

Natural disasters and forced displacement in the context of climate change

Policy brief based on the findings of the forthcoming OCHA-IDMC study, 8 June 2009

Natural disasters are one of the principal causes of forced displacement. Climate change is already increasing the frequency and intensity of natural hazards, and the numbers of reported natural disasters and those affected are rising. However, the actual scale of displacement caused by climate-related natural disasters¹ is still largely unknown. The lack of reliable estimates of disaster-related forced displacement makes it difficult for policy makers to take it into account in the context of climate change adaptation. The OCHA²-IDMC³ study *Natural disasters and forced displacement in the context of climate change* develops an estimate of forced displacement related to natural disasters in 2008, and proposes a methodology for monitoring disaster-related forced displacement on an annual basis.

Based on an agreed inter-agency typology, the study identified four climate change-related drivers of migration and displacement: 1) Sudden-onset extreme disaster / hazard events (e.g. storms and floods); 2) Slow-onset extreme disaster / hazard events (eg: drought or severe environmental degradation); 3) Significant permanent losses in state territory as a result of sea level rise; 4) Armed conflict/ violence over shrinking natural resources.⁴ This study focuses primarily on the first category – displacement related to sudden-onset extreme disaster / hazard events. Table 1 shows the typology of climate change impacts in terms of migration and displacement, with the results from this study along with some estimates of displaced or affected from other sources.

The findings show that at least 36 million people were displaced by sudden-onset natural disasters in 2008. Of those, **over 20 million were displaced** by climate-related disasters, while almost 16 million were displaced by non-climate-related disasters. Despite its limitations,⁵ the results provide a useful indication of the scale of forced displacement as a result of sudden-onset natural disasters in the context of climate change. The number of 20 million displaced can for example be compared to the 4,6 million newly internally displaced by conflict in the same period. In addition to the 20 million displaced by climate-related sudden-onset natural disasters, there are many million more displaced due to the other climate change-related drivers. It is therefore vital that evolving frameworks for climate change adaptation address displacement issues.

Currently, there is no single mechanism to systematically track disaster-related displacement. A three-step methodology was developed in this study to identify the numbers of persons displaced.⁶ Continued systematic collation of such data is recommended in the future to improve global understanding of trends in human mobility.

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¹ For the purposes of this study meteorological, hydrological and climatological disasters were considered. climate-related disasters.

² United Nations Office for the Coordination of Humanitarian Assistance.

³ Internal Displacement Monitoring Centre of the Norwegian Refugee Council.

⁴ Climate Change, Migration and Displacement: Who will be affected?: Working paper submitted by the informal group on Migration/ Displacement and Climate Change of the IASC - 31 October 2008, available at <http://unfccc.int/resource/docs/2008/smsn/igo/022.pdf>

⁵ There are a number of caveats: none of the data sources track returns, therefore, data is generally from the peak of displacement; data is often extrapolated from reports of homeless and evacuated as no systematic reporting on displacement is currently taking place; results cannot be extrapolated to produce trends as they only cover one year.

⁶ Recorded natural disasters were extracted from the EM-DAT dataset of the Centre for Research on the Epidemiology of Disasters; a series of filters was applied to identify disasters to be investigated in detail; those disasters were individually researched using a variety of other sources to establish if they had resulted in forced displacement; and the results were then cross-referenced between available sources to produce an estimate of forced displacement for each disaster.

Table 1: Typology of climate change impacts, migration and displacement, including numbers of displaced from the OCHA-IDMC study.

Cause of movement	Nature of movement and protection	Displaced reported
1. Sudden-onset / extreme climate-related hazard events	<p>Such events could result in forced displacement (in- and outside the country). Depending on recovery and rehabilitation efforts the displacement need not be too long and painful.</p> <p>Forced displacement (including more permanent) can also result from areas being designated as prohibited for habitation by authorities.</p> <p>Those who remain within their country, internally displaced persons, qualify for protection according to human rights law and the 1998 Guiding Principles.</p>	20,293,413 were displaced as a result of climate-related disasters in 2008 (Source: OCHA-IDMC study forthcoming)
2. Slow-onset extreme disaster / hazard events (environmental degradation)	<p>Such processes are mostly gradual, and initially result in voluntary movements (in- and outside the country) and potentially end in forced displacement (in- and outside the country).</p> <p>Forced displacement can also result from areas being designated as prohibited for habitation by authorities (see above).</p> <p>Internally displaced persons qualify for protection (see above).</p>	Estimates for slow-onset disaster related displacement for 2008 are not readily available. Further research to provide improved data on this issue will be essential. 26,502,500 persons were reported <i>affected</i> by drought in 2008 (Source: CRED EM DAT).
3. Significant permanent losses in state territory as a result of sea level rise etc.	<p>Such processes are mostly gradual, and initially result in voluntary movements (in- and outside the country) and potentially end in forced displacement (in- and outside the country), including statelessness.</p> <p>Internally displaced persons qualify for protection (see above). There is more uncertainty regarding the statelessness status.</p>	As of 2008, the only found permanent re-location plans identified in the OCHA-IDMC study concerned the forced displacement for the 2,000 inhabitants of the Tulun (Carteret) and 400 of the Takuu (Mortlock) Islands in Papua New Guinea. However, according to current IPCC findings, this trend is likely to substantially accelerate in the future.
4. Armed conflict/ violence over shrinking nat. resources etc.	<p>Forced displacement in the case of such armed conflict or violence could result in displacement (in- and outside the country).</p> <p>Internally displaced persons qualify for protection (see above). People crossing international borders could qualify for refugee status according to the 1951 Convention or regional treaties, or temporary or subsidiary forms of protection.</p>	4,6 million were internally displaced as a result of conflict in 2008 (the total number of internally displaced persons was 26 million) (Source: IDMC). Some studies have suggested that up to 40% of intrastate conflicts since 1960 are associated with competition over scarce natural resources. (Source: UNEP) Further research on this issue is required.

Adapted from Climate Change, Migration and Displacement: Who will be affected? Working paper submitted by the informal group on Migration/ Displacement and Climate Change of the IASC - 31 October 2008, available at <http://unfccc.int/resource/docs/2008/smsn/igo/022.pdf>