METHODOLOGICAL ANNEX

INTRODUCTION

The figures included in this report highlight the current state of knowledge of internal displacement on a global scale, and IDMC's current best estimates for displacement associated with conflict and disasters in 2017. In order to produce figures that are as robust as possible, they go through a rigorous quality assurance process, including comparisons between datasets and source types and multiple partner engagement. Producing comprehensive figures remains a challenge, however, particularly for such a complex, rapidly-evolving global phenomenon. There are data limitations, caveats and definitional questions that need to be considered in order to better understand the data currently available and improve the quality of reporting over time.

To this end, this section highlights some of the main challenges we face and illustrates the most significant caveats to which we call readers' attention. It describes how we produce our displacement figures by explaining the source data, calculations, definitions and decision rules we use in our analysis. Our aim is to provide maximum transparency so that readers understand the process, can replicate our work independently and make use of our data in innovative ways.

Our data on displacement associated with disasters for 2017 covers 890 displacement events triggered by natural hazards in 135 countries and territories. We also present data on displacement associated with slow-onset disasters for the first time, reporting on drought events in four countries.

Our data on displacement associated with conflict and violence covers 55 countries and one territory. We have data on several other countries, but have decided not to include it in our global figures for methodological consistency.

We have also started to expand our monitoring efforts to examine displacement associated with development projects. Our initial research turned up data for 36 case studies around the world. The lessons learnt from this exercise will allow figures for this type of displacement to form part of our global dataset in the future.

As part of our innovative methodology we are also providing, as we did last year, our assessment of confidence in the source data and what it means for the estimates concerned. The confidence assessments signal our commitment to transparency and provide a roadmap for future work in improving data collection, something we are committed to helping our partners do over the coming years.

We will make our data publicly available on our website for others to use freely. We are also using an open portal to allow policymakers, researchers, partners, the media and the public to interact with our data, making it easier to produce customised reports and analyses.

Given the complexity of displacement, we are forced to rely on a variety of sources in compiling our estimates. We have reassessed some of the criteria we use to maximise the reliability and accuracy of source data, and this report presents our figures in a way that clearly indicates how recently it was updated.

We currently use distinct methodologies to produce displacement estimates for displacement associated with conflict and violence, disasters and development projects. This annex describes each of the approaches.

To monitor and report on displacement associated with conflict and violence, we collect data on the countries affected and present nationally aggregated figures for: /

- New incidents of displacement between 1 January and 31 December 2017
- IDPs who returned, integrated locally or settled elsewhere between the same dates and, when possible, those who crossed an international border and those who were born or died in displacement
- The total number of IDPs as of 31 December 2017

As a result of ongoing methodological improvements, including the way partners collect data and the standardised application of the rules and criteria used to analyse this type of displacement, comparisons between countries are now more valid than before.

We use an event-based methodology to estimate the number of people displaced by disasters during the course of the year, and derive aggregated figures for new displacement for each of the countries affected.

We have monitored displacement associated with conflict and violence since 1998 and that associated with disasters since 2008. We have continuously sought to improve the ways we collect and analyse our data, and over the past nine years we have successfully obtained data on ever larger numbers of new displacement events associated with disasters, accounting for more small to medium-sized events than in previous years (see table A.1).

Reporting on these events helps to paint a more comprehensive picture in terms of the number of people displaced globally. It also provides an empirical evidence base with which to understand them and how they differ from mega-events.

TABLE A.1: Categories of events by magnitude

Event size	Number of people displaced
Small to medium	Fewer than 100,000
Large	100,000 to 999,999
Very large	One to three million
Mega	More than three million

RELATING OTHERS' DATA TO IDMC'S MODEL

In order to obtain a comprehensive and accurate picture of the scale and scope of displacement at any given point in time, we have generated a unique data model (see figure A.1, p.4). One of the challenges we face in producing our figures is relating our partners' primary and secondary data to it.

To account comprehensively for the number of people displaced in a given situation, we would have to populate each component of the model, updating the information as quickly as the situation evolved. We are currently working with partners such as IOM, OCHA and UNHCR to do just that, in an effort to better reflect the dynamics of displacement.

The purpose of our data model is to better capture on all "flows" - incidents of new displacement, the number of IDPs reported to have achieved durable solutions or to have crossed an international border, the number of children born in displacement and the number of IDPs who have died - as information becomes available.

The model is an ideal vehicle for compiling displacement estimates, but it has proved difficult to populate systematically. We seldom receive comprehensive data from our partners for all of its components. This is often because the type of data specified is simply not collected or, when it is collected, it is not disaggregated or lacks the context to support changes in our analysis. A primary data source may report the extent to which the number of IDPs has declined during the course of the year, but may not specify the reason for the decrease. The original model was extended to portray our present understanding of displacement flows (see figure A.2).

The remainder of this annex explains how we account for the main flows we report, how they relate to our estimates, how we have selected countries and events to include and why we have excluded others that we have reported on in the past. It also outlines how we assess and express our confidence in the source data.

We have continued to harmonise the approaches we use to monitor displacement associated with conflict and disasters by identifying more events that caused displacement during conflicts and by capturing more time-series data on caseloads of people displaced by disasters. That said, there are still some differences between the two approaches which reflect the availability of data and our ability to detect certain events and processes (see table A.2, p.5).

FIGURE A.1: IDMC's displacement data model

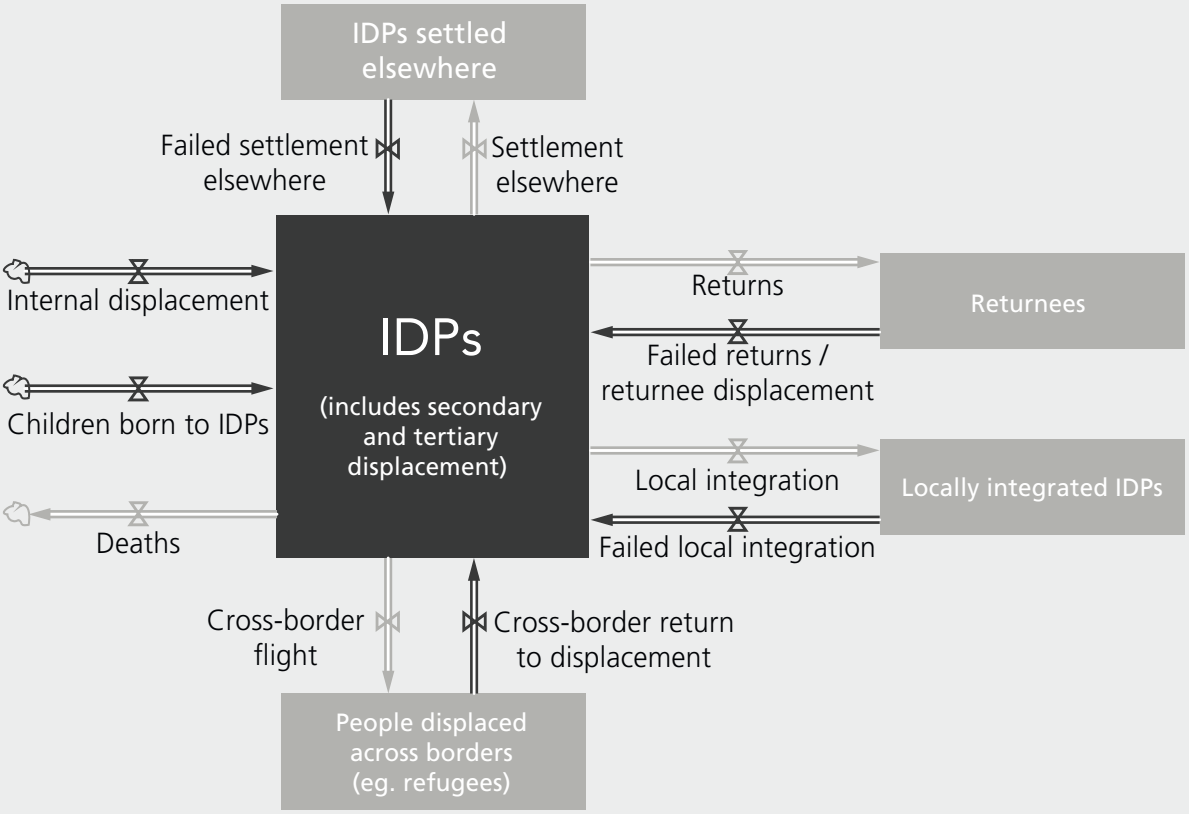


FIGURE A.2: IDMC's extended displacement data model with provisional solutions

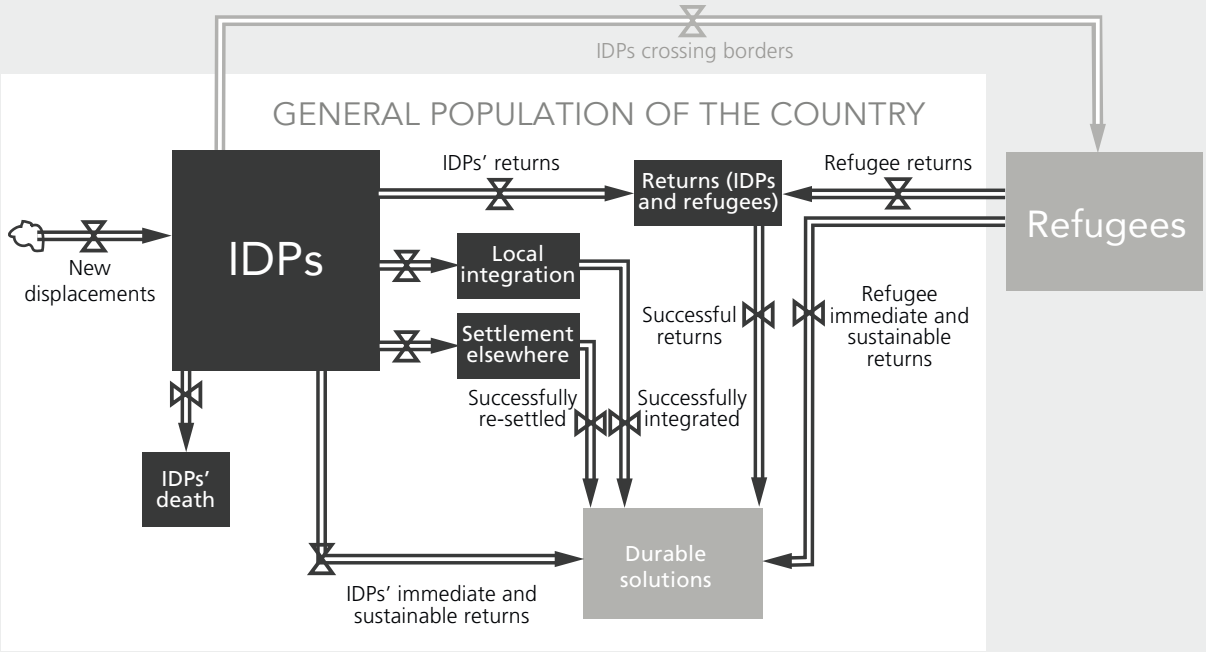


TABLE A.2: Comparison of main monitoring attributes for displacement associated with conflict and disasters

Displacement monitoring attribute	Conflict and violence	Disasters
Based on events and triggers	Partial	Yes
Based on geography or ongoing crisis	Yes	Yes
Global coverage	Yes	Yes
Quantitative threshold for minimum amount of displacement	No	No
Enables reporting of number, or stock of IDPs	Yes	Not at the global level
Covers incidents of new displacement	Yes	Yes
Includes other inflows and outflows that determine the number of IDPs	Yes, subject to availability	No, lack of data
Includes data disaggregated by sex and age (SADD)	Yes, subject to availability	Yes, subject to availability
Figures disaggregated based on age of source data	Yes	Not applicable
Application of average household size (AHHS) estimation	Yes	Yes

STANDARDISING DATA COLLECTION

COUNTRIES AND CONTESTED TERRITORIES

We use the ISO 3166-1 alpha-3 standard for coding countries and mapping. As the territories of Kosovo and Abyei do not have an official code, we assigned them XKX and AB9, respectively.

The geographical referential we use is based on datasets such as the Database of Global Administrative Areas (GADM), the Global Administrative Unit Layers (GAUL) and other sources. Boundaries and designations do not imply IDMC's official endorsement or acceptance.

Additional notes:
The Kosovo designation is in line with UN Security Council resolution 1244/1999 and the International Court of Justice's opinion on Kosovo's declaration of independence.

As the status of Abyei is not yet determined, for the purpose of monitoring we used the border representation of the 2005 peace agreement between the Sudanese government and the Sudan People's Liberation Movement.

POPULATION DATA

We base our population estimates on the 2017 UN World Population Prospect (WPP17).

NORMALISING DISPLACEMENT DATA BY COUNTRIES' POPULATION SIZE

To illustrate the magnitude of internal displacement at the country level, we normalise the data to account for population size. In doing so, a clear distinction has to be made between the notion of population and inhabitants. When a crisis is acute and people flee across international borders, a country's population at a given time may be significantly lower than the official figure. Syria is the most graphic case in point, but the issue also affects other countries such as Venezuela, Libya and Somalia, for which there are no up-to-date and reliable national population figures.

INCOME GROUPS AND GEOGRAPHICAL REGION

Income and geographical groups are based on the World Bank's classification.

ACCOUNTING FOR DISPLACEMENT ASSOCIATED WITH CONFLICT AND VIOLENCE

We produce our figures for displacement associated with conflict and violence via country-level or incident-based monitoring. That is, we learn of a displacement situation and begin collecting data on it over time. We did so this year for The Gambia, which we did not previously monitor for conflict, and we learned of mass population movements. We monitored the situation from when displacement started until all IDPs had returned home.

We calculate our figures as follows:

| NEW DISPLACEMENT

We calculate our figures for new displacements in a number of ways. If our partners provide us with data once a year, we simply report the annually aggregated figure. More often, however, they provide us with data on a monthly or quarterly basis, in which case we publish the sum of the estimates reported. The same methodology applies for countries for which we use event-based monitoring, such as CAR. In other cases, we have to rely only on projections, extrapolations of surveys and profiling exercises.

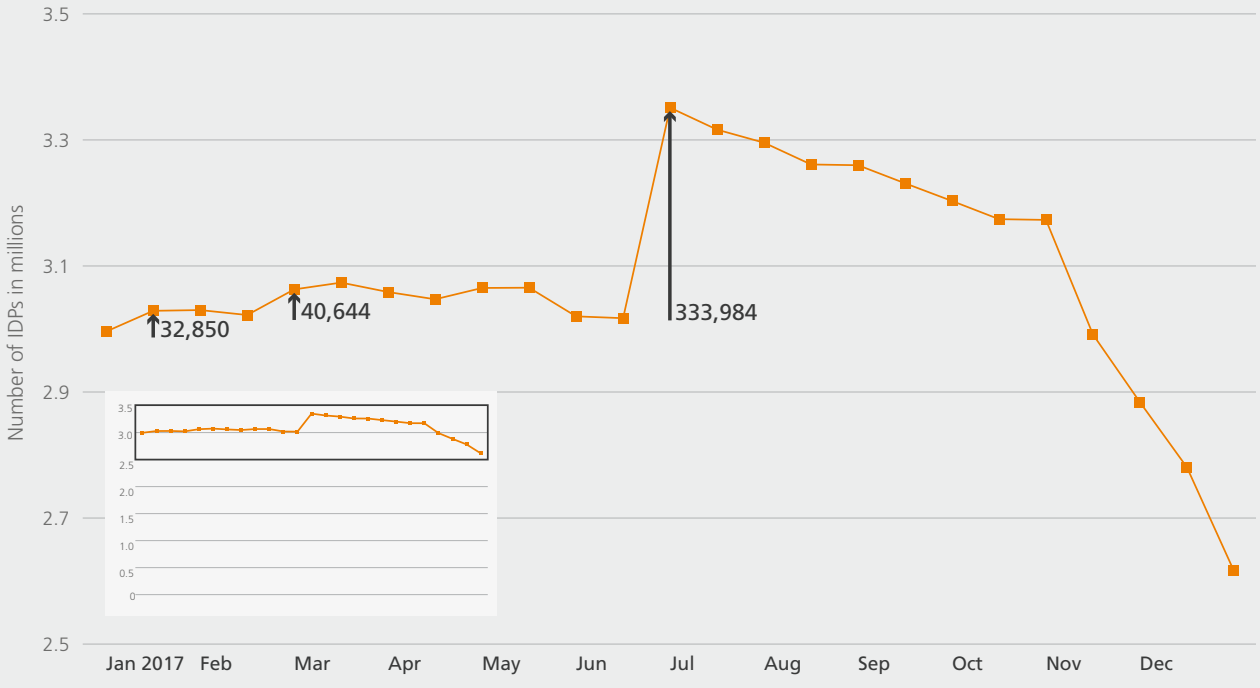
For some countries, such as Iraq, we also used another method. We analysed data on IDPs recorded by IOM's displacement tracking matrix (DTM). These records cover the whole of the calendar year, providing the number of people displaced at a given date. Positive differences between two data points give some indication of the minimum number of displacements that occurred during that time interval (see figure A.3). We used this method in combination with other reports in order to come up with a comprehensive total estimate of new displacements within the year.

It should be noted that "new displacement" is somewhat misleading in that data may capture the same people being displaced more than once. Given that we are unable to track individual IDPs, it tends not to be possible to determine the extent to which this is the case.

| CAPTURING THE END OF DISPLACEMENT

We adopted a new methodology in 2017 to account for the end of displacement through a new model we refer to as 'provisional solutions'. The model has two main purposes: to highlight the situation of people previously reported as IDPs and who may not have achieved a durable solution despite their being reported as having returned, underlining that they still have needs to be addressed; and to emphasise the need to continue collecting regular qualitative data on such caseloads.

FIGURE A.3: Monthly data on new displacement in Iraq



Source: IOM

We also aim to contribute to a more in-depth analysis of the concept of the end of displacement, and the definitions and metrics required to assess it. Given the complexity inherent in determining whether people are no longer displaced or are still suffering from vulnerabilities related to their displacement, we aim to underline the risks associated with taking them off the books as IDPs.

| CROSS-BORDER MOVEMENTS

When possible, we deduct the number of IDPs who flee across international borders. To be able to do this, we need those collecting information about refugees and asylum seekers to register whether people had already been displaced before fleeing across the border. Failure to do so risks double-counting. The number of refugees and asylum seekers is currently subtracted from their country of origin's general population but not its displaced population.

We sometimes face challenges when it comes to distinguishing between flows of IDPs and refugees because people may flee to a border area, stay there for only a short time and then cross into another country. Others may take several days to arrive at the border, in which case our ability to account for them depends on whether our partners manage to register them when they were moving inside the country or only once they cross the border.

We accounted for three types of returnee to Afghanistan from Pakistan who found themselves living in internal displacement once back in the country in 2017. We accounted for more than 28,500 undocumented returnees from Pakistan in this situation, of whom more than 4,000 were deportees. The others were calculated from the percentage that our partners in the field confirmed did not end up not living in their province of origin or intended destination. We also applied the same calculation to documented returnees reported by UNHCR and added them to our stock figure.

After an in-depth investigation of the origins and context of the movements of cross-border returnees from Iran, we decided were could not be sure they had become IDPs, so we did not include them in our stock figure for Afghanistan.

| BIRTHS AND DEATHS IN DISPLACEMENT

We only account for births and deaths in displacement when our partners provide data. Given the shortage of disaggregated data and the fact that IDPs' fertility and mortality rates may not correspond with national figures, we do not try to extrapolate births and deaths in displacement from national demographic data.

Depending on the scale and duration of displacement, the lack of primary data on these flows can represent a potentially significant blind spot. In protracted crises such as those in Macedonia and Cyprus, reported changes in the size of the displaced population may depend more on demographic trends than on returns, local integration and settlement elsewhere.

| TOTAL NUMBER OF IDPS

The inflows and outflows described above all influence the total number or stock of IDPs at a given moment in time, 31 December 2017 in the case of this report. We estimate the number of IDPs at the end of the year by triangulating data reported from one or more sources with an estimate derived from the flow data available on new displacement, returns, local integration, settlement elsewhere, cross-border flight and births and deaths in displacement.

We arrived at the total number of IDPs as of 31 December 2017 by taking the total at the end of 2016 and adding or subtracting flow data as follows:

$$\text{Total number of IDPs}_{\text{Dec 2017}} = \text{Total number of IDPs}_{\text{Dec 2016}} + [\text{Births}_{\text{in 2017}} + \text{new displacement}_{\text{in 2017}}] - [\text{Provisional solutions}_{\text{in 2017}} + \text{Returns}_{\text{in 2017}} + \text{settlement elsewhere}_{\text{in 2017}} + \text{local integration}_{\text{in 2017}} + \text{cross-border flight}_{\text{in 2017}} + \text{deaths}_{\text{in 2017}}]$$

The equation is technically incomplete because it only takes into account "counterflows" such as failed attempts to achieve durable solutions and cross-border returns into displacement to certain extent depending on data availability. Given, however, that these phenomena are sometimes accounted for as new displacement, the equation serves its purpose.

In reality, the lack of coverage of the components of our data model and the way outflow data is aggregated mean the actual equation for most countries is often more simply:

$$\text{Total number of IDPs}_{\text{Dec 2017}} = \text{Total number of IDPs}_{\text{Dec 2016}} + \text{New displacement}_{2017} - [\text{Provisional solutions}_{\text{in 2017}} + \text{Returns}_{\text{in 2017}}]$$

For some countries, including Guatemala, India and Kenya, we were unable to apply this formula, because new displacement figures and stock figures were disjointed and we could not be certain than people included in an older protracted figure covering the same areas were not the same as those displaced in 2017. We refrained from adding these possible new displacements to the equation to avoid double-counting.

The formula for estimating the stock of IDPs is at best a modelled approximation. We compare this with the data we obtain from our sources, and they do not always correspond. There are number of reasons for this:

The initial value – the estimate for the end of the previous year – is incorrect and needs to be revised. This was the case in Afghanistan, among other countries, because of the length of time it takes to verify displacement figures.

New displacement includes repeated displacement: This is the case every year in countries such as DRC and South Sudan, where pendular displacement – in which IDPs "commute" back and forth between their places of refuge and origin – generates higher numbers of displacements that often relate to the same people.

Double-counting: In Syria and other countries in which we compile our national figures from various sources, some IDPs may have been counted more than once. We reduce this risk by taking into account the geographical and temporal scope our sources' data.

Changes in the scope of a data providers' geographical coverage, as was the case for Yemen and Somalia.

We change our primary source because of the lack of available data or doubts about their credibility, meaning we are working with two very different data sets from one year to the next, as in Somalia.

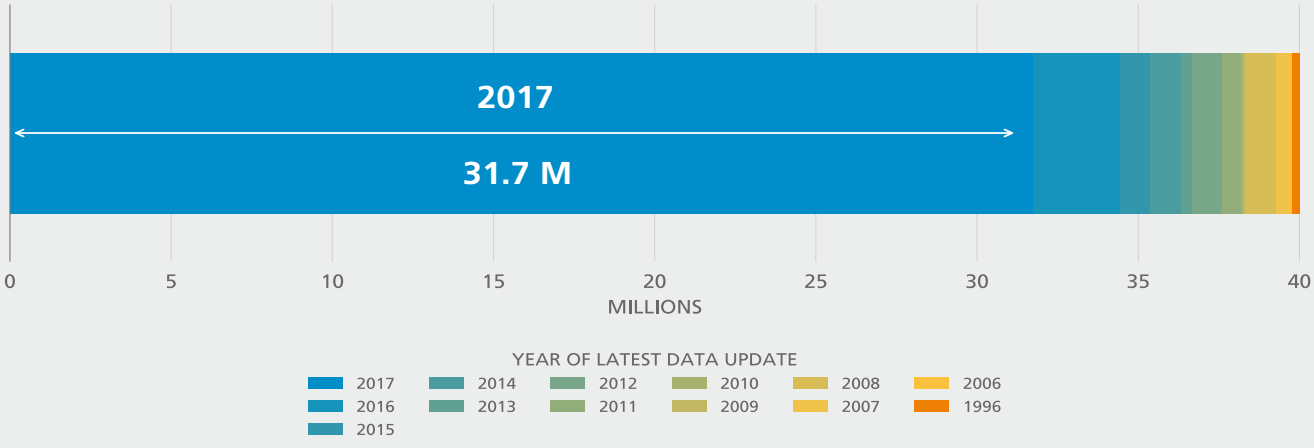
There is a lack of data on a flow that affects the number of IDPs in a country significantly. Data on the number of refugees and asylum seekers from Syria does not indicate whether they had previously been displaced internally. Similarly, there are indications of displacement in south-eastern Chad as a result of the crisis in CAR, but a lack of reliable, updated and verified data.

Delays in data collection after events leading to displacement toward the end of the year often make it impossible to disaggregate flows by year. End-of-year figures for 2017 only became available in February or March 2018 for several countries.

REFLECTING THE DATE OF SOURCES

When situations remain unchanged from one year to the next, or when flow data is not available, we base our end-of-year estimates on the data our partners provide. In many countries, however, it has not been updated for several years. In those with complex or multiple displacement crises, such as Chad and Myanmar, data for one crisis may be regularly reported, while for others it may be outdated or missing. If there is no credible evidence that IDPs in such situations have returned, integrated locally or settled elsewhere, we have in the past included them in our global figures.

FIGURE A.4: Different strata for conflict-related stocks of IDPs, ordered by the date of the source data



Source: IDMC

In the interests of transparency, this year's report stratifies our stock figures based on when the primary data was collected (see figure A.4, p.8). The length of the bar as a whole represents the total number of IDPs for whom we were able to obtain data. The right-hand section represents data which is increasingly out of date.

ACCOUNTING FOR DISPLACEMENT ASSOCIATED WITH DISASTERS

Our estimates for displacement associated with disasters are generated by event rather than by country. We monitor and collect information for all reported disasters from partners including governments' disaster management and disaster risk reduction agencies, the UN, IFRC, national Red Cross and Red Crescent societies, NGOs and local and international media outlets. We apply no threshold when doing so, either in terms of the number of people displaced or the distance they have travelled.

We have also implemented a procedure to systematise and improve the monitoring of hazards with potential humanitarian and displacement impacts, and to expand the integration and use of international standards such as international event names, the intensity of events and GLIDE numbers in our data and metadata collection.

We generate a single "new displacement" estimate for the total number of people displaced by each event. It is important to note that this figure is not necessarily the same as the peak number of IDPs, but instead aims to provide the most comprehensive cumulative figure for those displaced with minimal double-counting.

We try to collect data from a number of reports on the same disaster, specifying reporting units such as individuals or households, reporting terms such as "sheltered' or "housing destruction", and sources used, the publisher, the title of the source document and the date of publication. When possible we triangulate the figures using different reports. Sometimes, however, our estimates are derived from a single report. In others, they are the aggregation of a number of reports that together cover the wide geographical area affected.

This dataset allows us to better interpret the context of the figure in each report. In determining our estimates, it is vital that the data selected represents the most comprehensive figure from the most reliable source available for that event at the time when data was collected.

| REPORTING BIAS

We attempt to reduce selection bias by following a set of established decision rules. We are aware, however, that our methodology and data may be subject to different types of reporting bias:

Unequal availability of data: Global reporting tends to emphasise large events in a small number of countries where international agencies, funding partners and media have a substantial presence, or where there is a strong national commitment and capacity to manage disaster risk and collect information.

Under-reporting: Small-scale events are far more common, but less reported on. Disasters that occur in isolated, insecure or marginalised areas also tend to be under-reported because access and communications are limited.

"Invisible" IDPs: There tends to be significantly more information available on IDPs who take refuge at official or collective sites than on those living with host communities and in other dispersed settings. Given that in many cases the vast majority fall into the second category, figures based on data from collective sites are likely to be substantial underestimates.

Real-time reporting is less reliable, but later assessments may underestimate: Reporting tends to be more frequent but less reliable during the most acute and highly dynamic phases of a disaster, when peak levels of displacement are likely to be reached. It becomes more accurate once there has been time to make more considered assessments.

Estimates based on later evaluations of severely damaged or destroyed housing will be more reliable, but they are also likely to understate the peak level of displacement, given that they will not include people whose homes did not suffer severe damage but who fled for other reasons.

Our estimates for some disasters are calculated by extrapolating from the number of severely damaged or destroyed homes or the number of families in evacuation centres. In both cases we multiply the housing and family data by the average number of people per household.

TABLE A.3: Changes in the AHHS for Benin between 2008 and 2017

For the purpose of the example we use a hypothetical number of 1,000 households displaced	AHHS as of 2008 5.2	AHHS as of 2010 5.1	AHHS as of 2012 5	AHHS as of 2014 4.9	AHHS as of 2016 4.8	AHHS as of 2017 4.8
Estimated number of people displaced applying the AHHS respective to the year of the figure	5,200	5,100	5,000	4,900	4,800	4,8007

ESTIMATING AVERAGE HOUSEHOLD SIZE

Primary sources often report the number of homes rendered uninhabitable or the number of families displaced, which we convert into a figure for IDPs by multiplying the numbers by a country's average household size (AHHS). There is, however, no universal dataset with updated and standardised AHHS data for all countries.

Given the potentially significant influence of AHHS on our estimates, we have continued to update the data and methodology we use to calculate it. This year we used a linear extrapolation obtained with improved methodology developed for the GRID 2018.

The AHHS and therefore our estimates are subject to a margin of error. If possible we review and update the AHHS every year and, as a general rule, when data is expressed in household or family units, we estimate the number of displaced people according to the AHHS for the year when the data is captured. This applies particularly to figures obtained from historical or retrospective research, notably in protracted or prolonged displacement cases where using a contemporary household size without accounting for demographic changes would lead to an underestimate for an event that occurred in 2008 (see table A.3).

IDMC'S DATA COLLECTION, ANALYTICAL PROCESS, DEFINITIONS AND DECISION RULES

DEFINITION OF AN IDP

We use the definition of an IDP contained in the 1998 Guiding Principles. The forced nature of displacement "within internationally recognized borders" is fundamental in determining whether or not a person is an IDP, but the Guiding Principles do not set other criteria by which to identify a person fleeing their "home or place of habitual residence".

As such, we interpret IDPs to include not only citizens of a country in which displacement takes place, but also non-nationals such as migrants and asylums seekers in Libya; Palestinian refugees in Syria and Lebanon; refugees who have returned to their home country but have been unable to go back to their habitual place of residence, such as Afghans returning from Pakistan; and stateless people such as the Rohingya in Myanmar.

Forced displacement should not only be associated with the notion of a fixed place of residence, but also flight from traditional "living spaces" that support people's livelihoods, such as pastoralists' grazing areas. Given that the concept of habitual residence is intimately linked to the issue of livelihoods, people who have lost them as a result of their displacement – such as pastoralists in Somalia and elsewhere in eastern Africa – are considered IDPs. We consider a person to be displaced regardless of how far or for how long they flee.

For countries that have been divided into two internationally recognised states, we do not consider people whose former place of habitual residence is in one of the new entities and refuge in the other as IDPs. We do not, for example, consider a person who fled from what was formerly southern Sudan to northern Sudan an IDP following the creation of South Sudan, but we do consider people displaced within either Sudan or South Sudan as such.

We consider children born in displacement to be IDPs, and they are included in our estimates when these births are recorded or included in the data our partners provide. This is particularly pertinent in Azerbaijan and Palestine, where displacement has lasted for decades. As such, the number of IDPs in these countries may increase over the years as a result of demographic trends, despite the fact that the original trigger has long ceased to cause any new displacement.

ACCOUNTING FOR RETURNING IDPS AND REFUGEES

We have in the past made case-by-case decisions to include very specific groups reported as no longer being displaced back into our figures for IDPs, provided enough evidence was available to make it clear that their displacement had not ended. A clear example is the case of refugees who go back to their country only to find that conditions are not conducive to return and so end up living in internal displacement.

The rationale for counting people who have returned or settled elsewhere without achieving durable solutions as IDPs was that no "intermediate category" existed between displaced and no longer displaced and, in the absence of adequate data, that not accounting for such cases would obscure their needs and rights.

As we continue to improve our monitoring, however, we have identified an increasing number of IDPs reported as having returned, integrated locally or settled elsewhere in the country without sufficient evidence to determine that they no longer have residual vulnerabilities. When the available data permits, we have been working to separate them from those we count as internally displaced. The result is the creation of a new model that reflects provisional returns and other solutions for those instances where we have data on these processes.

Our primary aim in accounting for initial or partial progress toward durable returns, settlement elsewhere and local integration is to encourage governments and other data providers to gather more evidence on the situation of these people so that we can monitor and report on them until it can be clearly ascertained that they have achieved a durable solution.

People currently characterised as having made provisional progress toward durable solutions include those returning to a situation of persistent vulnerability; those who have begun to return or relocate, but for whom there is no tangible evidence of the process having led a durable solution; those living in protracted displacement for whom some anecdotal or contextual information but no firm evidence has been provided to suggest a move to return, relocate or resettle; and those trying to integrate locally but who do not fulfil all of the criteria for having achieved a durable solution.

Given the lack of time series data on these groups of people, it is not possible in the vast majority of cases to properly gauge the extent to which they have achieved a lasting end to their displacement or not. This year, however, we obtained data that described the needs and vulnerabilities for several caseloads of people who had reportedly returned, integrated locally or settled elsewhere. It revealed that more than nine million continued to face demonstrable vulnerabilities associated with their displacement, including people who returned to destroyed homes or who continued to reside with host families or in other types of temporary accommodation. We have therefore created a new reporting term and metric for these people who have begun to obtain provisional solutions.

DATA SOURCES

Our ability to report on displacement and provide reliable estimates is contingent on the availability of sources, and their willingness to gather and share data. We draw on information produced or compiled from a wide range of source types. Governments might be expected to have the primary responsibility for counting IDPs, but many others are involved in data gathering, including international organisations, community-based organisations, specialised websites, thematic databases, research institutions, local authorities, national Red Cross and Red Crescent societies and private sector institutions.

We also rely on media monitoring to triangulate events and displacement information, and to gather displacement figures. Such sources play a significant role, particularly when governments lack the capacity or will to collect data or when their estimates are unreliable. Media figures are less likely to be reliable than those our traditional primary data sources report, and they are more challenging to validate. As such we base our estimates on them only if no other figures were available.

Different sources gather different data for different purposes, with different methodologies and for different objectives. These include operational planning, which is influenced by considerations of timely funding. Divergent objectives often affect the way in which data gatherers estimate target populations and beneficiaries.

We are also aware that some sources may also have an interest in manipulating or tweaking the number of IDPs. They may choose to do so in order to call international attention to a crisis, maximise the amount of external assistance received or downplay the scale of a conflict or disaster if the government is held accountable.

In order to mitigate this potential bias, whenever possible we triangulate the data by using several sources and prioritising those we have historically deemed to have been most objective. Particularly for displacement associated with disasters, we monitor the different stages of the humanitarian response cycle, from the emergency to the reconstruction and recovery phase, by identifying the different organisations and indicators that report on displacement over the time.

Language bias also affects our ability to source displacement data comprehensively. We can only obtain and analyse information in the languages we speak and read. Our staff and partners speak most of the required languages, but we inevitably fail to capture some information, particularly for parts of Asia.

| DISAGGREGATED DATA

We seek to obtain not only quantitative data from our sources on possible increases and decreases in the number of IDPs, but also more specific information such as data disaggregated by sex and age (SADD). This is vital in guiding an appropriate and effective response to IDPs' protection and assistance needs.

Relatively little SADD is available for displacement associated with either conflict or disasters. This is mainly because information on IDPs' sex, age and disabilities tends only to be captured in organised settings such as relief camps, while in many cases a significant majority of IDPs live in dispersed settings among host families and communities.

We also aim to gather and report disaggregated information by geographical area, urban and rural locations, and time period. Even when disaggregated data is available, however, it tends not to represent a statistically significant portion of the overall data collected. More is vital if we are to accurately inform the identification of, and respond to the specific needs of different groups of IDPs.

METHODOLOGICAL CHALLENGES PARTICULAR TO DISPLACEMENT ASSOCIATED WITH CONFLICT

We gather data from primary and secondary sources on the number of people displaced by international and non-international armed conflict and other situations of violence. We aim to include all people forcibly displaced in such contexts.

Sources tend to be numerous during humanitarian crises and visible emergencies, when they compile information to target assistance, as in Syria. During protracted and neglected crises, displacement data tends to be unavailable or out-of-date, as in Armenia, Cyprus, Georgia, Togo and Turkey.

Sources often do not use the same definition of an IDP as the Guiding Principles. Nor do they use the same methodologies, which creates a serious challenge when compiling our estimates. In several countries, including Afghanistan, Bosnia and Herzegovina, Colombia, DRC, Georgia, Pakistan and Ukraine, only IDPs who have been officially registered with the authorities are counted.

In some countries only one data source is available, while in others there may be several. For each country listed in the GRID 2018 dataset, we systematically looked for several sources. We always strive to identify new data sources, even for countries and situations where others already exist. This enables us to crosscheck, but it may also create confusion because sources rarely explain their methodologies.

When different sources are available, or when a new source provides information, we may still decide to base our estimate on only one source. That decision may vary from year to year depending on objective criteria, such as their geographical and temporal coverage, or their perceived reliability (see below). We may equally aggregate different data from separate sources to help us extend the geographical coverage of our estimates. As such, our figures are more likely to take into account and reflect both qualitative and quantitative uncertainties.

In many countries affected by conflict and violence, no agencies or mechanisms collect data on the number and kind of people who have sought refuge in urban areas, those who are hosted by relatives or other families or those who have fled to remote areas. This leads to significant underestimates of the number of IDPs.

Data on returns varies significantly from context to context. Sometimes data on returnees is collected after people have returned to their area of origin or place of habitual residence. At other times, our sources use "returns" or "returnees" to indicate that people have departed a location such as a displacement camp with the intention of returning, but with no further information about their location or well-being. In order to make a more comprehensive and systematic assessment about the viability of these "returns", more follow-up data is needed.

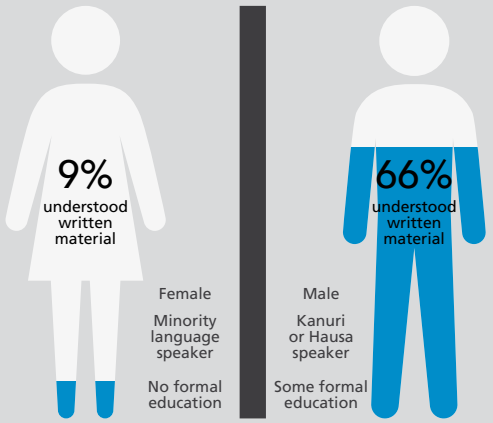
SPEAKING IDPS' LANGUAGE

Information on IDPs' mother tongue and literacy is key to meeting their needs, but relatively little is available. Many speak marginalised or minority languages that aid organisations and other service providers are not aware of. They may instead use a national language on the assumption, sometimes incorrect, that everyone will understand.

There is no single authoritative, verifiable and regularly updated dataset for languages that humanitarians or governments can refer to. Census data is often years old and requires correlation with information on IDPs' places of origin. Aid organisations do not routinely collect or share data on the languages people affected by emergencies speak, and the information is not readily sourced elsewhere. This lack of data is the first obstacle to making communication in the right language and format a standard feature of support for IDPs and others affected by humanitarian emergencies.

Do you read me?

Written comprehension by gender, education level and mother tongue at five IDP sites in north-east Nigeria



North-east Nigeria, where more than 70 languages are spoken, is a striking example. Humanitarian programme staff are largely recruited among native speakers of the two main lingua francas, Hausa and Kanuri, while IDPs are displaced from areas where other languages are spoken. That creates a communication challenge between IDPs and host communities and the organisations seeking to support them.

IOM's DTM shows that humanitarian communication with IDPs at 94 per cent of sites is conducted in Hausa and Kanuri, but research by Translators without Borders, Girl Effect and Oxfam highlights the pitfalls of that approach. Only 23 per cent of IDPs surveyed at five displacement sites understood simple protection messages written in the two languages. Among less educated women with a different mother tongue the figure dropped to nine per cent.

These interactions between enumerators and IDPs are not often considered but they can influence our figures. Unless IDPs are able to communicate accurately with those collecting data, there is a risk that they will be miscounted or misconstrued in our reporting.

SELECTION OF COUNTRIES IN THE GRID DATASET ON DISPLACEMENT BY CONFLICT AND VIOLENCE

The GRID 2018 dataset contains information on 55 countries and territories. The inclusion of a country is not contingent on a quantitative threshold for the number of IDPs. It depends only on the availability of credible data. The fact that a country is not included does not necessarily imply that no displacement has taken place, but rather that no information has been forthcoming, or that the displacement is not caused by conflict or violence. Examples include Venezuela and Zimbabwe.

GEOPOLITICAL PARAMETERS

We collect and present data on IDPs for UN members states and other self-governing territories, those with unsettled sovereignty such as the Abyei area and others with special status such as Palestine and Kosovo. The inclusion of such countries and other contested territories does not imply any political endorsement or otherwise on IDMC's part.

a. Foreign occupation

People displaced within areas of an internationally recognised state under foreign occupation are considered IDPs, irrespective of their location with respect to the de facto borders or the territorial claims of the occupying power, providing the original borders have broad international recognition. Examples incude eastern Ukraine, Crimea, South Ossetia and the Turkish Republic of Northern Cyprus.

Our estimate of the number of IDPs in Cyprus not only includes Greek Cypriots who moved to the southern part of the island at the time of Turkey's invasion in 1974, as was the case in the past, but also Turkish Cypriots who moved from southern to northern Cyprus at the time. This interpretation and accounting is consistent with the methodology we have used for other occupied areas, such as Crimea and other parts of eastern Ukraine.

b. Creation of new states

For countries that have been divided into two internationally recognised states, such as Sudan and South Sudan, we consider all people displaced within each of the new entities as IDPs, and we produce separate estimates for each one. People who fled within the previously undivided state and who crossed the border that delineates the new entities are no longer counted as IDPs.

Similarly, we no longer count people who fled from Timor-Leste to West Timor when the former was established in 1999. Their number has been subtracted from our estimate for Indonesia.

c. Unilateral secession

For regional entities such as Abkhazia and South Ossetia, which have unilaterally seceded outside an internationally supported process, we do not count IDPs within them separately from those in the state they have seceded from, in this case Georgia. In cases such as Kosovo, however, where a majority of UN member states have established diplomatic relations with a seceding entity, we do produce estimates for IDPs who have fled within it.

We no longer count people as IDPs if they have crossed what has become a de facto international border and find themselves in different entity from the one in which they were originally displaced. As such, our estimate for Kosovo refers only to people who have fled within the territory itself. Given that the Serbian government reports all IDPs in the country as having come from Kosovo, Serbia is not included in GRID 2018.

These decisions not to continue counting people we previously considered IDPs in no way implies that they no longer have vulnerabilities related to their displacement.

| GEOGRAPHICAL SCOPE AND COVERAGE

We aim to capture the full geographical scope of displacement and strive to monitor and report on all situations across the whole of each country we cover. In many, such as Burundi, DRC, Ethiopia, Mozambique, Myanmar and Turkey, however, data sources do not cover all of the regions where displacement took place. As a result, our figures only reflect geographical areas where humanitarian agencies operate, the objectives of their response and their motives for collecting displacement data.

Humanitarian agencies often have difficulty in accessing to conflict zones, which can lead to significant information gaps. Our sources tend to monitor and report on displacement more comprehensively in areas where IDPs

are most visible, such as in camps. In most cases, however, agencies fail to record the geographical dynamics of IDPs' movements when registering them. In other cases, such as Somalia and Syria, they collect data in regions that overlap, often using different methodologies.

Data gatherers are very likely to overlook IDPs living in more dispersed settings. These include people who move to urban areas where they blend in with local inhabitants; those who flee to remote areas, such as the bush in CAR or the forests of Côte d'Ivoire; and those who are hosted by other families or relatives, as in the Philippines. They end up unreported, and the scope and nature of such displacement cannot be quantified and assessed. Their number and fate remain unknown.

| TEMPORAL SCOPE AND FREQUENCY OF REPORTING

The figures in our GRID 2018 dataset are static, but IDPs' movements are not. For this reason, we aim to improve our methodology and increase not only its geographical, but also its temporal coverage. We plan to produce figures more frequently in order to capture the fluidity and complexity of IDPs' movements.

To do so, we have begun to use a hybrid monitoring methodology that combines event-based and country-based monitoring of displacement situations as they evolve over time. The idea is to identify events in near-real time, manually verify those we deem to have led to people fleeing and then engage partners in the field to collect time-series data. In some cases these partners will help us to identify events that have the potential to trigger displacement by issuing a humanitarian alert.

METHODOLOGICAL CHALLENGES PARTICULAR TO DISPLACEMENT BY DISASTERS

The GRID 2018 presents our latest findings on new displacement associated with disasters in 2017, and compares it with our historical dataset for 2008 to 2016.

| TAXONOMIC CONSIDERATIONS

Our estimates are based on new displacement known to have taken place as a result of disasters for which natural hazards have been identified as the primary trigger. When available, we use the internationally acknowledged name of hazards and categorise them initially into four main types: geophysical, meteorological, hydrological and climatological. These are then refined into types, sub-types and sub-sub-types (see table A.4, p.16).

To better understand the complexities of the phenomena, we plan to break disasters down into various stages and differentiate between their primary, secondary and subsequent triggers.

The GRID 2018 dataset presents figures for displacement associated with sudden-onset hazards, and 1.3 million people whom we estimated were displaced by drought in Burundi, Ethiopia, Madagascar and Somalia. Though droughts affected people in several countries in 2017, including Angola, Chad, China, Mauritania, Niger and North Korea, we were able to report on drought-related displacements in only these four countries. This was due to the limited availability of clearly labeled and verifiable data on displacements caused by droughts. Even where the data was available, disaggregating drought- and conflict-related displacement remains a challenge (see Inside the GRID, p.80).

| TEMPORAL COVERAGE

Our dataset records incidents of displacement that occurred in 2017 and are supported by a reliable and comprehensive source. As in previous years, overlapping hazards were a challenge because the monsoon and cyclone seasons coincide in many countries. In Asia, Typhoon Doksuri overlapped with the rainy seasons in Malaysia, Philippines, Thailand and Viet Nam, with displacement resulting from both the storm as well as the rain-triggered floods. Tropical storm Dineo occurred during Zimbabwe's rainy season, and both caused displacement.

Sometimes our sources reported on people who had fled disasters but without reference to when or how they had become displaced. One of our primary sources for Burundi provided aggregated data that we could not trace back to specific events. As such, we did not use the data and based our estimates exclusively on event-based figures instead.

Accounting for the length and severity of displacement in the aftermath of disasters is also a highly problematic. We produced a first scoping exercise in 2015, which aimed to shed light on the phenomenon by challenging

TABLE A.4: Taxonomy of natural hazards*

Hazard category	Type	Sub-type	Sub-sub-type
Geophysical	Earthquakes, mass movements, volcanic activity	Ground shaking, tsunamis, sudden subsidence, sinkholes, landslides, rockfalls, ashfalls, lahars, pyroclastic flows, lava flows, toxic gases, glacial lake outburst flows (GLOF), volcanic eruptions	
Meteorological	Storms, extreme temperatures	Extra-tropical storms, tropical storms including hurricanes and cyclones, convective storms, cold waves, heatwaves, severe winter conditions	Derechos, hailstorms, thunderstorms, rainstorms, tornadoes, winter storms, dust storms, storm surges, haze, gales
Hydrological	Flooding, landslides, wave action	Coastal floods, riverine floods, flash floods, ice jam floods, avalanches – snow, debris, mudflows, rockfalls – rogue waves, seiches	
Climatological	Drought, wildfires	Drought, forest fires, land fires – bush, brush and pasture	Fire whirls

** This taxonomy is adapted from the classification system developed by the international disaster database (EM-DAT) maintained by the Centre for Research on the Epidemiology of Disasters (CRED) in Belgium.*

the notion that people who flee a disaster are not likely to remain displaced for long. This false assumption is fostered by only occasional reporting of ongoing cases, often to mark the anniversary of a disaster. Our scoping exercise allowed us to re-examine the issue, and conclude that there are likely to be many more people living in protracted displacement than previously thought.

Quantifying this is difficult, however, given that data collection continued until the number of IDPs reached zero for fewer than one per cent of the 4,000-plus events we have recorded in our database since 2008. This represents a major blind spot, with significant implications for people who remain displaced but are not counted, and those responsible for protecting and assisting them.

| TERMINOLOGY

We use the term "displaced", but it is rarely if ever adopted consistently and unequivocally by different countries or sources (see table A.5, p.16). In some countries, such as Afghanistan, the term "returnees" can also refer to IDPs. People displaced by floods in 2017 were referred to as "*damnificados*" in Peru, which loosely translates as "affected", and as "sheltered" in Saint Vincent and the Grenadines. Many sources refer to people displaced by disasters as "directly affected". Additional analysis is required to make sense of the terms sources use, and to understand when and how they signal displacement.

Even within the UN and coordinated international humanitarian reporting mechanisms there is inconsistency in the way different populations are described and counted, with some estimates based on "people affected" and others on "people in need" or "people targeted".

Many terms and expressions are specific to internal displacement, and our database captures the most common ones (see table A.5, p.16). They may refer to individuals, groups of people such as families or households, or housing. We use the number of houses destroyed as a proxy because it shows that at least one household has been left homeless.

TABLE A.5: Explanation of reporting terms

| HOUSING INFORMATION

Housing information is important in estimating displacement associated with disasters. To produce our 2017 estimates, we analysed more than 400 reports that mentioned housing damage or destruction rather than the number of people displaced. In order to use housing data as a valid proxy, we only consider figures for homes

Term	Explanation
Displaced	Involuntary or forced movements, evacuation or relocation – when not specified – of individuals or groups of people from their habitual places of residence
Evacuated	Voluntary and forced evacuations, both preventive and in response to the onset of a hazard
Relocated	Voluntary and forced relocations, both preventive and in response to the onset of a hazard
Sheltered/ in relief camp	People accommodated in shelters provided by national authorities or organisations such as NGOs, the UN and IFRC
Homeless	People rendered homeless and without adequate shelter
Uninhabitable/ destroyed housing	Limited to habitual place of residence, and includes houses, retirement homes, prisons, mental healthcare centres and dormitories. The number of destroyed/uninhabitable houses is multiplied by the AHHS for that country to estimate the number of people rendered homeless and so displaced
Partially destroyed housing	Data on partially destroyed houses cannot necessarily be taken as a proxy indicator of displacement. This information, however, helps us identify situations we may need to look into further, and access to more detailed shelter assessments is very helpful in this sense. We also use it to triangulate other data. Sometimes, for example, partially destroyed housing is also referred to as uninhabitable
Forced to flee	"Flee" implies the forced nature of people's movement and we take it to indicate displacement
Affected	People whose life has been directly impacted by a disaster. Displaced people are amongst those affected, but not all affected people are necessarily displaced. There are exceptions, however, and in certain Latin American countries IDPs are referred to as "affected" for reasons of political sensitivity
Other	Other indicators of displacement used by local authorities or organisations. They include context-specific terms such as rescued people, people in need, targeted people, resettled people and people living in temporary or transitional shelters

that have been damaged to the extent they are no longer habitable.

After hurricane Maria struck the island of Dominica in September, for example, the government reported that 45 per cent of the island's homes had been either severely damaged or destroyed. We combined this information with official statistics on household size to arrive at an estimate of 34,000 people displaced.

Terms that indicate the extent of damage include "houses at risk [of collapse]", "houses severely affected/damaged" and "houses destroyed". We consider housing to be any place where people have established a habitual residence. We include hospitals if the information provided suggests that long-term patients have been displaced.

We also include shelters in refugee and displacement camps. "Collapsed tents" in Jordan's Zaatari refugee camp, for example, are counted as uninhabitable housing. Such cases constitute multiple displacement, in which people have already fled once, only to become displaced again when their camp is flooded.

EVACUATION DATA

We often use data on mandatory evacuations and people staying in official evacuation centres to estimate event-based displacement. This was the case for 8.4 million of the new displacements we reported on in 2017, or around 45 per cent of the global total.

On the one hand, the number of people counted in evacuation centres may underestimate the total number

of evacuees, as others may take refuge elsewhere. On the other, the number of people ordered to evacuate usually overstates the actual number, given that some people do not comply. The potential for such discrepancies is much greater when authorities advise rather than order people to evacuate, and as a result we do not incorporate such figures into our estimates.

When a major disaster occurs or is forecast in Japan, the cabinet office publishes situation reports that include figures for evacuation advisories, orders and people staying in temporary shelters, and the discrepancies between them can be significant. At a minimum we considers those in shelters as displaced, but without further context to triangulate orders and advisories, this may understate the true scale of evacuations. Mandatory evacuation orders are triggered in the US when danger is imminent, but not all people ordered to evacuate do so.

ACCOUNTING FOR DISPLACEMENT ASSOCIATED WITH DEVELOPMENT PROJECTS

We are still not able to cover displacement associated with development projects in our global figures, but as we noted last year, large numbers of people are forced off their land "in the public interest" all over the world.[1] This year we attempted to systematically record new displacements associated with one type of development activity, dam construction.

There are several types of data source on people displaced to make way for dams, but they tend to be incomplete and unverifiable. To apply a consistent methodology to all dams planned for construction in 2016 and 2017 and whose completion was anticipated by 2022, we and the UN Institute for Training and Research's operational satellite applications programme (UNOSAT) analysed satellite imagery to estimate the amount of displacement they are likely to have caused by the time they are completed.

The International Commission on Large Dams (ICOLD) has around 100 member countries and maintains a database, the World Register of Dams, which records more than 55,000 with walls higher than 15 metres.[2] ICOLD tries to obtain data on more than 30 indicators for each dam, including quantitative estimates on resettlement. Given the rich source of information, we extracted 50 dams from the ICOLD database to pilot new monitoring approaches.

Bearing in mind that dispossession and displacement associated with dam projects is often a slow process that begins long before people actually move, we selected a sample with completion years scheduled from 2016 to 2022. We then analysed each site for displacement, with the aim of generating a figure for a subset of dams where their impact is either clearly visible on pre-post imagery, or where the reservoir or impacted area of an unfinished dam has been predicted.

High-resolution imagery from each site before dam construction began was identified. Assuming that little year-to-year change would be visible in the absence of a major displacement event, images captured over the three years before the construction start date were considered appropriate for analysis.

ESTIMATING THE NUMBER OF HOMES TO BE INUNDATED AND PEOPLE DISPLACED

Remote sensing technologies do not yet allow us to automate the detection and counting of homes, a process which varies for each country and dam. The aim is to identify the number of structures that house people, and differentiate them from secondary structures such as barns and storage sheds. Photographs on Google Earth are a useful point of reference.

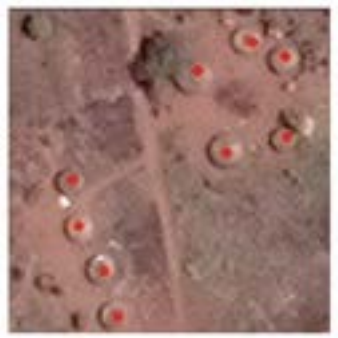
The images above illustrate some of the types of structure visible. On the left are circular huts seen frequently in the vicinity of dam sites in Uganda and Ethiopia, and on the right are examples from Laos and Vietnam. The red dots indicate structures included in our displacement calculation.

Many of the dams we included in our sample do not have a reservoir visible yet, so we used the height of their wall to estimate the number of structures likely to be affected. We calculated the area likely to be inundated to be the height from the lowest point on the original riverbed along the toe of the dam to the lowest point on the crest (figure A.6).

Once we had identified the number of homes likely to be inundated, we used the countries' average household size to estimate the number of people forced to move as a result.

FIGURE A.5:

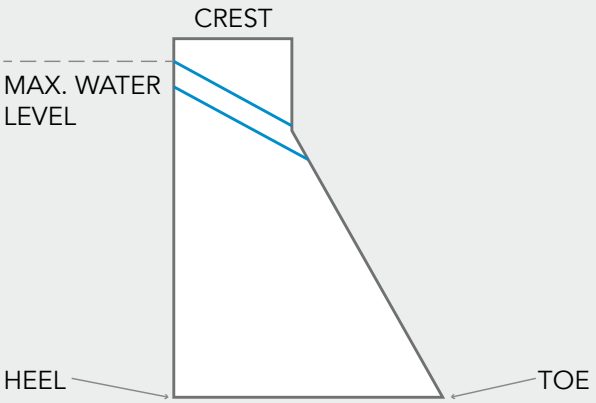
a. Homes in Karuma, Uganda



b. Homes in Trung Son, Vietnam

c. Homes in vicinity of Nam Ngiep 1 dam, Laos

FIGURE A.6: Structural diagram of a dam



The method discussed above is just one way of estimating displacement associated with one type of development projects. In an effort to better understand the potential of a wider array of projects to cause displacement, we analysed 119 resettlement plans, action plans and abbreviated action plans published by the World Bank in its online database in 2016.[3] The plans were produced by governments as part of their application process for World Bank funding, which means the people identified will only be at risk of being displaced or affected if and when the projects go ahead. We only considered projects that the World Bank had already approved for funding.

The organisation demands resettlement plans or action plans as part of its policy to safeguard against involuntary resettlement.[4] It accepts abbreviated resettlement action plans for projects likely to displace fewer than 200 people. These plans have to include measures that will be taken to limit the negative consequences of the project on the livelihoods of people likely to be affected. Not all plans, however, provide information about the degree to which people will be affected, including whether they will be displaced or not. The figures we report in the On the GRID section of this year's report only account for people clearly identified as to be displaced in the plans.

The World Bank's policy on involuntary resettlement identifies three possible consequences of the involuntary requisition of land:

1 Relocation or loss of shelter
2 Loss of assets or access to assets
3 Loss of income sources or means of livelihood, whether or not those affected must move to another location

Only the first is considered displacement. A displaced person is defined as someone physically moved from their home as a direct consequence of a project, regardless of the length of the displacement or whether it is temporary or permanent, and regardless of whether they were an owner, tenant or squatter. Affected people include those displaced and anyone else who suffers a project's impacts in any form.

QUALITY ASSURANCE AND INDEPENDENT PEER REVIEW

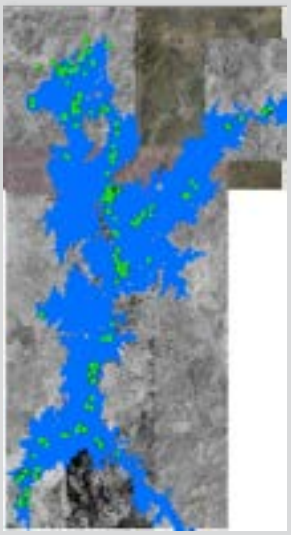
As in previous years, and in order to improve our methodology, we submitted this year's estimates to a quality assurance process to verify the data. The verification stage is as important as the data collection itself, because it allows possible discrepancies to be identified, and the data to be refined before it is finalised. This year's process was mainly led in-house, but our entries have been double-checked both by our partners in the field

ETHIOPIA: A PREDICTED DISPLACEMENT

The future reservoir for the Grand Renaissance Dam (GRED) in Ethiopia covers a very large area, and the first challenge was to obtain imagery with adequate coverage. Analysts tried to ensure that the images were as well-defined as possible to be able to estimate the number of people living in the area accurately.

A second challenge arose from the fact that the reservoir area is also home to pastoralists, so the use of multiple images at different moments in time had the potential to both exclude and duplicate populations.

To ensure that all potential displacement was captured we used images dating back to 2008 and 2009, before the site surveys were conducted. We identified 4,580 homes likely to be inundated or destroyed, from which we extrapolated that the project will displace at least 20,610 people.



and by experts not previously involved in the data collection and analysis.

Colleagues were assigned the countries with displacement associated with conflict and the 50 disasters that accounted for more than 90 per cent of the displacement in 2017. They dug through all the data collected and collated by others, asking questions and highlighting potential gaps, ensuring the highest possible level of transparency and clarity.

Reports of displacements associated with violence in India were questioned, for example, leading to a rigorous follow-up process with existing and new sources. This allowed us to solidify our data and present it with a much higher level of confidence. The review process for Guatemala revealed that the way we had initially aggregated different caseloads risked double-counting. Our published figure eliminates this risk, but it is likely to be an underestimate as a result.

The quality assurance process for displacement associated with conflict included extensive external peer review with in-country partners. We presented our figures and methodology to NRC offices, IOM teams, UN agencies, government agencies and NGOs in order to benefit from their field knowledge. In future we aim to extend the verification process to the entire set of annual entries.

Our methodology has been reviewed independent experts, and whenever we update our approaches and tools we submit them to external peer review. This was the case this year for our analysis of satellite imagery and Facebook data.

We will embed the external peer review and internal quality assurance processes in our future work to ensure that the methods we use to produce our figures are robust and that we have presented them accurately.

QUALITATIVE ASSESSMENT OF CONFIDENCE IN ESTIMATES FOR DISPLACEMENT ASSOCIATED WITH CONFLICT

BUILDING ON LESSONS FROM EXISTING ASSESSMENTS

There have been several attempts recently to design confidence assessment schemes to evaluate data on internal displacement as part of a broader effort in the field of humanitarian needs assessments.[5] The Task Force on Population Movement in Yemen (TFPM), for example, has developed a confidence rating based on disaggregation by sex and age, and the availability of data on districts of origin and displacement.[6]

IOM Iraq calculates a confidence rating to produce an estimate for each location in its DTM, based on the number of informants used, discrepancies between information from different sources, the accessibility of the location and the ability to independently validate the data received.[7] The Syria dynamic monitoring report (DYNAMO) gives a confidence rating based on the number of sources, the manner and extent to which

the data can be independently verified, the amount of convergence among the different sources and the degree to which they correspond with contextual information about the situation.[8]

Such assessments may seem reassuring, but if poorly conceived or implemented they may provide a false sense of certainty or confidence. They may hide the arbitrariness of the underlying criteria and the way they are weighted and aggregated. They may also reflect the biases and challenges inherent in the various steps involved in constructing an index and collecting the data. To limit evaluators' bias and improve objectivity and consistency, clear decision rules are needed that limit the number of dimensions taken into account.

There are ways of overcoming the limitations of points-based scores, but their complexity may render them opaque, adding another layer of potential confusion. Using only four indicators with two to five possible values for each, IOM Iraq's assessment framework yields as many as 126 possible combinations.[9]

THE CHALLENGE OF APPLYING NATIONALLY SPECIFIC TOOLS AT THE GLOBAL LEVEL

It is difficult to extrapolate to the global level from confidence ratings designed for national circumstances. The three examples discussed above all refer to situations in which a single organisation or cluster designs the entire national data collection process.

Aggregation at the global level and comparison between countries is made more difficult by the number of data sources and the fact that their motivations for collecting information ranges from rapid needs assessments to victim compensation without any a priori global coordination. Sources' methodologies also vary widely, from satellite imagery, registration, sampling, key informant interviews and censuses, to name but a few.

This diversity stands in stark contrast to the standardisation of data in the three national examples mentioned above. As such, the same set of criteria cannot easily be used to judge reliability, and the diversity in which the results are reported makes it more difficult to make comparisons between countries.

IDMC'S CONFIDENCE ASSESSMENT

We have designed a comprehensive framework to assess the confidence we have in the estimates we publish. The methodology and results presented in this report are the initial steps of a process we will continue to develop through several more iterations.

Given that we are as yet unable to apply many of the criteria to our data on displacement associated with disasters, we have only assessed our confidence in the figures associated with conflict and violence. In doing so, we applied a common set of criteria based on:

- The methodologies used to collect it
- The reporting unit
- Whether it could be independently validated
- The degree to which it is geographically comprehensive in terms of the extent of the conflict and associated displacement
- Whether it is disaggregated by sex and age
- The frequency with which it was collected
- How extensively it covers the components of our data model

We have not attempted to weight or rank these factors, nor have we assigned quantitative point values for them or generated an overall score for each source and estimate. In order to do so rigorously, we will first need to test the relative significance of each of the factors empirically.

Some of the data gaps reported can be attributed to the way governments and organisations collect and disseminate data, but this is not always the case. We try to be as comprehensive as possible in our own data collection, but we may overlook some sources that could address the gaps we report. As such, our assessment reflects the level of detail of the data we were able to collect and process from various sources, not the level of detail of all the data that exists or was published by each provider.

Our confidence assessment for the largest stock and new displacement figures associated with conflict is shown below in table A.10. Our assessment for the full list of countries is available on our website.

TABLE A.6: IDMC confidence assessment of conflict-related displacement figures

New displacements	Syria	Democratic Republic of the Congo	Iraq	South Sudan
Methodology	Key informants, other	Key informants, registration, media monitoring	Key informants	Key informants, registration, other, media monitoring
Data triangulation	Some local triangulation	Some local triangulation	No triangulation	Some local triangulation
Geographical coverage	Partial coverage	All relevant areas covered	All relevant areas covered	Partial coverage
Geographical disaggregation	Admin 2 or more	Admin 2 or more	Admin 2 or more	Admin 2 or more
Reporting unit	People, households	People, households	People, households	People, households
Frequency of reporting	Every month	More than once a month	More than once a month	Other
Disaggregation - sex	No	Partial	No	No
Disaggregation - age	No	Partial	No	No
Data on returns	Yes	Partial	Yes	Partial
Data on deaths	No	No	No	No
Data on births	No	No	No	No
Data on cross-border movements	Yes	Partial	No	Partial
Data on local integration	No	No	No	No
Data on settlements elsewhere	No	No	No	Partial

Ethiopia	Philippines	Central African Republic	Afghanistan	Somalia	El Salvador
Unknown, key informants	Registration, media monitoring	Unknown	Registration, other	Key informants	Other
Some local triangulation	Good triangulation	Some local triangulation	No triangulation	No triangulation	Contradictory data
Partial coverage	Partial coverage	All relevant areas covered	Partial coverage	All relevant areas covered	All relevant areas covered
Admin 2 or more	Admin 2 or more	Subnational - admin 1	Subnational - admin 1	Admin 2 or more	Country/territory - admin 0
People, households	People, households	People, households, percentage of population	Households, people	People	People
Other	More than once a month	More than once a month	More than once a month	Other	Once a year
No	No	No	No	No	No
No	No	No	No	No	No
No	Yes	Yes	No	Yes	No
No	No	No	No	No	No
No	No	No	No	No	No
No	No	Partial	No	Partial	No
No	No	No	No	No	No
No	No	No	No	No	No

Stock	Syria	Colombia	Democratic Republic of the Congo	Iraq	Sudan
Methodology	Key informants, other	Registration	Key informants, registration, media monitoring	Key informants	Key informants, registration
Data triangulation	Some local triangulation	No triangulation	Some local triangulation	No triangulation	Contradictory data
Geographical coverage	Partial coverage	All relevant areas covered	All relevant areas covered	All relevant areas covered	Partial coverage
Geographical disaggregation	Admin 2 or more	Country/territory - admin 0	Admin 2 or more	Admin 2 or more	Admin 2 or more
Reporting unit	People, households	People	People, households	People, households	People, households
Frequency of reporting	Every month	Upon request	More than once a month	More than once a month	Every 3 months
Disaggregation - sex	No	No	Partial	No	Yes
Disaggregation - age	No	No	Partial	No	Yes
Data on returns	Partial	Partial	Partial	Yes	Partial
Data on deaths	No	Yes	No	No	No
Data on births	No	No	No	No	No
Data on cross-border movements	Partial	No	Partial	No	Partial
Data on local integration	No	Partial	No	No	No
Data on settlements elsewhere	No	Partial	No	No	No

NOTES ON IDMC'S CONFIDENCE ASSESSMENT CRITERIA

Data disaggregated by sex and age (SADD): The availability of SADD does not directly factor into the calculation of the number of IDPs, but it can be considered a proxy for detailed data collection practices.

Geographically disaggregated data: Such data is not, per se, an absolute requirement for accurate national estimates of displacement. In many countries, however, some of the entities that collect data only have access to some regions. Geographical disaggregation allows for triangulation and gaps to be identified, while its absence can lead to possible double-counting.

Multiple data sources: The availability of data from a number of independent sources does not guarantee higher quality or more accurate overall results. It can, however, prompt discussion of the various estimates available and the methodologies used to derive them. It also sometimes permits triangulation, which is useful in situations for which displacement estimates are highly sensitive or more susceptible to data collectors' biases.

Temporal dimensions: The frequency of updates is a relative criteria. Unfolding crises and rapidly changing situations such as those in Syria, Iraq and Yemen require more frequent updates than stable and often protracted situations such as in Armenia and Cyprus. Yearly updates may suffice for some situations, but for others, it can exclude some if not many shorter-term displacements.

Yemen	South Sudan	Nigeria	Afghanistan	Turkey
Key informants	Key informants, registration, other	Registration, key informants, media monitoring	Registration, key informants, other	Satellite imagery, key informants
No triangulation	No triangulation	Some local triangulation	Some local triangulation	Some local triangulation
Partial coverage	Partial coverage	Partial coverage	Partial coverage	Partial coverage
Subnational - admin 1	Admin 2 or more	Admin 2 or more	Subnational - admin 1	Subnational - admin 1
Households, people	People, households	People, households	Households, people, percentage of population	People, households
Every 3 months	Every month	More than once a month	Other	Other
No	No	Yes	No	No
No	No	Yes	No	No
Partial	No	Partial	Partial	No
No	No	No	No	No
No	No	No	No	No
No	No	Yes	Yes	No
No	No	No	No	No
No	No	Partial	Partial	No

Our confidence assessment is a work in progress, and we welcome input from partners interested in contributing to its development. For this report we assessed our confidence in all the conflict figures reported. We aim in future to apply our criteria to all of the data we receive and analyse so that our estimates are as accurate as possible. In doing so, our data users will be made aware of the magnitude of uncertainty the data contains, and the underlying reasons for it.

NOTES

1. IDMC, Global Report on Internal Displacement 2016, May 2016, p.79, available at https://goo.gl/VOc8OZ.
2. ICOLD, http://www.icold-cigb.net/GB/icold/icold.asp
3. See selected World Bank publications, available at https://goo.gl/a08Wa.
4. World Bank, Operational Manual, OP 4.12 - Involuntary Resettlement, December 2001 (Revised April 2013), available at https://goo.gl/ppzTf5.
5. ACAPS, How sure are you? Judging quality and usability of data collected during rapid needs assessments, August 2013, available at https://goo.gl/JcYxMk.
6. Task Force on Population Movement in Yemen: 5th Report, October 2015, p.4, available at https://goo.gl/6GtTbN.
7. IOM, Response to the Anbar Crisis in Iraq, Displacement Tracking Matrix, Round II Report, April 2014, p.3, available at https://goo.gl/Da8Z6e.
8. Humanitarian Liaison Group, Syria Multi-Sectoral Needs Assessment, October 2014, available at https://goo.gl/OupIUP.
9. IOM Iraq, displacement tracking matrix downloads, available at https://goo.gl/AHE54s.