the extent and impact of displacement must be better understood. Accessible information and analysis are needed to inform coherent and consistent policy and action by governments and organisations who have responsibilities, mandates or roles to play in addressing this global challenge.

Background: new displacement in 2008

The first global estimate was developed by IDMC and the UN's Office for the Coordination of Humanitarian Affairs (OCHA) in 2009. The study had two aims: first, to provide an estimate of the scale of forced displacement related to sudden-onset disasters in 2008, including climate-related

disasters; and second, to propose a methodology for ongoing monitoring of disaster-related displacement.

The research cross-referenced information from existing data sets on natural disasters with various secondary sources, and further investigated individual events, to estimate figures for displacement in 2008. It found that at least 36 million people were displaced by sudden-onset natural disasters, and of those, over 20 million were displaced by climate-related disasters, triggered in large part by floods and storms.

The 2009/2010 study

IDMC has committed to taking on a longer-term role in the global monitoring and analysis of disaster-induced displacement, including through the provision of annual

What is a “disaster”?

The UN's International Strategy for Disaster Reduction defines a disaster as: “A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk.”

The criteria used by the Centre for Research on the Epidemiology of Disasters (CRED) for entering “disaster events” into the OFDA/CRED International Disaster Database (EM-DAT) include at least one of the following:

- Ten or more people reported killed;
- 100 or more people reported affected;
- Declaration of a state of emergency;
- Call for international assistance.

The phrase “natural disaster” is used in this study as shorthand in reference to the human impact of extreme natural hazard events; these are further explained in the following section.

- 1 Guiding Principles on Internal Displacement, 1998. www.internal-displacement.org/guidingprinciples/eng
- 2 Intergovernmental Panel on Climate Change, Fourth Assessment Report, 2007. www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm
- 3 EM-DAT: The OFDA/CRED International Disaster Database – Université Catholique de Louvain, Brussels, Belgium www.emdat.be/sites/default/files/Trends/natural/world_1900_2010/2c.pdf
- 4 NRC/IDMC and UN OCHA, Monitoring disaster displacement in the context of climate change, September 2009. www.internal-displacement.org/publications/2009/disasters

Table 1 Types of natural hazard events included in the study

Climate-related hazards	Meteorological	Hydrological	Climatological
Sudden onset	Tropical, extra-tropical and local storms	Floods and wet mass movement	Extreme temperature and wildfire
Slow onset	—	Long-lasting subsidence	—
Not climate-related hazards	Geophysical	Biological	
Sudden onset	Earthquakes, volcanic eruptions, dry mass movement	Epidemics, insect infestation, animal stampede	
Slow onset	Long-lasting subsidence	Epidemics, insect infestation	

■ Included in study

global estimates of its scale. An early step in its strategy is to provide figures and analysis for the two years since 2008. The methodology maintains the general approach established by the 2008 study, with some adjustments which are described in the following section. It includes the use of secondary data published by a wide range of sources, and detailed data which the Centre for Research on the Epidemiology of Disasters (CRED) and the International Federation of Red Cross and Red Crescent Societies (IFRC) have made available.

The study focuses on collecting and analysing quantitative data on new displacement in 2009 and 2010, induced by natural, sudden-onset hazard events. The types of events included in this study are highlighted in Table 1, in which hazards are further broken down according to whether or not they are considered to be climate-related, or either sudden or slow-onset in nature. Events related to biological hazards and to slow-onset disasters such as drought and sea level rise are not included in this study.

For the purpose of this study, no assumptions are made as to the role of global climate change in causing or contributing to specific events. Further drivers and types of population movement associated with global climate change, such as conflict due to competition for scarce resources, are also beyond the study's scope.⁵

The study focuses on quantifying peak levels of displacement, including due to preventative actions taken before as well as following the onset of a disaster, as people are evacuated out of harm's way or forced to flee their homes. Global data is disaggregated by classification and by type

Internally displaced people

This reports refers to people displaced by natural disasters without distinguishing between those who have been internally displaced within their country and those who have crossed a border to another country. The available evidence suggests that, globally, the large majority of people displaced by disasters caused by sudden-onset hazards remain internally displaced.

The Guiding Principles on Internal Displacement identify the rights and guarantees relevant to the protection of the internally displaced in all phases of displacement. They define internally displaced people (IDPs) as: "Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict situations of generalised violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognised State border".

of hazard or disaster, and also by geographical location at the continent and country levels.

⁵ For more information on the Inter-Agency Standing Committee's typology of climate-change related drivers of migration and displacement, see NRC/IDMC and UN OCHA, September 2009.

2. Findings for 2009

Scale of global displacement by type of disaster

At least **16.7 million** people were newly displaced by sudden-onset natural disasters in **2009**.

Of the total number of people reported as being affected by these events, 16 per cent were displaced.

15.2 million people, 91 per cent of the total, were displaced due to climate-related disasters, categorised as hydrological, meteorological or climatological. These disasters were primarily triggered by floods and storms, together known as hydro-meteorological hazards. Climatological events – extreme temperatures and wildfires – had a relatively small impact, and were reported to have displaced a total of around 30,000 people only.

An additional **1.5 million** people, nine per cent of the total, were displaced by geophysical hazards, namely earthquakes and volcanic eruptions.

Displacement by location

By far the highest levels of displacement in 2009 were in Asia. Around 14.5 million people, 87 per cent of the number displaced worldwide by natural hazard events, were displaced there. The remaining 2.2 million people displaced during the year were located almost equally in Africa (1.1 million people) and the Americas (990,000 people), with relatively small numbers also reported for Europe (75,000 people) and Oceania (27,000 people).

Most of the reported displacement was concentrated in a relatively small number of countries. 91 per cent of the people displaced during the year, totalling 15.3 million people, were displaced in the ten most-affected countries. Seven of these ten countries were in Asia, including all four countries where over one million people were displaced: India, China, the Philippines and Bangladesh. However, the impacts of major floods in Mexico and Brazil in the Americas, and in Senegal in Africa, remind us that large-scale displacement is not only an Asian concern.

Figure 1 Percentage of total displaced in 2009, by type of hazard

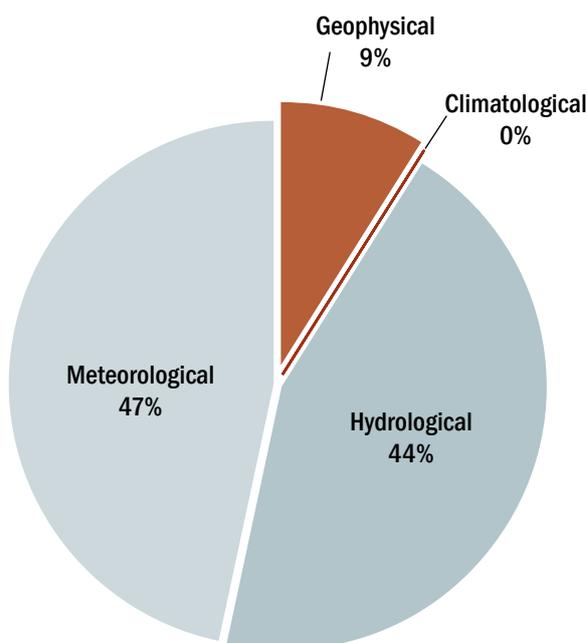


Figure 2 Percentage of total displaced in 2009, by continent

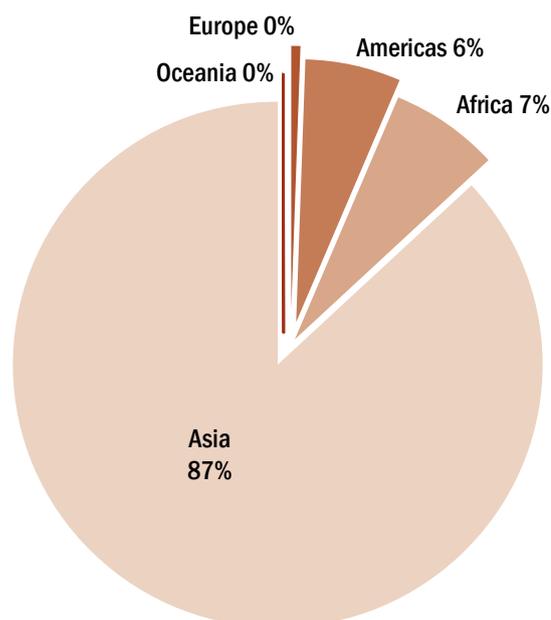
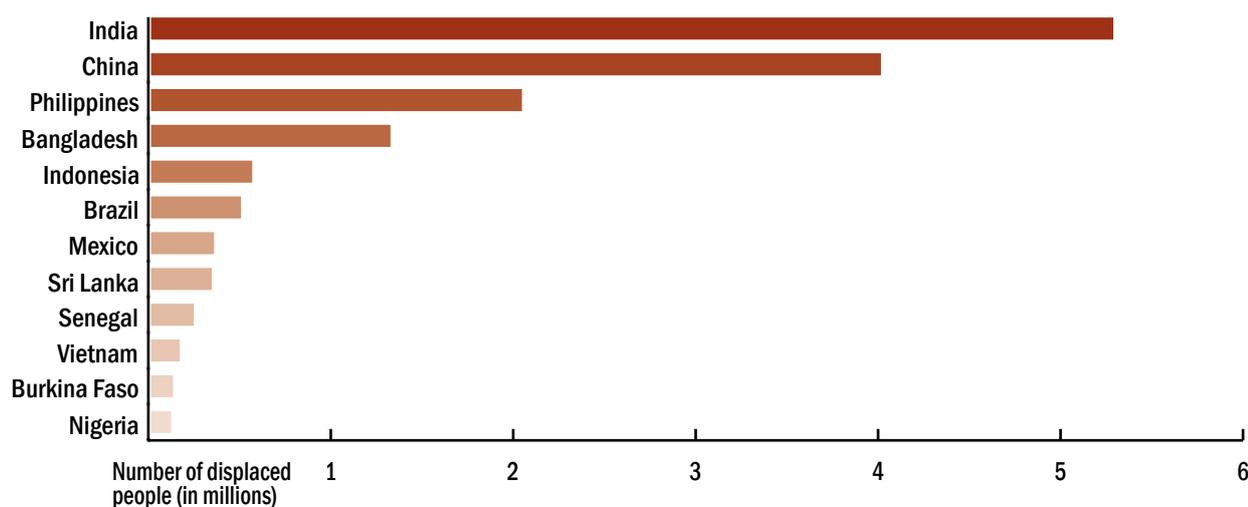


Figure 3 Countries with the highest levels of new displacement in 2009



India was found to be the country in which the most people were newly displaced, as well as the location of the two single events which caused the most displacement in the year. A huge storm in May displaced over 2.3 million people and floods in September displaced another 2.5 million.

Large-scale disasters

30 large-scale disasters, which were estimated to have displaced at least 100,000 people, accounted for 97 per

cent of the total number displaced during 2009, or 16.3 million people. These disasters are listed in order of decreasing size in Annexe 2. The ten largest are summarised in the table below.

Included in these large events were three massive hydro-meteorological disasters in India and China, which each displaced over one million people and represented 38 per cent of total displacement for the year. Floods in India displaced an estimated 2.5 million people, and Cyclone Aila displaced 2.3 million there, as well as a further 800,000

Table 2 Ten sudden-onset disasters causing most displacement in 2009

Country	Type	Start date	Number displaced	Source	Percentage of total displaced
India	Flood	25/09/2009	2,500,000	Reuters AlertNet	15%
India	Storm (Cyclone Aila)	25/05/2009	2,300,920	Reuters AlertNet	14%
China	Storm (Typhoon Morakot)	09/08/2009	1,620,000	UN OCHA	10%
China	Flood	01/07/2009	938,000	IFRC	6%
Bangladesh	Storm (Cyclone Aila)	25/05/2009	842,000	UN	5%
Indonesia	Earthquake (West Sumatra)	30/09/2009	675,000	UN OCHA	4%
Philippines	Storm (Tropical Storm Ketsana/Ondoy)	24/09/2009	561,242	IFRC/DMIS	3%
Philippines	Storm (Typhoon Parma/Pepeng)	29/09/2009	500,000	BBC News	3%
India	Flood	01/07/2009	500,000	Action Aid	3%
Brazil	Flood	22/04/2009	500,000	Asian Disaster Reduction Centre (ADRC)	3%
TOTAL			10,936,742		65%

people in Bangladesh. Typhoon Morakot displaced over 1.6 million in China, following floods that displaced over 900,000 a couple of months earlier. In the Philippines, only a few days after over 500,000 people were displaced by Tropical Storm Ketsana (local name “Ondoy”), a further 500,000 people were displaced by Typhoon Parma (local name “Pepeng”).

The largest disaster reported outside south and south-east Asia, floods across Rio Grande do Norte in Brazil, also caused the displacement of 500,000 people.

The largest earthquake-induced displacement, of 680,000 people, was reported in West Sumatra province in Indonesia; it was preceded in the same month by another in West Java, which displaced 180,000. In addition, two large earthquake disasters in July and November hit the south-western province of Yunnan in China, with the July earthquake displacing 400,000 people.

3. Findings for 2010

Scale of global displacement by type of disaster

At least **42.3 million** people were newly displaced by sudden-onset natural disasters in **2010**.

Of the total number of people reported as being affected by these events, 14 per cent were displaced.

38.3 million people, 90 per cent of the total number, were displaced due to climate-related (hydrological, meteorological or climatological) disasters triggered primarily by floods and in some cases storms. Climatological events such as extreme temperatures and wildfires had a relatively small impact, as in 2009, and were reported to have displaced a total of around 17,000 people only.

Over **four million** people, ten per cent of the total, were displaced by earthquakes and other geophysical hazards.

Displacement by location

In 2010, Asia was again the continent where the large majority of displacement was reported; 32.4 million people

were displaced in Asia, more than twice the number of people reported displaced there in 2009. They made up 77 per cent of people displaced worldwide during the year (compared to 87 per cent in 2009); 19 per cent were displaced in the Americas, a higher percentage than in 2009, and only four per cent in Africa. However, the absolute number of people displaced in Africa was still higher than in 2009 at 1.7 million, while the absolute figure for the Americas was over eight times higher, with 8.2 million people displaced there. The causes included the devastating earthquakes in Haiti and Chile and serious floods in Colombia, Mexico and Brazil.

Europe and Oceania reported only very small levels of displacement once again, with some 63,000 people displaced in Europe and around 31,000 in Oceania.

In 2010, as for 2009, 91 per cent of total displacement was concentrated in just ten countries, as shown in Figure 6. Six of these countries were in Asia and four in the Americas. 38.4 million people were displaced in these ten countries during the year, and eight of them reported over one million people displaced.

Figure 4 Percentage of total displaced in 2010, by type of hazard

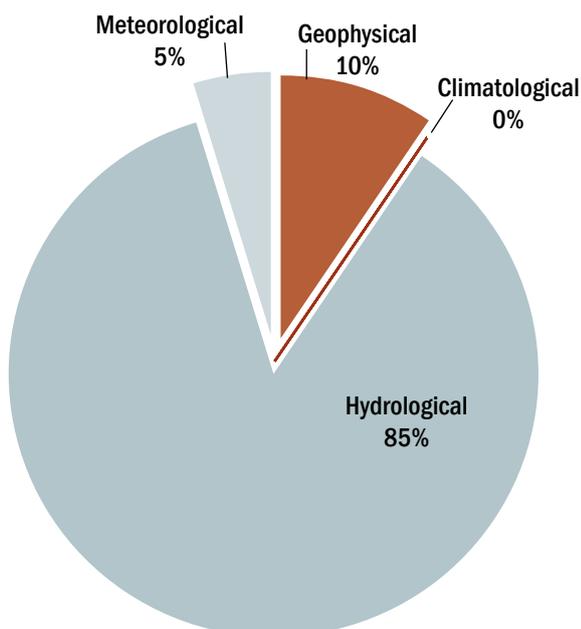


Figure 5 Percentage of total displaced in 2010, by continent

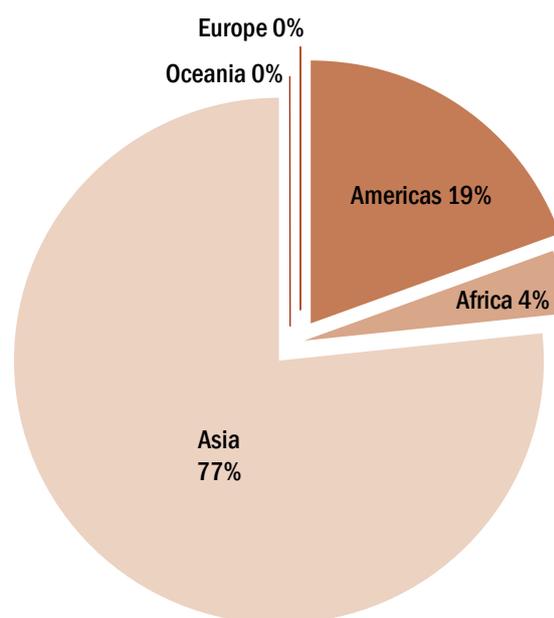
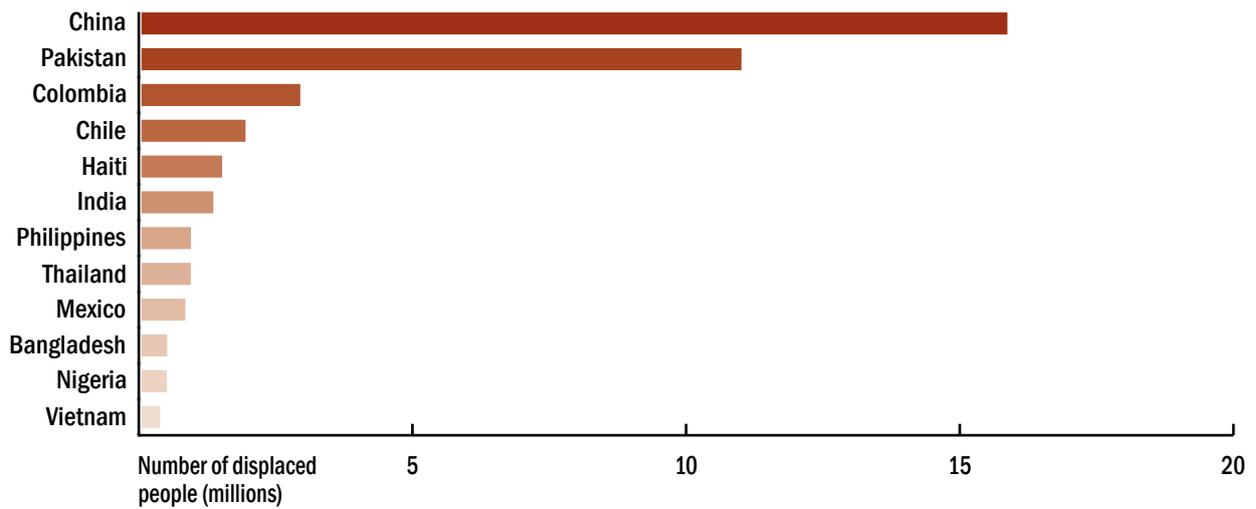


Figure 6 Countries with the highest levels of new displacement in 2010



The widespread and long-lasting flooding across huge areas of China and Pakistan alone caused the displacement of 26.2 million people; 62 per cent of the total global number displaced in the year. Around 15.9 million people were displaced in China and 11 million in Pakistan, and each event accounted for most of the displacement reported in each country. The large events behind many of these country-based figures are further discussed in the next section.

Large-scale disasters

As for 2009, a relatively small number of large-scale disasters had a highly disproportionate impact on the figures for 2010. The 31 large events which each displaced at least 100,000 people accounted for 93 per cent of the total number of people displaced during the year; they caused the displacement of 39.2 million people. These disasters are listed in order of decreasing size in Annexe 2. The top ten events are summarised in Table 3 on page 13.

Seven events each displaced over one million people in 2010, and together they caused the displacement of 32.5 million people, or 77 per cent of the total estimated number of people displaced during the year. They included the massive floods in China and Pakistan mentioned above, which accounted for 62 per cent of total displacement. Colombia and Mexico also suffered particularly devastating floods in 2010, with 1.5 million people in Colombia displaced during two flood events recorded within three months of each other. In Indonesia, the eruption of Mount Merapi towards the end of the year displaced over 360,000 people.

Earthquakes in the Americas: displacement in Haiti and Chile

The high levels of displacement in Haiti and Chile in 2010 were due to the devastating earthquake disasters towards the beginning of the year that displaced 1.5 million people in Haiti and two million people in Chile just six weeks later.

The different pre-existing levels of vulnerability of the Haitian and Chilean populations, and their respective levels of preparedness to cope with these major disasters, created huge differences in their impact. The Chilean earthquake was far greater in magnitude, but in Haiti 230,000 people died, whereas around 550 people died in Chile. Displacement was on a huge scale in both cases as people's homes were destroyed or made uninhabitable.

A year after the earthquake, reconstruction in Chile was reported to be progressing at a faster pace than in Haiti. In Haiti, the difficult living conditions for people made homeless and displaced to relief camps were made still worse by the impact of further natural hazards including heavy rains, Cyclone Tomas and a cholera epidemic later in the year. Yet in both countries, hundreds of thousands of displaced earthquake survivors continued to face huge barriers to their recovery as they continued to live in temporary shelters.

Table 3 Ten sudden-onset disasters causing most displacement in 2010

Country	Type	Start date	Number displaced	Source	Percentage of total displaced
China	Flood	07/05/2010	15,200,000	IFRC/DMIS	36%
Pakistan	Flood	28/07/2010	11,000,000	Pakistan Floods Shelter Cluster	26%
Chile	Earthquake	27/02/2010	2,000,000	New York Times	5%
Haiti	Earthquake	12/01/2010	1,500,000	Center for International Disaster Information (CIDI)	4%
Colombia	Flood	06/04/2010	1,500,000	Center for International Disaster Information (CIDI)	4%
Colombia	Flood	01/07/2010	1,500,000	National Red Cross- Colombia	4%
Thailand	Flood	10/10/2010	1,000,000	Pattaya Daily News	2%
Mexico	Flood	20/09/2010	810,000	AFP- news agency	2%
Nigeria	Flood	13/09/2010	560,000	AFP- news agency	1%
India	Flood	05/09/2010	523,000	Dartmouth Floods Observatory	1%
TOTAL			35,593,000		84%

In Nigeria, over 500,000 people were displaced from their homes when dam gates were opened by local authorities following heavy rains. This is an example of how risks created through lack of preparedness or warnings to exposed populations, or through apparent mismanagement by local authorities, may contribute as much to a disaster as an area's exposure to a natural hazard such as heavy rains.

4. Comparing findings from 2008 to 2010

Impact on figures of the largest disasters

For each year from 2008 to 2010, large-scale disasters in which at least 100,000 people were displaced were found to have a very significant impact on the figures reported for displacement at national, continental and global levels. Large disasters displaced 34.1 million people in 2008, 14.7 million people in 2009, and 39.2 million people in 2010

While the number and absolute impact of large-scale disasters varied between years (with 25 such events in 2008, 30 in 2009 and 31 in 2010) their impact on the overall annual displacement figures was constant. They made up 95 per cent of the total global figure for 2008 and about 90 per cent of the totals for 2009 and 2010, .

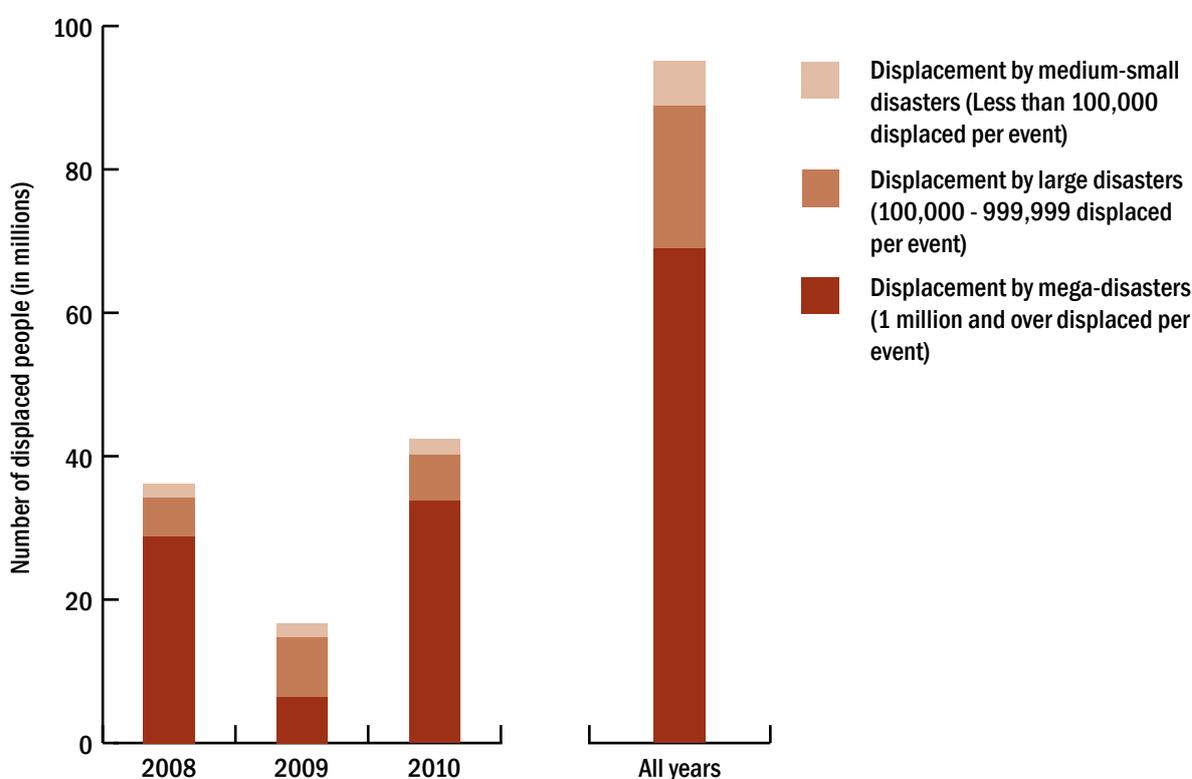
Comparing the impact of events in each year, the most dramatic difference between each year can be seen in the size and number of the largest events or mega-disasters. 18 such events between 2008 and 2010 each caused the

mass displacement of at least a million people. As Figure 7 shows, it is the occurrence of these mega-disasters that plays the greatest role in the differences observed between the global estimates for each year, rather than the overall number of events or disasters in a year.

During 2010, a staggering 33.7 million people were displaced by mega-disasters. With 15.2 million people displaced in China by floods, only the devastating Sichuan earthquake in the same country was comparable in scale during the three-year period.

In comparison, the largest displacements in 2009 were caused by floods and storms in India, with 4.8 million people displaced by two events; these were still huge in scale, but far smaller than the biggest events reported for 2010. In China, floods and storms were also significant in 2009, displacing at least 2.5 million people.

Figure 7 The scale of disasters triggering displacement relative to the global estimate for each year



Dominant impact of climate-related floods and storms

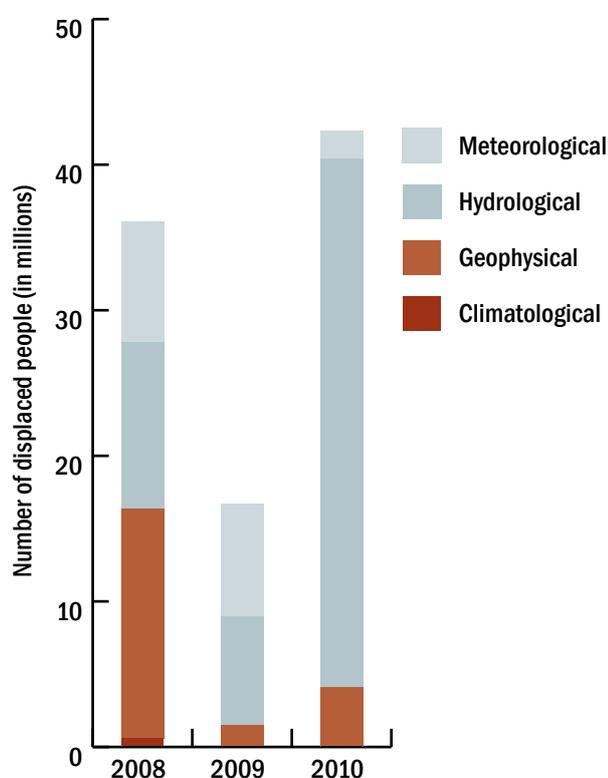
Climate-related disasters were the trigger for the displacement of 56 per cent of the total number of people displaced in 2008, 88 per cent of the total displaced in 2009 and 93 per cent in 2010. Floods and storms formed the vast majority of events driving displacement, as well as making up 17 or 18 out of the 20 disasters causing the highest numbers of displacement each year.

Geophysical disasters (volcanic eruptions, earthquakes and tsunamis) were also significant in the global figures, causing nine per cent of all displacement in 2009 and ten per cent in 2010. In 2008, this figure was much higher at 44 per cent, due to the Sichuan earthquake which alone displaced an estimated 15 million people.

Climatological hazards, including extreme temperatures and wildfires, were relatively insignificant in terms of their impact on displacement.

Figure 8 below shows the proportion of the total number of people displaced by each type of disaster from 2008 to 2010, with hydrological and meteorological events

Figure 8 Number and proportion of people displaced by different types of hazard, 2008-2010



forming the majority in all years, and the overall impact of geophysical events reflecting specific major events such as the Sichuan earthquake in 2008 and the Haiti and Chile earthquakes in 2010.

Proportion of affected populations displaced by different disasters

On average for each year, between 14 and 17 per cent of the total number of people reported as affected by sudden-onset disasters were found to have been displaced. Further analysis according to the type of disasters causing displacement showed general differences between geophysical events and climate-related events.

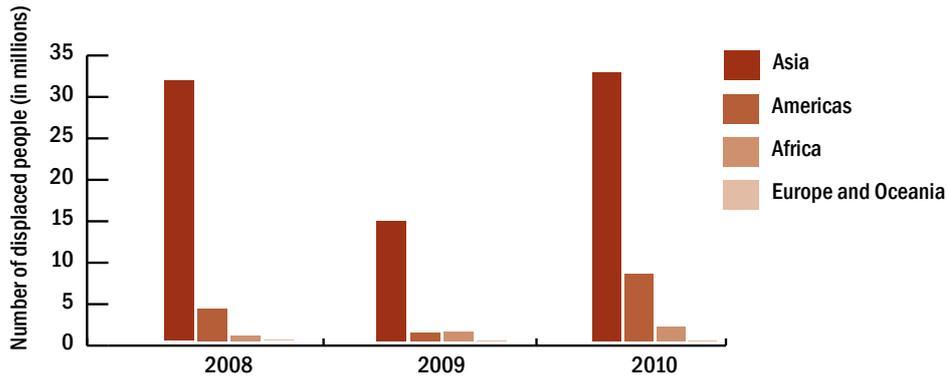
Disasters triggered by earthquakes and volcanic eruptions caused the displacement of fewer people in absolute terms, at least partly because they occurred far less frequently than floods and storms. However, the levels of displacement which they caused, relative to the size of the total population affected, appeared significantly higher (between 34 per cent and 55 per cent in the years studied). In comparison, only between 13 per cent and 15 per cent of the people affected in climate-related events in each of the three years were reported as displaced (see Table 4 below).

These figures should be interpreted with caution. There are frequently significant variations between the findings for individual disasters of the same type. Differences in the amount and quality of data available for different events, and the different criteria used by various sources for reporting the size of affected populations, both have an important effect. The reliability and value of this tentative finding will need to be tested through further research.

Table 4 People displaced as a percentage of the total number affected, by type of disaster, 2008-2010

Total displaced as a percentage of total affected			
Type of disaster	2008	2009	2010
Geophysical	34%	37%	55%
Climate-related	13%	15%	13%
All disasters	17%	16%	14%

Figure 9 Numbers displaced by continent, 2008-2010



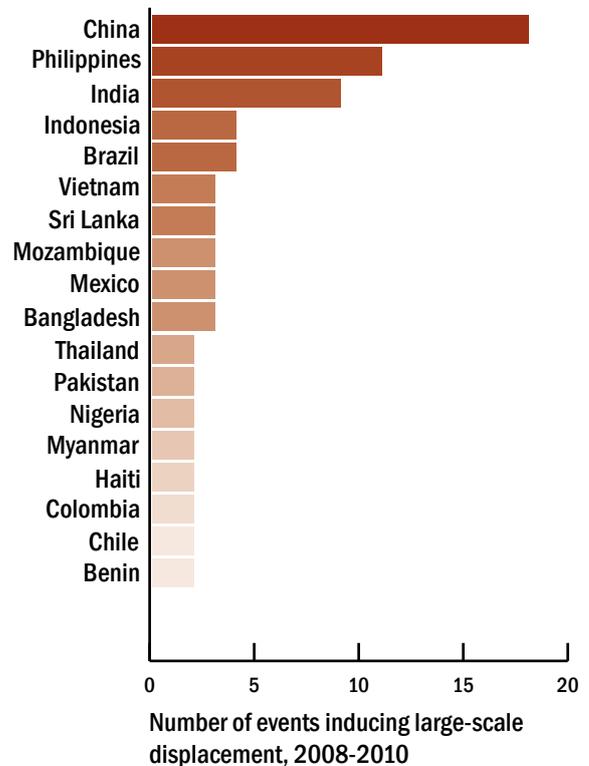
Biggest numbers in Asia

Asia was consistently the continent most affected in terms of the absolute and relative numbers of people displaced. It accounted for at least three-quarters (between 77 and 87 per cent) of all displacement in each year. It was also the continent where the events with the highest number of people displaced took place (with eight of the ten “largest” events in 2008, six in 2009 and seven in 2010). The Americas and then Africa tend to follow Asia as the second and third most affected continents. The absolute figures for the scale of displacement in Europe and Oceania are very small in comparison. Figure 9 shows the aggregate number of people displaced by sudden onset disasters by continent from 2008 to 2010.

Countries most affected by large-scale displacement

18 countries were found to have experienced large-scale displacement due to sudden onset disasters more than once over the three years, as listed in Figure 10. China, the Philippines and India stand out as the countries most frequently experiencing disaster-induced displacement on this large scale: China with 18 such disasters, the Philippines with 11 and India with nine. These three countries are also consistently amongst those with the highest number of people displaced each year, as shown previously in Figures 3 (2009) and 6 (2010). They are followed by Indonesia and Brazil. Countries in the Americas and Africa have also been significantly affected: as well as Brazil, Mexico, Haiti, Colombia and Chile were all hit a number of times with mass displacement. In Africa, Mozambique, Nigeria and Benin were the countries most frequently affected, with two or three events reported in each over the period of the study.

Figure 10 Countries hit frequently by disasters triggering large-scale displacement (more than once in the course of three years), 2008-2010



5. Methodology for developing estimates

Process and sources

The study benefited significantly from the open sharing of raw data and inputs from the OFDA/CRED's International Disaster Database (EM-DAT)⁶ and the IFRC's Disaster Management Information System (DMIS); from access to the Dartmouth Floods Observatory database and the Asian Disaster Reduction Centre (ADRC)'s Glide database; and also from access to documents via Relief Web, Pacific Disaster Net and the website of UN and government agencies, news agencies, insurance companies and research institutions.

Four steps were followed to develop global estimates:

1. Identifying a base list of events

A base list of events relevant to the scope of this study was identified for 2009 and 2010, as a starting point for research. This drew on CRED's EM-DAT datasets for 2009 and 2010, complemented by other sources including the databases listed above.

2. Prioritising events to create a core dataset

Events were prioritised for further investigation in relation to displacement and the creation of a core dataset for research. Prioritised events included all larger-scale events where over 50,000 people were reported as affected, and events where figures for people made "homeless" were reported in EM-DAT. A sample of smaller-scale events was also prioritised.

3. Estimating displacement for each event

Individual events were cross-checked through investigating a variety of sources for quantitative data indicating displacement; an estimate of total displacement was then made for each event.

4. Analysing findings

The core dataset was analysed by type and location of disasters and displacement for 2009 and 2010, and the results were also compared with findings from the 2008 study.

Data from various sources referencing figures for displaced, homeless or evacuated people was considered

in relation to the reliability of the source, dates of the information sourced compared to the start of disaster onset, the type of disaster, and the country where the event took place.

Where large discrepancies were found between the figures provided by different sources, further investigations were made to determine, on a case-by-case basis, which figure provided a more reliable reflection of the scale of displacement.

A total of 259 events from 2009 were identified for inclusion in the base list of events, of which 119 were prioritised and investigated as the core dataset for this study. For 2010, a total of 355 events were identified for the base list, of which 149 formed the core dataset.

The more detailed process and criteria by which these events were identified, filtered, prioritised and investigated to draw estimates is described in Annexe 1.

Indicators of displacement

Data specifically referring to figures for "displaced" populations is often unavailable or not reported using this terminology. Usually, other indicators were used to provide evidence of the scale of displacement.

1. Homelessness

Homelessness generated by a disaster is used as a proxy indicator for displacement. As highlighted in an evaluation of over 20 years of humanitarian responses to flooding in Africa, Asia and the Americas, "shelter and housing are more than just a roof over a person's head", as the livelihood activities of many flood-prone communities are home- or homestead-based and destroyed along with homes.⁷ CRED/EM-DAT data defines homeless people as "people needing immediate assistance for shelter".

Where homeless figures were provided by EM-DAT, they were used as an initial figure for estimating displacement. If homeless figures are not clearly provided by

⁶ The database and more information are at www.emdat.be

⁷ ALNAP/Prevention Consortium, Flood disasters: Learning from previous relief and recovery operations, January 2008.

the sources, EM-DAT's method is to take the number of destroyed houses or homes and multiply it by an average household size of five for developing countries and three for industrialised countries, as defined in the UNDP country list. The same method was applied in this study to figures for houses destroyed, with a few exceptions where country-specific information with regards to average household size was used instead. For example, an average household size of three was applied to data on houses destroyed in China. Where data did not allow for differentiation between houses destroyed and damaged but mentioned both, the aggregate figure was used.

2. People evacuated

People evacuated as a result of imminent risks created by natural disasters are displaced. Evacuation has been defined as the facilitation or organisation of the transfer of individuals or groups from one area or locality to another to ensure their security, safety and well-being. It can be carried out as either a preventative or a reactive measure.

Differences between the 2008 and 2009/2010 methodologies

A few significant differences should be noted between the methodology applied to the 2008 study, and its adjusted form used in the 2009/2010 study, when interpreting the findings of the two studies.

Firstly, the 2009/2010 study assumes that where data is available for the number of people evacuated, these figures overlap with the number of people reported as homeless. The 2008 study calculated the total number of people displaced by adding the number of people reported as evacuated to the number reported as homeless. The 2009/2010 study does not aggregate the figures in this way. Rather, preference is given to the higher figure where data is available for the number of people made homeless, evacuated or reported specifically as "displaced", if the source of the higher figure is judged to be reliable.

Secondly, the 2009/2010 study assumes that the number of people displaced is a part of the total number of people reported as affected by a disaster. People displaced are people affected. Therefore, where the number reported displaced by an event exceeded the reported total number of people affected, the number displaced was also used as the "affected" figure in the core datasets.

The 2008 study maintained affected figures where available from EM-DAT for individual events. The EM-DAT definition of "affected" people is: "People requiring immediate assistance during a period of emergency; it can also include displaced or evacuated people." For the 2009/2010 study, most of the events in the study datasets also use "affected" figures as provided by EM-DAT. However, other sources were used in some cases, for example in the more complex and cascading series of events where figures provided by reliable sources differed greatly, with coverage of different parts of the total area affected in a country, or where greater precision was given by a specific source in relation to data for displacement.

Finally, while the core datasets were identified in a similar way, the number of events included in the 2009 and 2010 datasets compared to 2008 was significantly different, both in absolute terms and relative to the total number of events identified in the original base list. Thus 221 events, or around 71 per cent of the base list of events, were investigated in 2008, compared to 119 events in 2009 (37 per cent of the base list) and 149 events for 2010 (42 per cent of the base list). However, as events in which fewer than 50,000 people were reported as affected are far less significant in terms of their impact on global estimates, the figures are still comparable across the three years. The larger number of smaller events investigated in the 2008 study represented less than 1.3 per cent of all reported displacement for that year.

6. Considerations for future displacement monitoring

Access to relevant data

Data is more easily accessed for some countries and regions than for others, and smaller-scale disasters are generally less reported. For example, Oceania and the Pacific island countries are recognised internationally as a “hotspot” for the impacts of climate change, including in relation to sudden onset disasters, but data accessible for this study appears to under-represent the number of events occurring there each year and their human impact. In addition, displaced people who have taken refuge in camps may be better represented in the available data than those who have stayed outside camps in host communities.

Where data is not accessible from databases or through web searches, it is necessary to make direct contact with regional and national sources, which is a resource-intensive process.

The relevance of different types of data to enable estimates for displacement merits further attention. Figures for evacuations and shelter needs provide a strong basis for identifying and analysing the scale of displacement, but information on other factors such as the destruction of livelihoods might helpfully complement this data.

To achieve a more comprehensive global picture of the occurrence and scale of displacement due to natural disasters, more systematic ground-level monitoring of displacement and collection of standardised information is needed, together with increased sharing of information.

Analysing data for complex events

Even where data is available, its usefulness may be difficult to determine for more complex and interlinked extreme hazard events, such as the cascading patterns of floods in some regions, together with their secondary impacts. Extreme events may occur in close succession during a rainy or cyclone season and some populations become subject to multiple displacement. Examples from 2010 include the massive series of floods which spread across southern China over several months, and the floodwaters of the Indus River that moved through the length of Pakistan.

The separation of events is often difficult, and the aggregation of events is problematic where all affected populations and areas are not covered by the available data.

The estimation of the scale of displacement resulting from these complex disasters often requires judgement based on the best data that is available. Further study of specific, complex disasters would enable a better understanding of the challenges and possible good practices in reporting on resulting displacement. The time required to analyse such events should not be underestimated, but would be valuable as they significantly affect overall global estimates.

Understanding trends and regional and national impacts

While compiling the data from three successive years has enabled the identification of possible patterns, the sample is still too limited to confirm patterns as longer-term trends, and they will need to be further tested. Better knowledge of regional and national contexts and of the evolution of displacement situations over time will also deepen understanding to inform international policy and action.

Country-specific data needs to be put in context, including in relation to population size and density, and to pre-existing vulnerability and capacity to cope with an extreme hazard event. For example, the study shows the aggregated number of people displaced by country and region, but does not report on the percentage of their populations displaced. The countries with the largest number of people displaced – China and India – are also the world’s most populous, and the same is true of Asia as the most affected continent. However, continents and countries with smaller populations may have been relatively highly impacted, without being prominent in the findings.

At the same time, complementary qualitative studies should be carried out to understand the evolution of displacement situations over time, the specific protection issues and needs of disaster-displaced people, and

the barriers to their achievement of durable solutions to their displacement.

While the global estimates highlight the largest disasters and their impact on the scale of displacement globally, smaller-scale disasters are far less visible. National and international actors must work towards a greater understanding of the cumulative impacts of frequent, small-scale events on the most vulnerable communities and individuals, and of their coping strategies.

Slow-onset disasters - drought

The main type of slow-onset natural hazard is drought. Based on data compiled by CRED/EM-DAT, 101 million people were reported as affected by drought in 2009, and 108 million people in 2010.

Around two thirds of these drought-affected people were in Asia, with 60 and 64 million people affected in each year in China. Most of the rest were in Africa, the majority of them in east Africa, where 25 million people were affected in 2009 and 17 million in 2010. However, Niger in west Africa was the African country with the highest number of people affected by drought in 2010, with almost eight million reported affected.

In comparison, “only” 26.5 million people were affected by drought in 2008. Far fewer people (3.5 million) were affected in China than in 2009 or 2010; East Africa was the worst-hit region with over 20 million people affected.

It is not known how many of these people were forced to move from their homes in search of places where they could sustain livelihoods and meet their basic needs, and the best approach to monitoring such displacement has not yet been identified. Lessons might be drawn from humanitarian and development experience, including knowledge of displacement caused by conflict and development projects. This is an area that requires further exploration to provide a more comprehensive picture of the impact of climate-related disasters on displacement.

Annexe 1 Detailed methodology

In addition to the information provided in the Methodology section of this report, key stages in the process of identifying, prioritising, investigating and drawing estimates for displacement are further detailed below.

Classification of natural hazards

The general classification of natural hazard events used was developed by CRED in agreement with the reinsurance company Munich Re.⁸

Geophysical – Events originating from solid earth.

Main types: earthquake, volcano, mass movement (dry)

Meteorological - Events caused by short-lived/small to meso scale atmospheric processes (in the spectrum from minutes to days).

Main type: storm

Hydrological – Events caused by deviations in the normal water cycle and/or overflow of bodies of water caused by wind.

Main types: flood, mass movement (wet)

Climatological – Events caused by long-lived/meso to macro scale processes (in the spectrum from intra-seasonal to multi-decadal climate variability). This should not be confused with the broader group of climate-related events, including hydrological and meteorological events.

Main types: extreme temperature, drought, wildfire.

Biological – Disaster caused by the exposure of living organisms to germs and toxic substances.

Main type: epidemic

Identification of the base list of natural hazard events in 2009 and 2010

Events were identified and filtered to create the base list of natural hazard events included in the study for 2009 and 2010.

⁸ Below R., Wirtz A., Guha-Sapir D., *Disaster Category Classification And Peril Terminology For Operational Purposes*, 2009.

1. Meteorological, hydrological, climatological and geophysical disasters which were reported in the EM-DAT data set managed by CRED for 2009 and 2010 were selected. For a disaster to be entered into the EM-DAT database at least one of the following criteria must be fulfilled: ten or more people reported killed; 100 or more people reported affected; the declaration of a state of emergency; and a call for international assistance.

2. Events listed but for which no figures were provided for people affected, killed or made homeless were deprioritised for inclusion and investigation. They were not included in the core dataset unless relevant and reliable figures were detected as a consequence of other investigations, in which case they were included.

3. Inclusion of additional events in the base list not listed in the EM-DAT datasets, which were detected through random searches and cross-checking of events with other data sources.

The full EM-DAT dataset included 338 separately listed events categorised by these types of disaster in 2009, and 384 events in 2010. These were further filtered and additional events detected added (six additional events for 2009, and 14 additional events for 2010). Finally, 259 and 355 listed events formed the base lists of events for each year respectively.

Prioritisation of events in the base lists for investigation and cross-checking

Events in the base list were prioritised for further investigation to provide an estimate for displacement where possible based on data accessible in the time frame for the study.

The total number displaced is assumed, by definition, to be a sub-set of the total number affected by a given event. Therefore, where the estimate made for the number of people displaced by a given event was higher than the affected figure recorded in the dataset, the figure for “displaced” was also used as the “affected” figure in the IDMC raw dataset.

Events were prioritised where there was a high probability of displacement due to the size of the population reported as affected, and deprioritised where displacement was highly unlikely, specifically for extreme temperature climatological hazards.

1. All events with over 50,000 people reported as “affected”.

In 2009, 75 events were reported as having affected over 50,000 people (including 55 events with over 100,000 people affected, and 20 events which affected between 50,000 and 99,999 people)

In 2010, 81 events were reported as having affected over 50,000 people (of which 53 events affected over 100,000 people, and 29 events affected between 50,000 and 99,999).

2. All events reported with figures for “homeless” by EM-DAT.

Many of these events were already prioritised as events with over 50,000 people reported as affected; however, those events with “homeless” figures and less than 50,000 people affected were also added to the list of events most relevant for investigation.

As a result, a total of 32 additional events with figures for “homeless” were included in the 2009 dataset and 34 additional events the 2010 dataset.

3. Additional sampling from among the smaller events (less than 50,000 people affected)

Sampling of small-scale events was partly random and partly purposive. Information about displacement due to smaller events found in the course of investigating larger events was incorporated in the dataset, and further random sampling was also done.

Climatological events were deliberately included in the sample of smaller scale events, to ensure that they were represented in the estimates provided for displacement, while assuming that the numbers of displaced were likely to be relatively insignificant in terms of the global figures.

Similarly, events in Oceania were selected and added for investigation, to ensure representation of the region in the statistics, though they refer to smaller absolute figures per event compared to other regions given the size of populations in Pacific island countries. This was also considered to be important given the recognition of the Pacific region as a global “hotspot” in terms of

the impacts of climate-related hazards in the context of climate change.

25 additional smaller events not included in those mentioned above were added to the list investigated for 2009 and 2010 combined.

The final core dataset for 2009 included 119 events, and the core dataset for 2010 149 events.

Annexe 2 Summary data tables

The following tables show the summary data for the largest events for each year identified through this study. These are defined as all events identified that were estimated to have displaced at least 100,000 people: 30 disasters in 2009 and 31 in 2010. The full set of events and raw data for both 2009 and 2010 may be provided on request. The events in the data tables shown here list events in according to the number of people estimated as displaced for each event, in order from highest to lowest.

Data table 1 Events displacing at least 100,000 people, 2009

Country	Type	Start date	Total affected	Affected (Source)	Homeless reported	Evacuated reported	Displaced reported	Est. total displaced	Estimated total displaced source
India	Flood	25/09/2009	2,000,000	EM-DAT	2,500,000		750,000	2,500,000	Reuters AlertNet
India	Storm	25/05/2009	5,100,000	EM-DAT	1,262,020		2,300,000	2,300,000	Reuters AlertNet
China P Rep	Storm	09/08/2009	11,000,004	EM-DAT	0	1,620,000	1,570,000	1,620,000	UN OCHA
China P Rep	Flood	01/07/2009	39,372,000	EM-DAT	0	938,000	550,000	938,000	IFRC
Bangladesh	Storm	25/05/2009	3,935,341	EM-DAT	900,000	842,000		842,000	UN
Indonesia	Earthquake (seismic activity)	30/09/2009	2,501,798	EM-DAT	675,000			675,500	UN OCHA
Philippines	Storm	24/09/2009	4,901,763	EM-DAT	400,000	100,000	561,242	561,242	IFRC/DMIS
Philippines	Storm	29/06/2009	4,478,491	EM-DAT	30,190	500,000		500,000	BBC news
India	Flood	01/07/2009	1,886,000	EM-DAT	500,000		200,000	500,000	Action Aid
Brazil	Flood	22/04/2009	500,000	EM-DAT	500,000		426,886	500,000	ADRC
Bangladesh	Flood	03/07/2009	500,000	EM-DAT	0	500,000	300,000	500,000	ADRC
China P Rep	Earthquake (seismic activity)	09/07/2009	400,000	EM-DAT	50,000	400,000		400,000	Media
Sri Lanka	Flood	14/12/2009	302,885	DFO/GoSL Disaster Management	0		302,885	302,885	Dartmouth Flood Observatory/GoSL Disaster Management Center
Senegal	Flood	24/08/2009	264,000	EM-DAT	30,000		264,000	264,000	Reuters AlertNet
Philippines	Flood	02/01/2009	537,991	EM-DAT	0		200,000	200,000	ADRC
Philippines	Storm	03/02/2009	200,000	Dartmouth Flood Observatory	25,000	200,000		200,000	Dartmouth Flood Observatory
Mexico	Flood	01/11/2009	107,670	EM-DAT	0	40,000	200,000	200,000	Dartmouth Flood Observatory
Indonesia	Earthquake (seismic activity)	02/09/2009	339,792	EM-DAT	0		178,490	178,490	UN OCHA
China P Rep	Storm	11/11/2009	1,197,799	EM-DAT	0	166,000		166,000	National News
China P Rep	Storm	19/06/2009	162,757	International News	19,809	162,757		162,757	Xinhua - news agency
Burkina Faso	Flood	01/09/2009	151,000	EM-DAT	50,000	65,000	150,000	150,000	Reuters AlertNet

Country	Type	Start date	Total affected	Affected (Source)	Homeless reported	Evacuated reported	Displaced reported	Est. total displaced	Estimated total displaced source
Nigeria	Flood	10/09/2009	150,000	EM-DAT	100,000		140,000	140,000	Dartmouth Flood Observatory
China P Rep	Storm	02/08/2009	1,500,000	EM-DAT	50,000	123,000	7,250	123,000	China Daily - news
China P Rep	Flood	28/08/2009	118,000	EM-DAT	0	120,000		120,000	Xinhua - news agency
China P Rep	Flood	19/06/2009	106,000	EM-DAT	0	118,000	106,000	118,000	Xinhua - news agency
Philippines	Storm	07/05/2009	401,007	EM-DAT	117,220			117,220	Government of Philippines: National Disaster Coordinating Council
China P Rep	Storm	14/09/2009	1,000,058	EM-DAT	0	115,000		115,000	Xinhua - news agency
Philippines	Storm	28/10/2009	802,175	EM-DAT	0	115,000		115,000	United Nations
Viet Nam	Storm	28/09/2009	2,477,315	EM-DAT	108,635	100,000		108,635	CRED/EM-DAT
Mexico	Storm	08/11/2009	100,000	Wikipedia	0	100,000		100,000	Wikipedia

Data table 2 Events displacing at least 100,000 people, 2010

Country	Type	Start date	Total affected	Affected (Source)	Homeless reported	Evacuated reported	Displaced reported	Est. total displaced	Estimated total displaced source
China P Rep	Flood	07/05/2010	230,000,000	FRC/DMIS	6,810,000	9,610,000	800,000	15,200,000	IFRC/DMIS (using Government source)
Pakistan	Flood	28/07/2010	20,359,496	CRED/ EM-DAT	11,000,000		7,000,000	11,000,000	Pakistan Floods Shelter Cluster
Chile	Earthquake (seismic activity)	27/02/2010	2,671,556	CRED/ EM-DAT	800,000		2,000,000	2,000,000	New York Times - news media
Haiti	Earthquake (seismic activity)	12/01/2010	3,700,000	CRED/ EM-DAT	1,000,000		1,500,000	1,500,000	Center for International Disaster Information (CIDI)
Colombia	Flood	06/04/2010	2,234,443	CRED/ EM-DAT	20,000			1,500,000	National Red Cross - Colombia
Colombia	Flood	01/07/2010	1,500,000	AFP (via Colombia Red Cross)	1,500,000			1,500,000	National Red Cross - Colombia
Thailand	Flood	10/10/2010	8,970,653	CRED/ EM-DAT (& ADRC)	0		1,000,000	1,000,000	Pattaya Daily News
Mexico	Flood	20/09/2010	1,000,000	CRED/ EM-DAT	810,000	200,000		810,000	AFP - news media
Nigeria	Flood	13/09/2010	2,000,000	BBC News, Sept 24th	0	14,800	560,000	560,000	AFP - news media
India	Flood	05/07/2010	523,000	Dartmouth Floods Observatory	400,000		523,000	523,000	Dartmouth Floods Observatory
Bangladesh	Flood	01/10/2010	500,000	CRED/ EM-DAT			500,000	500,000	IRIN
India	Storm	13/04/2010	500,000	CRED/ EM-DAT	455,285			455,285	Nagaland Post - news media
Philippines	Flood	01/11/2010	450,673	CRED/ EM-DAT	0	383,969		383,969	National Disaster Risk Reduction and Management
Indonesia	Volcano	24/10/2010	360,557	IFRC/IFRC/DMIS	0		360,557	360,557	IFRC/DMIS
Benin	Flood	07/07/2010	831,000	CRED/ EM-DAT	150,000	275,000		275,000	Government of Benin

Country	Type	Start date	Total affected	Affected (Source)	Homeless reported	Evacuated reported	Displaced reported	Est. total displaced	Estimated total displaced source
China P Rep	Flood	06/10/2010	130,000	CRED/ EM-DAT	3,000	270,000	19,000	270,000	The Hindu - news media
Vietnam	Storm	24/08/2010	241,705	Gov/Relief Web	241,705			241,705	Government of Vietnam
Niger	Flood	01/08/2010	226,611	CRED/ EM-DAT	100,000		198,740	198,740	UN OCHA
China P Rep	Storm	09/09/2010	186,000	CRED/ EM-DAT	186,000			186,000	CRED/EM-DAT
Brazil	Flood	19/06/2010	157,000	CRED/ EM-DAT	0	156,497	150,000	156,497	Government of Brazil
Philippines	Storm	18/10/2010	2,009,026	CRED/ EM-DAT	150,240	23,127		150,240	IFRC
Philippines	Storm	12/07/2010	585,474	CRED/ EM-DAT	137,445	12,390	1,309	137,445	IFRC
Mozambique	Flood	09/03/2010	130,000	Dartmouth Floods Observatory		130,000	130,000	130,000	Reliefweb, Dartmouth Floods Observatory
China P Rep	Storm	20/09/2010	1,190,000	Xinhua - news agency	48,000	128,000		128,000	Xinhua - news media
Sri Lanka	Flood	10/11/2010	164,193	CRED/ EM-DAT	0		124,000	124,000	IFRC
Guatemala	Storm	28/05/2010	397,962	CRED/ EM-DAT	85,000	112,000		112,000	BBC - news media
Myanmar	Storm	22/10/2010	260,049	CRED/ EM-DAT	101,923			101,923	IFRC and UN OCHA
Venezuela	Flood	25/11/2010	101,684	Government	5,600	33,000	101,684	101,684	Government of Vietnam
Bolivia	Flood	01/01/2010	227,860	CRED/ EM-DAT	50,250		4,500	100,000	International News

The Internal Displacement Monitoring Centre

The Internal Displacement Monitoring Centre (IDMC) was established by the Norwegian Refugee Council following the request of the United Nations Inter-Agency Standing Committee to set up an IDP database in 1998. The Geneva-based Centre has since evolved into the leading international body monitoring internal displacement caused by conflict and violence in some 50 countries worldwide. Since 2009, IDMC has also monitored displacement due to natural-hazard induced disasters. IDMC is funded by a wide range of institutional donors and foundations.

The Internal Displacement Monitoring Centre focuses on the following activities:

- monitoring internal displacement caused by conflict, violence and natural hazard-induced disasters;
- maintaining an online database on conflict and violence related internal displacement;
- increasing visibility and awareness of internal displacement and advocating for the rights of internally displaced people;
- providing training on the protection of IDPs;
- contributing to the development of guides and standards for the provision of assistance and protection to internally displaced people.

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