

Landslides and Displacement Situation Update

27 August 2015



Nepal Earthquake
Assessment Unit

This report is an update of the 'Landslide and displacement update' of 27 July 2015. The main objective of this note is to provide an overview of the current situation and limitations of the available data.

Overview

2.33 million people not living in original house

59,500 people in 104 sites >20 HH

Almost **80,000** people relocated due to landslide risks

REACH/Shelter Cluster Assessment 17/05/2015

CCCM DTM 21/07/2015

Media sources 17/08/2015

The impact of the 25 April and 12 May earthquakes resulted in over two million people losing their houses due to damage. Initially, the earthquake resulted in significant population movements within and between districts. However, by mid-July, most people had returned to their VDC of residence. The vast majority of the population stays in close proximity to their original residence, however, a small minority or 2.5% of this group were residing in spontaneous settlement sites as of mid-July.

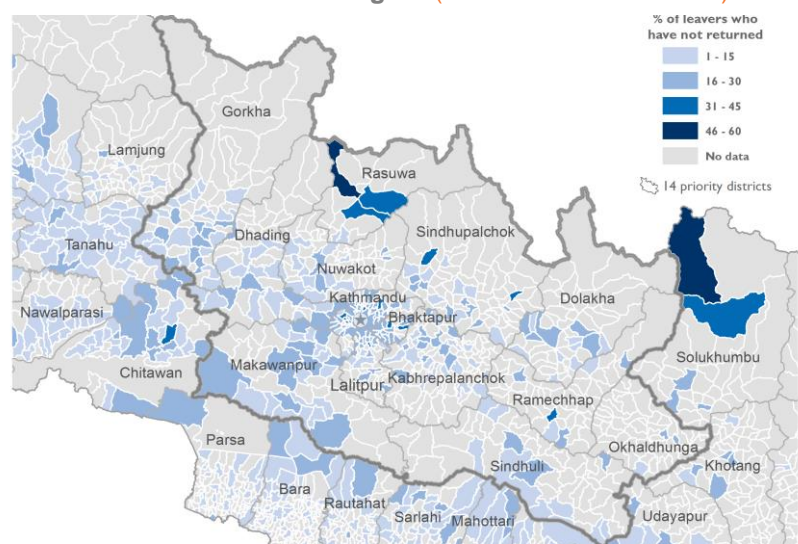
In addition, due to the increased risk of landslides due to the earthquakes and monsoon rains, about 17,000 households (HHs), or almost 80,000 people, have left their houses on their own or with Government support since July. About 100 fatalities from landslides have been reported since the start of the monsoon, primarily outside the 14 priority districts. This is above average for Nepal, but considering the elevated risk as a result of the earthquakes, the figure is lower than expected. Landslide frequency increased as a result of the earthquakes, and based on experiences in other contexts, the heightened risk of landslides is likely to persist for several years.

During September and October this year, population movements are expected to increase, particularly with the mass outflux from the Kathmandu Valley to districts before the Dashain festival beginning in late October. On a smaller scale, with the end of the monsoon, the majority of those residing in spontaneous settlement and those relocated due to landslide risks will likely return to their original residence. Ensuring comprehensive returns will also depend on the availability of support for shelter reconstruction.

Returns

The large majority of those not living in their original houses are residing on their land or in close proximity of their house (REACH/Shelter Cluster Assessment 17/05/2015). However, a number of people moved to other districts or VDCs within their districts, particularly in the immediate aftermath of the 25 April earthquake. Analysis of mobile network data from 12 million Ncell subscribers by Flowminder shows that 152,000 people are outside of their district of normal residence by August 19th. By mid-August, most people who initially left the district after the earthquake had returned. Between 4-14% (depending on the district of origin) of the people who left have not yet returned. Most of these returns took place shortly after the earthquake. People from the Kathmandu Valley have returned more gradually than those from other districts, which is likely due to the fact that most of those residing in Kathmandu have family and/or property outside of the Valley. Kathmandu district has high levels of people still away from home, with an average percentage per

% of leavers who have not returned to VDC of normal residence as of 19 August (Flowminder 19/08/2015)

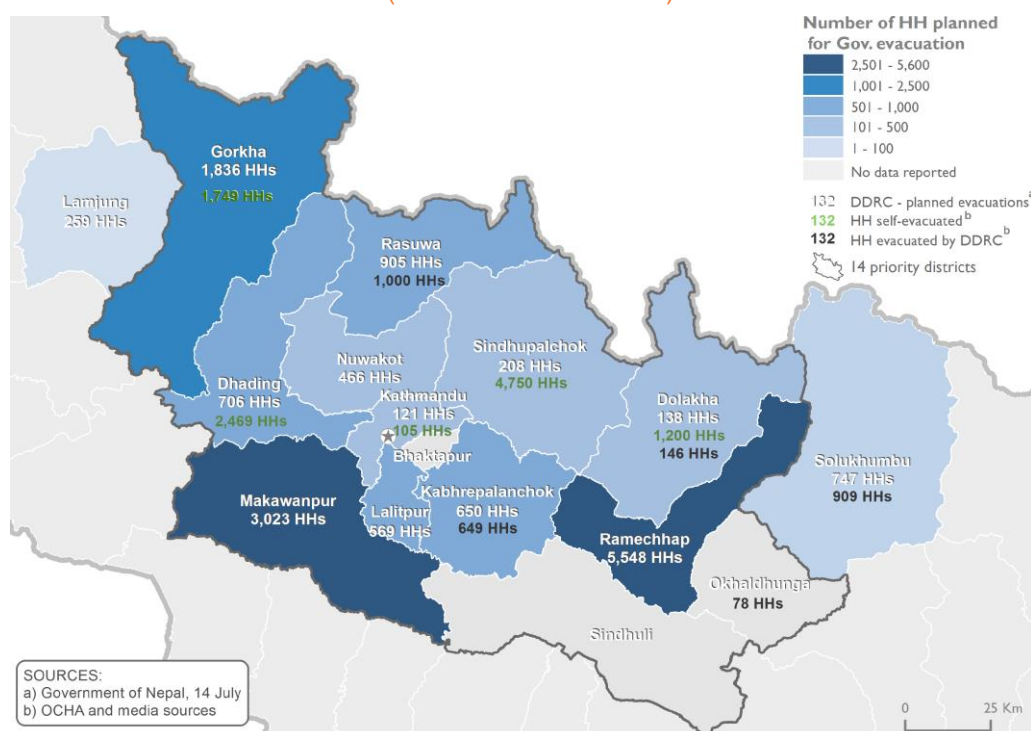


VDC of 21% having not returned (out of those that initially departed). This includes movement to neighbouring VDCs as well as to other districts. A survey among those residing in displacement sites over 20 HHs shows that 60% of those assessed plan to return during or immediately after the monsoon. Housing concerns are the main factor required to return. (Camp Coordination and Camp Management 21/07/2015)

Evacuations due to landslide risks

According to the 14 July national plan, the Government planned to evacuate 15,176 HHs, or over 71,000 people, from 13 districts. On 8 August, local media reported that the Government had evacuated 6,945 HHs in 17 districts. According to OCHA and media sources, over 10,000 HHs in Dolakha, Dhading, Gorkha, Kathmandu, and Sindhupalchok have relocated without assistance in July and August. Reported relocations, both Government-led and spontaneous, have decreased in August. By mid-August, there was a decrease in the number of districts where there have been reports of authorities leading evacuations, as well as the number of evacuees, compared to the last two weeks of July.

Number of Government-planned and completed evacuations due to landslide risks, as of 17 August
(Several Media sources)



Expected movements

Significant population movements are expected in the next three months. Seasonal migration from rural areas to urban centres and abroad is common between August and October, when agricultural productivity is low (FAO 2010). During the winter months, migration takes place from higher mountains with members of HHs temporarily moving to the south or to China in search of livelihood opportunities. (NCF 2003). Movements from hard-to-reach areas to the south may increase significantly this year as HHs may not have adequate time or resources to prepare shelters for winter. Those displaced by landslides are likely to return home as the risk decreases when the monsoon ends and as Government support to evacuation sites is expected to end in October. However, as experienced in other contexts, landslide events can increase at higher than average rates for several years following a major earthquake (Durham University 27/08/2015). A surge in movement normally takes place just before and during the Dashain festival from 26 October to 5 November, when people return to their area of origin, particularly from the Kathmandu Valley. While exact data is not available, national media reported that according to the Director General of the Department of Transport, 1.3 million people left the Kathmandu Valley in the run up to the festival.

Limitations of available movement data

- **Residing outside of original house:** The most recent information on the number of people not living in original house stems from a Shelter Cluster assessment in mid-May and can therefore be considered out of date. Although the Camp Coordination and Camp Management's Displacement Tracking Matrix (CCCM DTM) provides relatively recent information on the number of people residing in sites >20 HH, this comprises only 2.5% of the population not residing in their house. Both the Shelter Cluster and CCCM DTM are planning an update of their assessments and as a result, more updated figures are likely to become available in October/November.
- **Returns:** The main limitation of the analysis of Ncell mobile network data provided by Flowminder is the coverage. Nepal has 23 million mobile phone subscribers out of a population of 27 million people. Ncell has a market share of 56% (Ncell). As a result, the analysis provides data from around half of the population. Mobile phone use is relatively lower in several groups including women, children, the elderly, and the poorest. If these groups have substantially different movement patterns than groups with high mobile phone use, results will be biased.
- **Relocations:** There is no single authoritative source on the number of households relocated, either with or without Government support. As a result, the available data is a compilation of media reports, which is likely incomplete.
- **Expected movements:** There is no tracking of seasonal or holiday-related movement patterns in Nepal. As a result, most data available is anecdotal.

Landslides

Since the beginning of the monsoon season, about 100 people have been killed by landslides - the vast majority of which have occurred outside the 14 priority districts. However, at this point in time, no comprehensive data on landslides is available to the humanitarian community. There are two main methodologies used to capture landslides events in the 14 priority districts. Satellite imagery collected and analysed by research institutions such as the British Geological Survey (BGS) and Durham University (UK) has been used to monitor landslides for the priority districts since 25 April. However, cloud coverage has hampered the completeness of the available optical imagery. Several organisations with a widespread geographical presence in Nepal are collecting real-time data on landslides based on direct observations. However, none of these sources provide publicly available comprehensive data.

Rainfall accumulation and additional aftershocks will likely cause landslides until the end of October (see [Hazard Analysis 23/06/2015](#)) and heightened risk of landslides due to the earthquakes will extend beyond this monsoon season. A solution to the existing data gaps is required to ensure the humanitarian community can prepare for and respond to the humanitarian impact of landslide events for this monsoon season and future preparedness activities, both in Nepal and at the global level. In the current context in Nepal, the following actions could contribute to a better understanding of landslide trends:

- Open access to data collected by the Nepal Army and Police for humanitarian actors.
- Sharing of landslide event data among stakeholders, particularly humanitarian agencies, military actors, and research organisations, in a common format and single portal to allow for easy collation and analysis.

The Assessment Unit welcomes all information that could complement this report. For more information, comments or questions please email nepalassessments@humanitarianresponse.info



Office of the United Nations Resident and Humanitarian Coordinator

