iDMC internal displacement monitoring centre

THEMATIC SERIES

The ripple effect: economic impacts of internal displacement

This thematic series focuses on measuring the effects of internal displacement on the economic potential of IDPs, host communities and societies as a whole

INTERNAL DISPLACEMENT AND DEVELOPMENT

A statistical analysis

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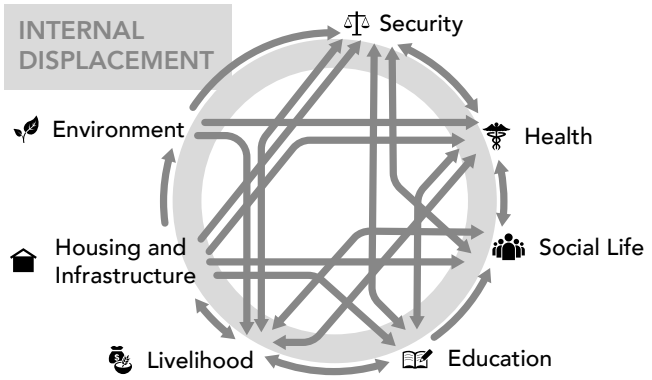
www.internal-displacement.org

KEY MESSAGES:

- Internal displacement impacts the livelihoods, education, health, security, social life, environment and access to housing and infrastructure of displaced people, their hosts and the people they leave behind.
- The effects of internal displacement on each dimension ripple through to others.
- Health can be affected by loss of livelihoods, poor housing conditions and disrupted social life.
- Loss of livelihoods due to internal displacement can limit access to decent shelter, healthcare and education, jeopardize security and social life.
- Internal displacement's consequences on livelihoods and school systems can reduce access to education and security.
- Shelter is one of the highest burden on displaced people, hosts and aid providers' financial resources, and affects security and health.
- Security can be damaged by internal displacement and subsequently threaten health, social life and livelihoods.
- The environmental impact of mass internal displacement is heavily dependent on housing, infrastructure and livelihoods solutions, with effects on security for both displaced people and host communities.
- The disruption of social life caused by displacement can damage mental health and access to work, and is connected to housing conditions.
- The impact of internal displacement must be assessed comprehensively for all of these dimensions.
- Policies looking to address or prevent internal displacement should consider the phenomenon in its entirety.

This report highlights the most significant impacts on each dimension and discusses how they are connected, as illustrated in figure 1.

FIGURE 1: Links between the effects of internal displacement on each dimension



The effects of internal displacement on each dimension ripple through to others, creating causal chains and feedback loops that are impossible to understand or measure independently.

Table 1 below presents examples of how the impacts of internal displacement on each dimension can affect other dimensions. Impacts on the dimensions in the top row can ripple through to some of the dimensions in the left column: for instance, one of the connections between the health impacts of internal displacement and education is that children who suffer from malnutrition, a condition often linked with internal displacement, are less attentive in school. More concrete examples from the literature are highlighted in each chapter.

The analysis makes the case for comprehensive assessments of these effects, an objective that we started to work toward in 2018. Boxes in each chapter discuss how they can be costed and set out the initial results of our first attempts at doing so.

Our ultimate aim is to arrive at a comprehensive and consistent measure of the economic impacts of internal displacement across all affected countries, in the hope that highlighting this hidden cost will help to demonstrate the socioeconomic benefits of investing in its prevention and mitigation.

HEALTH

When people abandon their homes, it is most often because not doing so would pose a serious threat to their safety. Flight is their only way to escape violence or disaster and preserve their life or wellbeing. In such circumstances, internal displacement is obviously the better option, but it can have adverse effects on people's physical and mental health, particularly when it is unplanned and mismanaged, or becomes protracted.

Reports of these effects on the physical and mental condition of internally displaced people (IDPs) are numerous and often consistent, which allows the identification of common threats.

Studies reveal higher mortality rates among IDPs than the general population, mostly the result of communicable diseases. Displacement has also been linked with several reproductive health issues including lack of contraception and increased risk of sexually transmitted infections (STIs). The third most commonly reported effect of internal displacement is mal or under-nutrition, which is particularly prevalent among young and older IDPs.

Individual health is affected through displacement's impacts on livelihoods, the environment, housing and infrastructure, social life, education and security. These health issues in turn affect livelihoods, security, access to housing and infrastructure, social life and education, setting up a vicious circle for displaced people and their hosts.

NOTES

1. IDMC, Global Report on Internal Displacement 2017, 2017, https://goo.gl/pdSFzx
2. IDMC, Global Report on Internal Displacement 2018, 2018, https://goo.gl/CSqRBV
3. World Bank, World Development Indicators, https://goo.gl/R3X1XC; World Bank, Worldwide Governance Indicators, https://goo.gl/2wMj7A
4. IDMC, The ripple effect: economic impacts of internal displacement, 2018, https://goo.gl/oiqCDx
5. Spearman's correlation coefficient R. See methodological annex for more details.
6. The absolute value of the coefficient R is between 0 and 1. The closer it is to 1, the stronger the correlation.
7. The two-sample Kolmogorov Smirnov test. See methodological annex for more details.
8. In order to better highlight the correlation between indicators and internal displacement, we added 22 countries with no internal displacement associated with conflict to the 49 countries with displacements associated with conflict recorded by IDMC between 2010 and 2016. We used the number of refugees as proxy to select Antigua and Barbuda, Australia, Austria, Belgium, Brunei Darussalam, Switzerland, Cyprus, Finland, Kiribati, Lithuania, Norway, New Zealand, Oman, Panama, Portugal, Suriname, Sweden, Tuvalu, Uruguay, Vanuatu, Samoa, Seychelles.
9. UNISDR Global Assessment Report 2009, 2011, 2013, 2015, https://goo.gl/7znWwx; IDMC, Global Disaster Displacement Risk: a baseline for future work, 2017, https://goo.gl/YJgSvG
10. The Spearman's coefficient is preferred to the more common Pearson's coefficient because it measures the rank correlation that is less sensitive to outliers and gives same results for variables in linear and logarithmic scale.
11. This threshold is supported by Monte Carlo simulations, in which we compared the average value of indicators for high-displacement countries with the one coming from random choices of countries.

METHODOLOGICAL ANNEX

In order to study the relationship between socioeconomic indicators and displacement, we used the Spearman's rank correlation coefficient R that assesses monotonic relationships between two variables.[10] Correlation coefficients are between +1 and -1, corresponding to a perfect monotonically increasing and decreasing relationship respectively. On the other hand, coefficient values close to zero indicate a negligible rank correlation between two variables. In our analysis, we assumed that a significant correlation between indicators and displacement is present when the absolute value of R is larger than 0.4. We have verified that below this threshold indicator-displacement correlations are typically very weak.

Because the number of IDPs is larger in densely populated countries, fake correlations between indicators and displacement can arise when indicators are also related to the country population. For this reason, the correlation analysis has been performed both on the total number of new displacements and on the relative number with respect to the country population. Indicators with a real and robust link to displacement are expected to have a strong correlation with both these figures. On the other hand, for indicators that are clearly dependent on the country population or area (for instance "Rural population" or "Agricultural land"), the correlation analysis was performed using relative numbers (such as "Rural population rate" and "Agricultural land rate").

In addition to the correlation analysis, we used an alternative approach to highlight links between indicators and displacement. We first separated countries in two groups, with high and low numbers of new displacements. This is quite straightforward for conflict-related displacement: the 49 countries with reported displacement are supposed to belong to the "high-displacement" group; the 22 countries with zero displacements to the "low-displacement" group. For disaster-related displacement, we choose the following criterium (that divides countries almost in half): a country belongs to the high-displacement group if the number of displacements is > 10,000 or the relative number is > 1‰.

Then, for each indicator, we compared the distribution of values of that indicator in the two groups: we expect that, when indicator and displacement are related, the two distributions are significantly different. To assess the similarity of two distributions we use the two-sample Kolmogorov-Smirnov test (KS test). This test checks whether two independent samples are drawn from the same distribution, providing the probability that the null hypothesis (i.e., the same parent distribution) is true. We used as reference the probability threshold of 0.1‰: below this value[11] we assume the indicator to be related to displacement. This approach has the advantage to be independent of using the absolute or the relative number of displacements. It can be used therefore as a cross check for cases in which correlation is found only with the absolute value but not with the relative one (or vice versa).

Cover photo: An internally displaced person reveals some beans ready for harvest in the Mpati area of the North Kivu province of DRC. Photo: NRC/Christian Jepsen, March 2017

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