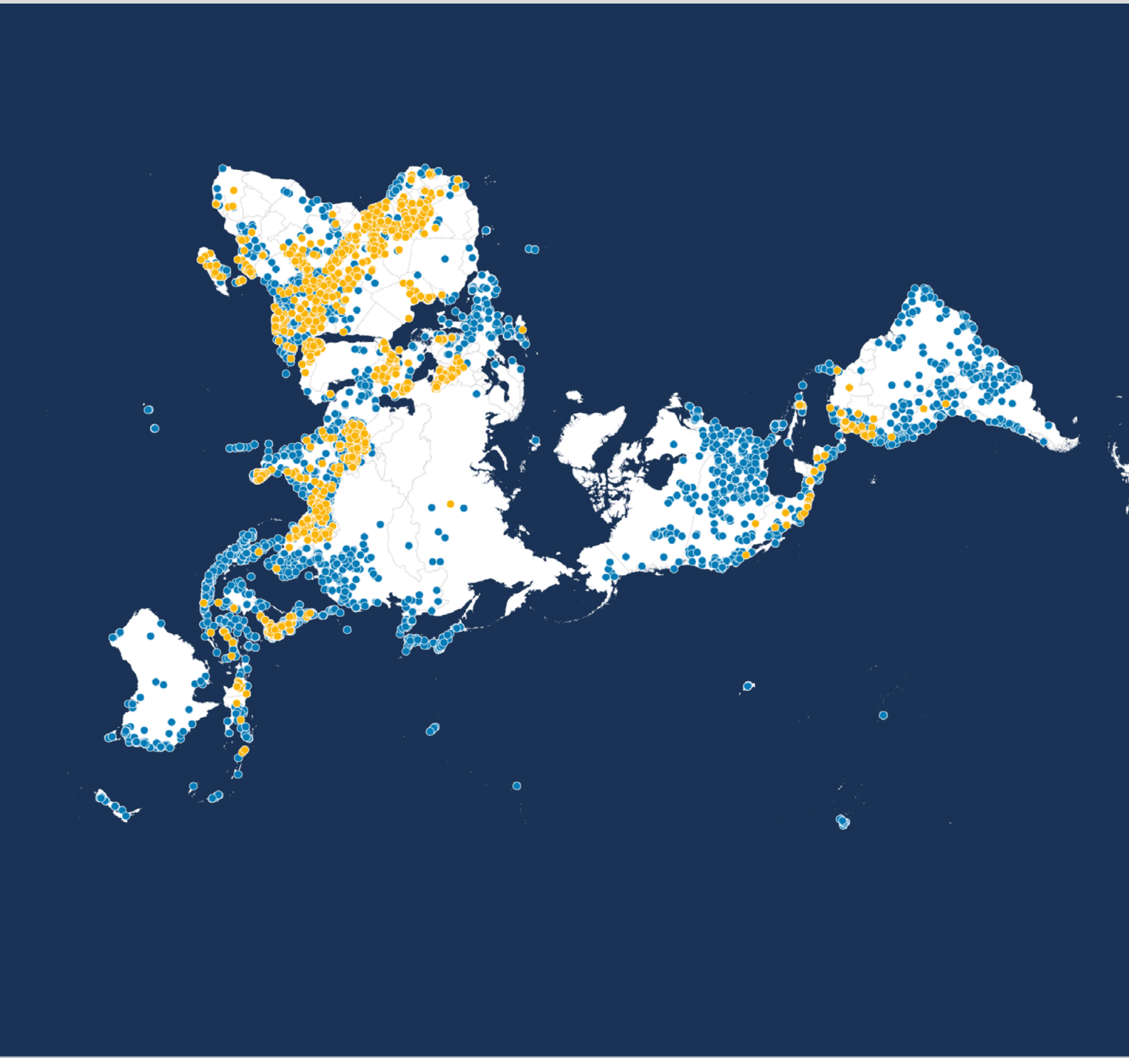
GRID 2020

GLOBAL REPORT ON INTERNAL DISPLACEMENT

METHODOLOGICAL ANNEX



iDMC internal displacement monitoring centre

NORWEGIAN REFUGEE COUNCIL NRC

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INTRODUCTION

IDMC's Global Report on Internal Displacement (GRID) is the result of an intense process of data gathering, collation, analysis and validation and presents IDMC's best estimates of internal displacement associated with the causes and triggers of displacement that we monitor: conflict and violence, disasters and development projects. It reflects continuous improvements concerning the ways we collect data, be it from our partners or with our own tools, as well as advances in the research and analysis that help identify key trends, causes, triggers, patterns and impacts of internal displacement.

For the purpose of this report, we analysed data addressing the following set of metrics:

- the total number of internally displaced persons (IDPs) as of 31 December 2019
- new incidents of displacement recorded between 1 January and 31 December 2019
- the estimated number of people who reportedly made some partial progress towards a durable solution in 2019, or those whose return, local integration or resettlement, as reported by data providers or governments, could not be verified.

To ensure the highest level of reliability of IDMC's estimates and analysis, we adhere to strict guidelines and processes, including extensive research, partner engagement and a rigorous quality-assurance process that involves both internal and external reviews of the data and our analysis of it. This allows us to publish our best estimates accompanied by comprehensive documentation and detailed explanation of any limitations associated with the data. Such limitations relate to the way in which data is collected, treated, disseminated and published.

Monitoring internal displacement comes with a wide array of challenges, mostly linked to the general lack of visibility and understanding of the phenomenon. It also involves addressing several technical complexities related to population movement tracking, including how

The Horn of Africa experienced above-average rainfall that triggered widespread flooding. This man and his wife lost their home and shop in Lodwar, Turkana county, Kenya. © UNICEF/UNI250645/Chinyenze, December 2019

A displaced man from Hawja town, at the Laylan camp in Kirkuk, Iraq. Photo: NRC/Alan Ayoubi, February 2019

to deal with gaps in data as well as conflicting sets of figures about the same situation. This annex highlights some of the key challenges we face, as well as the strategies, guidelines, quality-control principles and decision rules IDMC has in place to overcome them. It also presents some of the tools and procedures used for the collection, collation, analysis and verification of internal displacement data, as well as the potential limitations these might have.

The annex is divided in eight main sections. The first section introduces the foundations upon which IDMC develops its work, including the definitions and terms it applies, IDMC's data model and the metrics we report on, as well as the countries and territories that we monitor. The following section details the critical aspects of how IDMC collects and processes data on internal displacement. It describes our data sources, the geographical and the temporal scope of our data, and when and how we use of proxies, such as housing destruction, to detect displacement and produce metrics. This section also highlights the importance of metadata, the long-term preservation of this information and the internal rules in place to ensure the reliability of IDMC estimates. The annex's third section summarises the main challenges that IDMC faces in monitoring displacement, ranging from the availability of data, through the difficulties in capturing displacement in bordering regions, the coverage by data collectors and the level of disaggregation of the data, to the limitations presented by outdated data. This section also describes potential reporting and selection biases – and how we have tried to overcome them. Sections 4, 5 and 6 explain the criteria and challenges specific to monitoring displacement related to disasters, to conflict and violence, and to development projects, respectively. These are followed by a section detailing the practices that IDMC has put in place to ensure the quality of the data and figures it reports on, and to also ensure transparency over the confidence and the analyses of the figures. Last, section 8 presents additional methods, classifications and assessment tools we are currently developing to improve the monitoring of internal displacement. These include the disaster and conflict typologies, the displacement severity assessment, and the use of satellite imagery and other tools that can increase the scope of our monitoring, identify more situations of displacement, triangulate our figures with more data, and report on displacement in a more timely manner.

1

IDMC'S ANALYTICAL PROCESS, DEFINITIONS AND DECISION RULES

1.1 Definition of an IDP

IDMC adopts the definition of an IDP categorised in the Guiding Principles on Internal Displacement:

"Internally displaced persons are persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border."[1]

For accounting purposes, we focus on the three key elements of this definition when determining whom to include in our figures:

- the forced nature of the displacement
- displacement from the habitual residence (or the displacement trigger preventing the people or group concerned from accessing or remaining in said place)
- the fact that those displaced remain within their country of origin or habitual residence.

We attempt to monitor all situations of internal displacement, regardless of the cause and trigger. Our current reporting, and the figures included in GRID 2020, however focus on internal displacement caused by conflict and violence, and disasters. We aim to continuously improve and expand the scope of our monitoring and reporting, based on the availability of data on movements. Our data model aims to account for and characterise the diverse forms of population movements we encounter during our monitoring (Figure A.1).

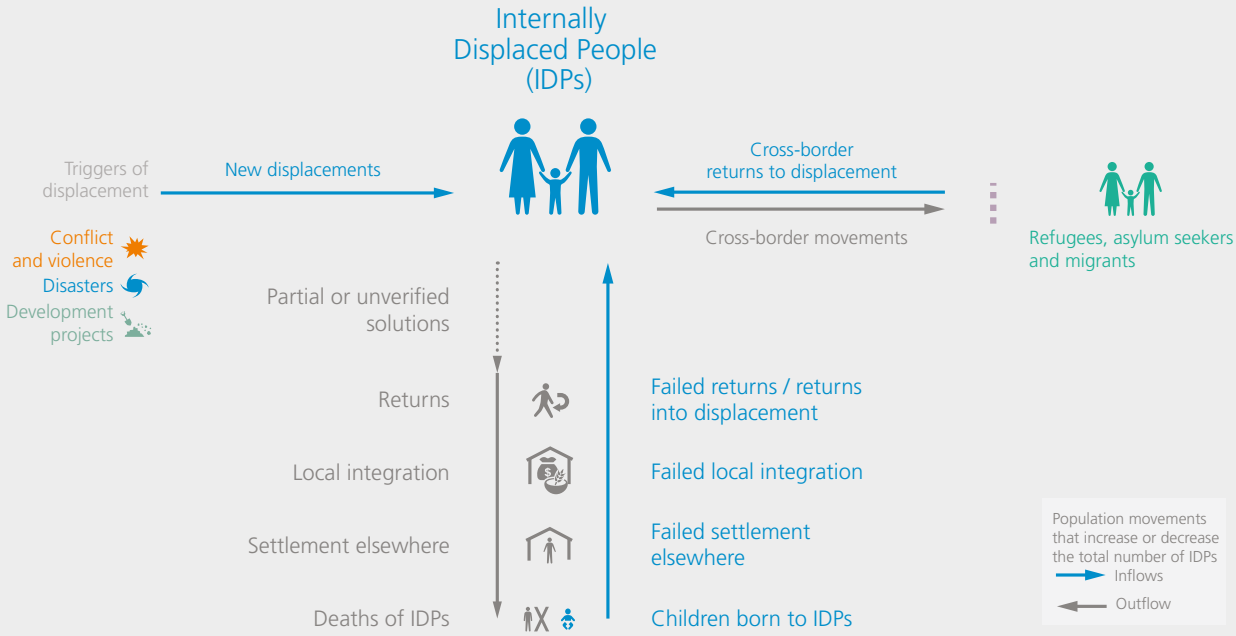
The forced nature of the displacement "within internationally recognised borders" is fundamental in determining whether or not a person is an IDP, but the Guiding Principles do not set other criteria by which to identify a person fleeing their "home or place of habitual residence". As such, we interpret IDPs to include not only citizens of a country in which displacement takes place, but also non-nationals whose habitual place of residence is in that country.

IDMC also recognises that forced displacement is not solely associated with the notion of a fixed place of residence. For nomadic pastoralists, displacement may be the result of the loss of traditional grazing areas, the death of livestock, or a combination of both. Given that the concept of habitual residence is intimately linked to peoples' livelihoods, some people who have lost their livelihoods can be considered IDPs. We have found this to be the case for pastoralists who have become displaced due to the impacts of drought and conflict.

1.2 IDMC data model

Estimating the number of people displaced in a certain location and at a given point in time is challenging, especially when population movements are highly dynamic. IDMC has developed a data model (see figure A1, for a simplified version) which we use to map data and transform it into the figures we publish. The model illustrates how different types of population flows influence the total number of people displaced in any given situation at a specific point in time. Additionally, it reflects reported cross-border movements and attempts to reach durable solutions, as these can also affect the total number of IDPs. The purpose of this data model is to provide a comprehensive representation of internal displacement data so that we can publish figures for all the countries and situations we monitor in as consistent a manner possible. This allows us to make meaningful comparisons across all countries and from one year to the next, which is essential for informing more targeted and effective policymaking by government and other actors in complex crises.

FIGURE A.1: IDMC's displacement data model



The figures that we publish describe two main types of metrics: stocks and flows. Stocks represent the total number of people displaced in a location at a specific moment – in the case of this report, as of 31 December 2019. Flows represent dynamic processes, such as the number of new displacements or reported returns over a period of time. Displacement flow data record the direction of displacement, from the area of origin to the destination location (figure A2).

FIGURE A.2: Stocks and flows and their relationship to IDMC's displacement estimates

New displacements
Total number of displacements between 1st of January to 31th December 2019

Partial Solutions or Unverified Conditions
Number of people who made partial progress towards durable solutions or whose progress could not be verified

Stock
Total number of people displaced as of 31st December 2019

The data model is an essential tool for producing comprehensive and comparable figures. Populating it with data, however, is a challenge. Data collected in the field almost never accounts for all relevant flows. And it is often difficult to map partners' data onto the corresponding part of the data model.

1.3 IDMC metrics and indicators

Total number of IDPs (or "stock")

Estimating the total number of IDPs for conflict and other forms of violence

The total number of IDPs is referred to as a "stock" metric. It represents a static snapshot of the number of IDPs in a given location at a specific point in time. For GRID 2020, that reference point is 31 December 2019. The population movements described in Figure A.2. influence the number of IDPs: new displacements increase it; returns, cross-border flight and other outflows decrease it.

We estimate the total number of IDPs at the end of the year by verifying and triangulating data reported from one or more sources. Along with contextual analysis, we also triangulate the data and estimate the number of IDPs by analysing data on new displacements, cross-border movements, births and deaths in displacement, as well as movements leading to some form of progress towards durable solutions. Thus, we estimate the total number of IDPs as of 31 December 2019 by adding or subtracting different population movements, as Illustrated below:

Total number of IDPs as of 31 December 2019 = Total number of IDPs $_{\text{Dec 2019}}$ + [Births $_{\text{in 2019}}$ + new displacement $_{\text{in 2019}}$ + Returns into displacement $_{\text{in 2019}}$] – [Partial or Unverified Conditions $_{\text{in 2019}}$ + cross-border flight $_{\text{in 2019}}$ + deaths $_{\text{in 2019}}$]

The equation presented above shows that the numbers we report as partial or unverified progress towards durable solutions signify an outflow, meaning that they entail a reduction in the total number of IDPs. This does not imply that people whose progress toward durable solutions is partial or unverified no longer face vulnerabilities related to their displacement; rather it reflects the fact that our data providers often account for these people as "returned" and stop collecting data about them. If we were to continue to include these people in our estimate of the total number of IDPs, we would risk double counting people who were displaced more than once.

In cases where there is a lack of coverage of all the components of our data model, we nevertheless take into account new displacement and the previous year's stock figure when estimating the total number of IDPs.

For some countries, including Guatemala, Honduras, India and Kenya, we were however unable to apply this formula, because the data related to new displacements and about the number of IDPs was not interoperable and it could not be brought together in a meaningful manner. This means that we could not be certain that people included in an older protracted figure covering the same areas were not the same as those displaced in 2019. In such cases, we refrain from adding possible new displacements to the equation to avoid double counting people who were repeated more than once.

The equation above for estimating the total number of IDPs is at best a modelled approximation. We compare this with the data we obtain from our sources, and the different figures do not always correspond. This is the case in Colombia, where IDPs have two years to register with the Colombian authorities, and thus, some IDPs who were displaced in 2018 only registered in 2019.

Estimating the total number of IDPs for disaster events

It should be noted that the situation of people facing protracted displacement is not unique to conflict contexts. Based on the available data, IDMC estimates that there were about 5.1 million people in 95 countries displaced by disasters at the end of 2019. As we have observed in the past, it is particularly difficult to keep track of how many people remain displaced over time following a disaster event. All too often, data collection stops a few days or weeks after the disaster. This limits our understanding of the needs and living conditions of those displaced as well as our ability to estimate how many people remained displaced at the end of the year. Consequently, it can be difficult to compile an end-of year estimate of the total number of people who are, at a given moment in time, living in situations of internal displacement situations as a result of disasters.

Our year-end estimate is based on time-series data and housing destruction data for specific disaster events, as well as aggregated figures on the number of people displaced by disasters recorded by governments and other stakeholders, including through tools such as the Displacement Tracking Matrix (DTM) from the International Organization for Migration (IOM). To generate this figure, IDMC started with an analysis of all the disaster displacement data we obtained and applied the different decision rules to diverse scenarios (see section 2.9).

For example, we used scenario 4 (events that occurred in 2019 for which we were only able to obtain information on housing destruction) in cases such as Niger where IDMC obtained information solely on housing destruction from the 2019 rainy season. We used scenario 6 (aggregated figures not linked to specific events but for which data was collected in 2019 on people displaced by disasters) when data providers like IOM DTM reported the number of people who remain displaced at the end of 2019 and for which no specific disaster event could be associated to it. This was the case for Afghanistan and Cameroon, among others.

For more information on the methodology used and the different scenarios, see section 5.2.

| New displacements and other flows

Our estimates of the number of new displacements refer to the total number of movements that have been recorded over the course of a year. For our estimates of disaster-related displacement, this figure is the sum of all the displacements we have recorded and verified for that country between the 1 January and 31 December. How we produce this figure for conflict-related displacement is often more complicated.

We generate a single new displacement estimate for the total number of people displaced by each event, be it a disaster, a situation of violence or conflict episode, or a development project. It is important to note that this estimate is not necessarily the same as the peak number

of IDPs, but instead aims to provide the most comprehensive cumulative figure for those displaced during a given period of time, limiting double counting.

Given the challenges in tracking population movements, it is difficult to determine what portion of new displacement figures refer to people being displaced for the first time and what portion represents the same people being displaced a second, third, fourth or fifth time. As a result, new displacements could include secondary or multiple displacement movements.

Repeated displacements occur more frequently in some context than in others. This is the case every year in the Democratic Republic of Congo (DRC), Mali and South Sudan, for example, where pendular displacement in which IDPs "commute" back and forth between their place of refuge and their homes. This results in significant numbers of displacements that in fact refer to the movements of the same people.

Since 2017, we have used event-based monitoring to estimate the number of new displacements induced by conflicts where data is available. This is the case in the Philippines where the UN Refugee Agency (UNHCR - UN High Commissioner for Refugees) is the main source for small-scale events in the southern region of Mindanao. However, the national Disaster Response Operations Monitoring and Information Centre (DROMIC) also publishes updated information on larger or significant events.[2] Using an events-based approach allows us to monitor and compare figures reported at the local level, helping us to ensure that we report on the most accurate new displacement figure.

Due to enhanced event detection and the increased availability of data, we can apply our event-based monitoring of conflict-induced displacement to many other countries, including CAR, Ethiopia, India, Kenya, Libya, Somalia, and South Sudan. For numerous other conflict-related displacement figures, we use event-based monitoring to triangulate data collected at fixed intervals. We also often use event-based monitoring to triangulate and confirm estimates for disaster events, this is the case for the rainy season in Nigeria for example.

| Cross-border movements

In line with our data model, we subtract the number of IDPs who flee across international borders from our year-end figure of the total number of IDPs. To be able to do this consistently, we rely on partners who collect data on refugees, asylum seekers and migrants to record whether people had been displaced internally before crossing the border. Currently, 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.

In some contexts, returning refugees, asylum seekers and migrants can become displaced when they return to their country of origin. This can occur when their return movement itself is a form of displacement, such as the deportation of some refugees or asylum seekers. It could also occur when people voluntarily return to their country of origin but find themselves in a condition of internal displacement – such as when they return to IDP camps or to destroyed homes. In these cases, we add these people to our year-end headcount of the total number of IDPs.

» Monitoring methodology for cross-border displacement associated with conflict

| Return movements: Partial Solutions and Unverified Conditions

Internal displacement, displacement-related vulnerabilities, risks and hardships often continue long after the events that caused them have ended. Capturing, analysing and reporting on some of the durable solutions sought by IDPs during and following displacement (be them returns, resettlement and local integration) allow for a better assessment of all the impacts of internal displacement on affected populations. Whereas some people are evacuated for a couple of hours and are quickly able to return home, many others are forced to flee their homes and are unable to resettle or integrate into new communities for several months or years. Reporting on solutions sought or reached – or the lack thereof – is a way in which the stories of IDPs, their situation and vulnerabilities can be better understood and brought to light.

Our primary aim in accounting for initial or partial progress towards durable returns, settlement elsewhere and local integration is to highlight the need for governments and other data providers to gather more evidence

on the living conditions of displaced people over the long term, so that IDPs and their needs remain visible over time and do not "fall off the radar". The premature removal of IDPs from registries simply because they have left a camp or settlement, or because they have reportedly returned to their place of residence, without further consideration for their actual living conditions and pervasive displacement-related vulnerabilities can lead to protracted and repeated displacement situations.

Gathering, analysing and reporting on data related to solutions to internal displacement poses a unique set of challenges, mainly concerning the definition, availability and analysis of solutions-focused data.

Firstly, although some key frameworks – such as the Guiding Principles on Internal Displacement and the Inter-Agency Standing Committee (IASC) Framework on Durable Solutions – provide milestones for the achievement of solutions and for overcoming displacement situations, transforming these into measurable indicators remains a challenge. This is further complicated by the fact that achieving durable solutions is a long-term and multi-step process, for which publicly available information is scarce.

Defining and applying such indicators universally and in a harmonised way, taking into account context-specific conditions, further complicates this exercise. The Expert Group on Refugee and IDP Statistics (EGRIS) has been working on defining and detailing such measures, including a composite measure of progress towards the achievement of durable solutions and a measure on their actual achievement. Providing such a unique measure is critical, although defining one that can be applied across all contexts and displacement drivers is complex. The outputs of EGRIS' Solutions Working Group will be a significant milestone. These outputs are, however, designed for the production of official statistics by governments. Operational actors, who still collect, analyse and distribute a significant portion of displacement data, are also making efforts to more adequately and accurately represent the conditions of IDPs and migrants following reported return, resettlement and local integration attempts, across wide spectrums of indicators (for example, on security conditions, access to livelihoods, education and medical services, and social cohesion).

Information on solutions, however, often paints an incomplete and non-comprehensive picture of the living conditions of IDPs. For instance, a report may indicate that an internally displaced population has returned to their homes, but it may not be clear to which conditions they have returned or to what extent their basic needs are being met or their fundamental rights protected. Media sources, often used to complement operational or official data or to fill the gap when this data is not available, commonly report on new displacement flows and stocks but rarely on the return of IDPs, their resettlement or their integration into host communities.

In light of these challenges and data gaps, IDMC has developed a framework and data model, called Partial Solutions and Unverified Conditions, which captures and reports on progress towards durable solutions, while recognising the long-term and multi-step process of overcoming displacement-related vulnerabilities, and the related data gaps.

We have identified an increasing number of displaced people reported to have returned, integrated locally or settled elsewhere in their country, without enough evidence to determine that they no longer have residual vulnerabilities.

The Partial Solutions and Unverified Conditions model captures solutions alongside the dynamic and changing living conditions of IDPs. IDMC records as "Partial Solutions" the number of IDPs whom we have identified as having reportedly returned, resettled or locally integrated in a specific year and for whom the evidence obtained suggests that progress towards durable solutions is only partial, given their living conditions. In a few instances this number may refer to movements rather than people. This is to prevent the risk of double counting individuals and groups captured in the data provided by our partners.

Number of IDPs who have reportedly returned, resettled or locally integrated but who may still have vulnerabilities linked to their displacement: In some cases, IDMC's sources provide evidence that those who have returned, resettled or begun to integrate into their host communities still face risks related to their displacement. We have therefore accounted for these movements as partial solutions. In north-east Nigeria, for example, 89,000 people were reported as having returned home, but information on their shelter conditions suggested they had gone back to damaged or destroyed housing or were living in temporary structures in their original place of origin. In the Democratic

Republic of the Congo (DRC), almost 1.5 million people were reported as having returned, but there was significant evidence to suggest that their situation was not sustainable, given high levels of insecurity. In both cases, IDMC accounted for the returns as partial solutions.

Under "Unverified Conditions," IDMC reports on either progress made by IDPs towards durable solutions – which is reported or believed to have occurred, according to data or anecdotal evidence, but which cannot be verified – or on the movement of IDPs leading to unknown situations, such as departure from a displacement camp, without any follow-up of the persons or groups concerned. The term "conditions" in this regard refers to a status that may indicate progress made towards durable solutions but which may also be a reversal in the situation of IDPs, a movement into more precarious or vulnerable standards of living, or a representation of data gaps. In previous publications, IDMC recorded unverified movements as "unverified solutions". For the GRID 2020, the categorisation changed slightly in order to better distinguish between verifiable progress towards durable solutions and data gaps.

Number of IDPs whose reported return, resettlement or local integration cannot be verified: In other cases, data sources report only that people have left a shelter, camp, evacuation centre or host community, sometimes with the stated intention of returning home. No further information is available about what happens to them or the conditions they face after leaving. Characterising these movements as durable solutions would be both misleading and inconsistent with the Guiding Principles, which clearly state that IDPs who continue to face risks and vulnerabilities related to their displacement should still be considered internally displaced. In Yemen, for example, IOM DTM reported on almost 1,700 families that "left location" in 2019. IDMC characterised this change as an unverified condition, because no further information about these people was available. In South Sudan, the UN Office for the Coordination of Humanitarian Affairs (OCHA) and local media reported that 12,000 IDPs returned in 2019. IDMC accounted for these returns as an unverified condition since we could not obtain any information about the conditions to which people had returned.

People currently characterised as having made partial or unverified progress toward durable solutions include those who have been reported as having returned, resettled or integrated, but for whom there is no tangible evidence of the process having led to a durable solution; those returning to a situation of persistent vulnerability; 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 systematic longitudinal assessments on the living conditions of IDPs upon their return, it is seldom possible to determine the extent to which they have achieved a durable solution to their displacement. This year, we obtained data that described the needs and vulnerabilities for several caseloads of people who had reportedly attempted to return, integrate locally or resettle elsewhere. It revealed that more than 3.5 millions of those reported movements led to conditions of continued vulnerabilities associated with displacement, including people who returned to destroyed homes or in other types of temporary accommodation.

This model, however, aims primarily at highlighting the number of reported movements of people for whom data might be mischaracterising the exact conditions they are in. It does not allow for a comprehensive identification of all IDPs who have made progress towards solutions, or for whom data is missing to determine this. It is likely omitting significant numbers of people and groups, whose progress towards solutions or lack thereof is missed or misrepresented. By highlighting these gaps, we aim to also emphasise the need for stronger and better measures of the achievement of durable solutions, and the use of more solid indicators. As member of EGRIS, IDMC supports and contributes to the work of the Solutions Working Group and provides advice and support to data providers on their collection and analysis of displacement-related vulnerabilities. Our model is therefore a continuous and living exercise, which we hope to continuously improve on.

| Births and deaths

IDMC accounts for children born to IDPs and IDPs' deaths only when our data providers collect and share this information. Given the fact that the fertility and mortality rates of IDPs may not correspond with national figures, we do not try to extrapolate births and deaths in displacement from national demographic data. In protracted cases of displacement such as Georgia and Palestine, fluctuations in the total number of IDPs may reflect demographic changes such as births and deaths.

1.4 Terminology

Many terms and expressions are specific to internal displacement, and our database captures the most common ones. They may refer to individuals, families, households or homes. Table 1 summarises the most common terms we look for.

As part of IDMC's monitoring process, we may compile and interpret data that – at first glance – might not seem directly linked to internal displacement. We are compelled to do this because of the variety of terms used to report on situations of displacement. For example, in Afghanistan, depending on the source, "returnees" may refer to returned refugees or to IDPs. People displaced by floods in 2019 were referred to as '*damnificados*' in Peru and Colombia, which loosely translates as "affected". IDPs in Myanmar are sometimes referred to as "refugees". Many sources refer to people affected by disasters as "displaced".

Additional analysis is required to make sense of the terms used by our sources and to understand when and how they relate to displacement. Even within the UN and coordinated international humanitarian reporting mechanisms, agencies refer to IDPs as "people affected", "people in need" and "people targeted".

TABLE A.1: Key terms used to describe internal displacement and internally displaced people

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.
Multiple/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.

1.5 Countries and territories in scope of GRID 2020

The inclusion of a country is not contingent on a quantitative threshold based on the number of IDPs. It depends only on the availability of credible data. When a country is not included in the GRID it does not necessarily imply that no displacement has taken place there. In many cases it means that we were not able to obtain or verify data on displacement, or that the drivers of displacement are complex and multi-causal. Thus, although IDMC monitors internal displacement globally the GRID 2020 dataset contains information on 145 countries and territories.

| Geopolitical considerations

Amongst the primary and crucial criteria to determine whether a person or a group is internally displaced is the fact that the forced movement remains within the internationally recognised borders of the place of habitual residence. This is usually straightforward, and the data obtained from governments and other providers allows us to identify the location of departure and/or arrival of said movement(s).

There are, however, several cases in which the borders of a country or territory, as well as the sovereignty associated with them, are disputed or in question. This presents a challenge regarding what countries and territories to include in our reporting and how to account for certain groups of displaced people.

The inclusion of countries and other contested territories does not imply any political endorsement or otherwise on IDMC's part. IDMC collects and presents 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.

| Foreign occupation

People displaced within areas of an internationally recognised state under foreign occupation are considered IDPs, irrespective of their location within the internationally recognised borders or the territorial claims of the occupying power.

| 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 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. For example, we no longer count people who fled from Timor-Leste to West Timor when the former was established in 1999.

| 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 many 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.

2

CAPTURING INTERNAL DISPLACEMENT THROUGH DATA

This section describes the key metrics that are captured in IDMC's Global Internal Displacement Database (GIDD) and including in the GRID; the methodology applied for the compilation, curation and aggregation of data; the standardisation of data and metadata; and the tools and methodologies that have been developed to fill data and information gaps.

2.1 Data sources

Our ability to report on displacement and provide reliable estimates is contingent on the availability of sources, and their ability to gather data and willingness to share it with us. We draw on information produced or compiled from a wide range of partners. Although national governments are primary responsible for counting IDPs, many other institutions are involved in data gathering. These include local authorities, the UN and other international organisations, civil society organisations, research institutions, specialised media, thematic databases, national Red Cross and Red Crescent societies and the private sector.

We also rely on media monitoring to triangulate 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. Figures reported by the media are difficult to validate and we consider them to be less reliable than those our traditional primary data sources report. We therefore base our estimates on them only if no other figures were available.

Different sources gather different data for different purposes. They also use a range of methods for collecting data. One common reason for collecting displacement data is to inform operational plans and humanitarian responses. The range of different uses of displacement data and reasons for collecting it affect the way in which data is collected and presented.

In order to mitigate these potential biases, we triangulate the data using several sources whenever possible, prioritising those we have historically deemed to have been most objective and accurate. Particularly for displacement associated with disasters, we monitor data released during the different event stages. This entails identifying the different organisations and indicators that report on displacement over time, from emergency preparedness and response phase to the reconstruction and recovery process. Language bias also impacts our ability to process 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 small scale incidents in parts of Asia.

In the past two years, we have started using new methods of monitoring displacement, including satellite imagery, natural language processing and machine-learning (described in section 8). These have helped us identify new incidents of displacement and triangulate data from more traditional sources.

2.2 Geographical scope and disaggregation

IDMC aims to have a geographic coverage of displacement data that is as comprehensive as possible. This includes covering all relevant regions and geographic areas where displacement is happening; as well as collecting data that is spatially disaggregated.

Data on displacement collected by IDMC reflects different levels of geospatial aggregation. Factors that have an influence in the geographical coverage of data collected are: the lack of accessibility to areas affected, related with restrictions to the humanitarian access; different operational coverage of relief organizations, political sensitivities, lack of data on people leaving out of camp-like accommodations such as people living with host families.

For example, data resulting from site assessments may provide IDP location data using GPS coordinates, whereas other datasets cover data that is aggregated at the regional or national level. IDMC works to adequately reflect this geospatial information in our database. In addition, in cases where georeferenced data is unavailable, IDMC fills this gap by geotagging data using reverse geocoding methods. This also includes performing satellite imagery analysis (see section 8.5).

| Accounting for IDPs in urban and rural locations

There is no universally recognised and accepted global methodology for classifying areas as being urban or rural. Different definitions of what constitutes an "urban" area serve different purposes and are based on different criteria. When it comes to analysing urban and rural population data, new methodologies exist and can be applied to estimate the scope and scale of displacement in cities.

For GRID2019, supported by international scientific partnerships, initiatives such as the European Union's Global Human Settlement Layer (GHSL), a dataset developed by the European Commission's Joint Research Centre (JRC)[3], combines satellite observation with census data to produce globally consistent, comparative estimates that can be used to assess of the degree of urbanisation of a given location. This gridded dataset divides settlements into rural areas, low density urban clusters and high-density urban clusters.

IDMC used the GHSL dataset for a comparative analysis of internally displacement data across countries to assess how many IDPs lived in urban areas and how many in rural areas. Given this purpose, we simplified the three categories used by GHSL into two categories:

- urban areas, which encompass high and low-density urban clusters in the GSHL layer; and
- rural areas, which encompass "rural cells" of the GHSL layer.

For our previous report in 2019, we compiled point-estimate data describing the number of IDPs by location, using data collected by five organisations and consortia – including IOM DTM, the camp coordination and camp management cluster, OCHA, the Humanitarian Needs Assessment Programme and the Task Force on Population Movement – covering 12 countries: Afghanistan, Cameroon, Chad, Democratic Republic of Congo, Iraq, Libya, Myanmar, Nigeria, Palestine, Sudan, Syria and Yemen.

By merging geolocated point estimates of the number of IDPs from the site assessments with the GHSL dataset, we were able to classify displacement locations as being either urban or rural and counting how many IDPs were in each type.

2.3 Temporal scope and frequency of reporting

There are two main factors related to the temporal resolution of data and information on IDPs: the timeframe of data collection and the frequency with which data is updated and published. Data collected on a specific date is a snapshot of a situation and is appropriate to indicate how many people are living in displacement at a given point in time. Instead, data on displacement flows represent a moving picture, and therefore indicate how many movements occurred between two or more points in time.

| Total number of IDPs, or stock:

"Ten thousand people were still displaced at the end of the month" indicates *how many people were displaced at a specific point in time* ("at the end of the month").

| New displacements, or flow:

"In 2019, about 4.597.000 new displacements were accounted for in Sub-Saharan Africa" refers to the *number of displacements recorded between two or more points in time* (in this case, between 1 January and 31 December 2019.

The frequency of data publication can vary from daily bulletins, weekly or monthly reports, to quarterly and annual publications. The reporting cycle can impact the production and delivery of IDMC's analysis. Different data sources and publishers might follow different schedules of data collection, data reporting and data publication, which eventually poses a challenge when IDMC compares trends across different countries within the same region, or at the global level.

In general, a short timeframe between the collection of data and its publication allows IDMC to develop a more accurate and up-to-date monitoring of displacement. However, delays may take place for valid reasons; for example, owing to data verification process, or because preliminary data analysis is needed for field operations. Lack of systematic collection and publication of displacement data can also have a significant impact on IDMC's monitoring and reporting. For example, in 2019, we observed that discontinuity in sharing data was mostly due to high turnover in the country-based teams, lack of access to the displaced population, delayed communication between data collectors and their team, as well as strained resources.

2.4 Event-based monitoring

In order to better capture displacement, and when data is available, IDMC carries out even-based monitoring. This refers to the monitoring of displacement-generating occurrences as individual units of analysis that encapsulate all aspects of a specific displacement event. In the case of disasters, this can be a flood or a hurricane (the event), which is then broken down and disaggregated into smaller, related units (for example, the impact of the disaster and the displacement it generated in a specific area within the wider affected zone), which all together provide all information necessary for the analysis of the event. This can also include subsequent disasters, related to the wider one, which also cause displacement, in an interconnected manner (for example, multiple floods linked to a rainy season in a specific location). Grouping these incidents of displacement into discrete events allows IDMC to track and record the duration of displacement and allows us to measure the risk of future displacement.

Whenever possible, we also apply an event-based monitoring methodology to displacement caused by conflict and violence. For example, we do this by grouping individual occurrences into a wider context, such as a series of local attacks that occur within a broader conflict. This form of analysis allows to provide greater, in-depth contextual understanding, as it highlights the multiple components of displacement, what leads to it and what impact it has.

Through this methodology IDMC can produce disaggregated analysis on displacement, based on date of displacement, triggers, causes and duration. As a result, for every displacement, IDMC aims at recording information on the dates of the displacement event, the hazard (disaster events) or actor (for conflict and violence) that caused the displacement, and the geolocation of the origin of displacement, as well as the magnitude (number of new displacements) and the footprint (houses destroyed).

Moreover, event-based monitoring results in a better estimation of new displacement metrics as it allows us to better report on dynamic displacement situations or short-term displacements that would otherwise not be captured by data collection rounds at specific moments in time. Event-based monitoring can also be useful for monitoring and tracking historical changes or protracted displacement situations. It enables us to continue to monitor changes in figures and estimates beyond the year an event took place.

2.5 Combining data sources using triangulation

| Triangulating data

In highly complex or dynamic situations, we compare and combine multiple data sources and use triangulation to reach an estimate that is as comprehensive and reliable as possible. To capture the extent of the displacement that took place in Ethiopia in 2019 for example, we used a combination of methods. First, we analysed data on IDPs recorded by IOM's displacement tracking matrix (DTM). This data covers the whole year, providing the number of people displaced in specific locations monitored on a given date. When the figures increased between two dates, it represents the minimum number of displacements that occurred during that time interval. Since not all displacement locations in Ethiopia were covered by IOM DTM data in 2019, and since IOM DTM data may not always capture displacements that took place in between data collection rounds, we also considered multiple other sources from humanitarian partners and government agencies to reach a comprehensive estimate, all the while discounting numbers reported in the IOM DTM data whenever necessary to avoid double counting.

In the Philippines, IDMC used two main data sources to triangulate and calculate the conflict estimates. UNHCR and its partners in the Mindanao region of southern Philippines provide detailed information on displacement, while for the rest of the country we rely on reports by DROMIC. By drawing on reliable sources that provide displacement data on a regular basis, we can triangulate this information with media reports, reduce the risk of double counting, and cross check and fill gaps in our data.

2.6 Displacement data based in the number of households or in housing destruction

Housing information is important in estimating displacement associated with disasters. In some cases, displacement sources only report on housing information rather than the number of people displaced. To produce our 2019 estimates, we analysed more than 2,500 reports that mentioned housing destruction rather than the number of people displaced. From these reports 603 were used to produce our recommended figures. As a

result, 5 per cent of the disaster events used to produce our estimates in 2018 were based on housing information. In 2019, close to half of the disaster events contained information on housing destruction. In order to use housing data as a valid proxy, we only consider figures for homes that have been damaged to the extent they are no longer habitable. 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 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 repeated displacements, in which people have already fled once, only to become displaced again when their camp is flooded.

Primary sources often report on 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). The only global dataset for AHHS does not cover every country and territory we monitor, and it sometimes relies on demographic data that is several decades old.

Given the potentially significant influence of AHHS on our estimates, we have continued to update the data and methodology we use to calculate it. For the past years we have used a linear extrapolation obtained with improved methodology developed for the GRID 2020. This approach considers a national aggregated estimate for the AHHS, without taking into consideration differences between rural/urban households or possible regional differences. Therefore, our estimates that apply this methodology are subject to a margin of error (underestimate). Nevertheless, we include figures from official statistical office when this are available. Furthermore, 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. For the years with missing AHHS data we have used a linear extrapolation based on the available AHHS measurements. This particularly applies 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 A2).

2.7 IDMC workflow

The first part of the monitoring of internal displacement consists on identifying key actors and sources providing data and information on internal displacement. Frequently, we select the most conservative sources and estimates available. When information is not available, IDMC fills data and information gaps using media monitoring or satellite imagery analysis.

Subsequently, all relevant data and contextual information gathered by IDMC is stored in our database, 'Helix', and then triangulated. We use Helix to store both the data and metadata and to annotate and comment on the information we receive so that we and external peer reviewers can review the source data and means of interpretation, analysis and validation associated with every figure we publish.

Since 2016, all information collected by IDMC has been recorded in this platform. Helix interactive web interface allows IDMC analysts to organize the content in three interlinked objects called:

- Documents: These objects describe the metadata and they store the link to the original source of data. Information about the publication date of the data, the country and the source are also captured. Since

TABLE A.2: Changes in the AHHS for Benin between 2008 and 2019

	2008	2010	2012	2014	2016	2017	2018	2019
Average household size	5.2	5.1	5	4.9	4.8	4.8	4.7	4.7
Estimated number of people displaced if 1,000 households were reported displaced	5,200	5,100	5,000	4,900	4,800	4,800	4,700	4,700

the implementation of Helix more than 16,700 documents have been compiled by IDMC.

- Events: In the context of Helix, "events" group contextual information regarding the specific driver of displacement. In the case of displacement driven by conflict it could describe a battle, or in the case of disaster-related displacement could describe a disaster such as a specific storm. As of December 2019, we have recorded displacement figures for more than 6,800 disaster events.

- Facts: Depending on our partners' units of measurement, our facts can be stored as a single data point or as an entire dataset (e.g. a spreadsheet). Facts also allow to link the information stored in documents and events with the displacement estimates. These objects also contain an analysis of the figures and their uncertainty, as well as an assessment of the level of coverage and disaggregation of the data by areas affected, age and sex.

Later, the consistency of the displacement estimates, and our interpretation and analysis of contextual information is validated in collaboration with data providers and other key partners in the field. For this purpose, we collaborate with government officials, national disaster management representatives, UN organizations, civil society, and investigative reporters, among other relevant actors.

Finally, after an internal quality insurance processes (see section 7.1) we publish our global estimates on the Global Internal Displacement Database (GIDD). The GIDD is our publicly available global repository of all our validated data on internal displacement. For data on displacement, the GIDD contains data since 2008. The general IDMC workflow is illustrated below in Figure A.3.

2.8 Storage of metadata

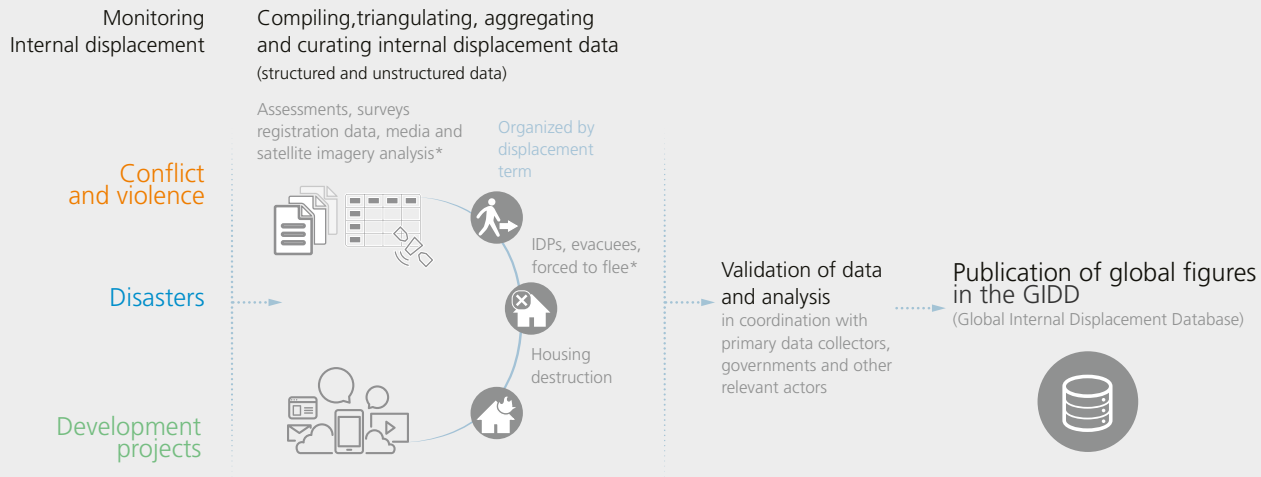
Data is collected by a plethora of actors, for different purposes and in different formats. This can include humanitarian bulletins or other reports, structured datasets, infographics, web services; and uses different terminologies or reporting terms. In order to guarantee the long-term preservation of the data, and to facilitate the traceability of IDMC's data to the original source, we store additional information about the context and purpose of the data. This is necessary to understand the data and the methodology used. This is referred to as metadata or "the data about the data".

2.9 Decision rules

IDMC bases its displacement estimates on the most reliable data available, from a variety of sources. This reliability is determined by various factors and rules, to ensure consistency and transparency.

The inclusion of a figure or dataset requires a sufficient level of verification or triangulation, performed by the source(s) and/or by our monitoring team. This means that some numbers or data we obtain, or that have been published by our sources, might not be included in our reporting and our database. Compared to other published figures, our estimates tend to be conservative.

FIGURE A.3: IDMC's workflow: Data aggregation, curation, standardization and quality control process, to publish our datasets



* The list of terms used in this graphic is not exhaustive.

All of our estimates of displacement caused by conflict and violence are accompanied by a detailed description of caveats based on the in-depth analysis we performed, and considerations raised by external partners when reviewing our work. For disasters, these are produced for specific events and countries. These "Figures analyses", published on our website, are particularly important for politically sensitive figures as well as instances where the data we have obtained is out of date, of limited geographical scope or does not accurately reflect the magnitude of displacement. The Figure analysis allow IDMC to explain some of the limitations of the data.

We have developed decision rules which allow us to produce estimates even when a source does not provide a specific number of displaced individuals, such as when they use qualifiers such as "hundreds of people" or "several houses". They also let us produce estimates when sources use terms that could be misinterpreted as referring to displaced groups, instead of people simply affected by a potentially displacement-inducing event, but who have not had to move.

Additionally, we use triangulation to assess the quality and reliability of the data and contextual information we receive. Consequently, we aim to verify and validate estimates by researching and comparing data and information from various sources and publishers. In cases where several sources report on one same event, we compare these reports and the methodology employed by each to produce figures. This is essential when data from two or more partners appear to conflict.

As a result of our decision rules, we sometimes publish lower figures than other organisations. When we have insufficient data or cannot verify the data we have received, we do not publish any figure at all.

Rounding rules

All our published figures are rounded for consistency and clarity. Below are the rules we use for this purpose:

Box A1. Rounding rules

- If a number is under 100 – we report the number itself (e.g. 17 people)
- If the number is between 100 and 999 – we round to nearest 10 (e.g. 240 people)
- If the number is between 1,000 and 9,999 – we round to nearest 100 (e.g. 2,300 people)
- If the number is over 10,000 – we round to nearest 1000 (e.g. 340,000 people)

Rounding can affect aggregated figures, as we usually round total figures, as well as individual caseloads. At the national level, we use these rounded figures for different caseloads to arrive at a single estimate for each country. However, at the regional level, we add the actual, not rounded figures, per country. This prevents the potential for lower accuracy that comes from adding up rounded figures for many countries.

3 COMMON CHALLENGES RELATED TO INTERNAL DISPLACEMENT MONITORING

IDMC has identified the most recurring and critical challenges of monitoring and analysing internal displacement. They issues are summarised in the sections below.

3.1 Data availability

IDMC's global figures on conflict and disaster induced displacement rely on data from primary and secondary sources covering some 145 countries. However, data availability varies considerably. Sources tend to be numerous during humanitarian crises and visible emergencies, especially when targeting assistance efforts, as in Syria. During protracted crises, such as Armenia, Bangladesh, Cyprus, Georgia, India, Togo and Turkey, displacement data tends to be unavailable or out-of-date. We also tend to notice frequent delays in the data collection on conflict-induced displacement. The end-of-year figures for 2019 only became available in February or March 2020 for several countries, including the Democratic Republic of Congo, Mexico, South Sudan, and Nigeria. Where there is enough information, we employ event-based monitoring, as in CAR. In contrast, where data is extremely scarce, we rely on other methodologies such as projections, as in Colombia; extrapolations of surveys, such as in El Salvador, or profiling exercises in Honduras.

While one challenge of monitoring internal displacement is the lack of data availability, there is also the challenge of verifying and analyzing the ever-increasing amount of data we obtain. For example, in the case of Indonesia, the National Board for Disaster Management (BNPB) has constantly improved its system of collecting and publishing disaster data by events. According to their current system, there were more than 3,800 individual disaster events that took place in 2019. This provides a robust set of data for displacement analysis, yet also creates challenges in assessing, storing, and publishing this information.

3.2 Geographical scope of displacement data

Whenever possible, we strive to identify new data sources, even when others already exist. The need to rely on several sources is however oftentimes exacerbated by access challenges due to insecurity or because IDPs are displaced in non-government-controlled areas. In such complex crises, it is rare that one partner can cover the entire country. In some cases, access restrictions or political sensitivities are so severe that IDMC lacks any reliable data on a given crisis. While this is rarely the case for entire countries, it is relatively common that certain regions of a country go uncovered, such as areas in northern Chad and Ukraine's non-government-controlled areas (NGCAs).

Whenever possible, relying on multiple sources is necessary to crosscheck figures. However, this exercise may not always be straightforward, especially when there is incomplete information on the methodology used by IDMC's sources, or on the extent to which two or more different data sets overlap. Hence, we may decide to base our estimate on only one source. That decision may vary from year to year depending on the geographical and temporal coverage of the data, or its reliability.

In some cases, changes in the scope of a data providers' geographical coverage also pose challenges. We can be working with two different datasets from one year – or even one month – to the next, as has been in the case in Afghanistan, Burundi, Nigeria and Somalia, among other countries. 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 eastern Cameroon as a result of the crisis in CAR, but a lack of reliable, updated and verified data on that region.

A significant change from previous Global Reports is the use of various sources in the production of estimates for new displacements and the total number of IDPs in the DRC. This year's estimates are based on a combination of datasets from various sources, mainly OCHA and IOM DTM, and are based on the geographical and temporal coverage of each dataset. The GRID 2020's new displacements estimate for the DRC is based on data from OCHA for 26 territories across nine provinces, and IOM DTM data is used for those territories for which OCHA has no estimates or where IOM's coverage is considered more

reliable. This is the case for Lubero territory in North Kivu, and Djugu and Irumu territories in Ituri, where data from IOM DTM is used instead of OCHA. This estimate also includes displacement events that took place after OCHA and DTM assessments were finalised; they are therefore not covered by their wider assessments nor included in their estimates, but were instead detected through IOM's Emergency Tracking Tool. Overall, the combination of OCHA and IOM data provides an estimate with a coverage of 29 territories across nine provinces. The estimate of the total number of people in situations of displacement in the DRC at the end of 2019 follows the same logic. As a result of this improved methodology, the figure reported for total number of IDPs in the country is seemingly much higher than that reported in GRID 2019. Although violence continued to displace people in the DRC during 2019, the significant increase between GRID 2019 and 2020 is largely due to methodological considerations, notably through the support provided by IDMC to in-country partners and the government during 2019 (including a technical workshop in July 2019).

3.3 Data disaggregated by sex, age and disability

We seek to obtain not only quantitative data on possible increases and decreases in the number of IDPs, but also more specific information such as sex and age disaggregated data (SADD) and disability.4 This information is vital for informing targeted and effective responses to IDPs' protection and assistance needs.

Relatively little SADD is available for displacement associated with conflict or disasters. This is mainly because information on sex, age and disabilities of IDPs tend mainly to be captured in official sites, such as relief camps, whereas a significant majority of IDPs in many cases live in dispersed settings among host families and communities. Even when disaggregated data is available, however, it tends to not represent a statistically significant portion of the overall data collected. More disaggregated data is vital if we are to accurately inform the identification of IDPs and respond to the specific needs of given IDP groups.

IDMC has found that 70 per cent of countries and territories have age-disaggregated data for international migrants, but only 56 per cent of refugee data includes information on age.5 Meanwhile, out of the nearly 50 countries and territories for which IDMC was able to estimate the total number of IDPs in 2018, only 14 per cent provided age disaggregation, and only one in four did so systematically. To know exactly how many children are currently living in internal displacement in order to better address their needs and vulnerabilities therefore requires better data at the national level. It also requires medium to long-term investments in statistical and reporting capacities.6

3.4 Decaying data

When situations remain unchanged from one year to the next, or when 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 countries with complex or multiple displacement crises, such as Myanmar, data for one crisis may be regularly reported, while for others it may be missing. If there is no credible evidence that IDPs in such situations have returned, integrated locally or settled elsewhere and thus achieved durable solutions, we have in the past included them in our global figures. In the interest of transparency, we also report the year that the total number of IDPs was last updated (see GRID 2020, Table 3).

3.5 Data on returns and progress towards solutions

More generally, data on returns, resettlement and local integration varies significantly depending on the context. Sometimes data on returnees is collected after people have returned to their area of origin or place of habitual residence. At other times, 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 such cases, we are careful to make a comprehensive and systematic assessment about the viability of these "returns". We do this by keeping a dialogue with the data-producing partners prior to determining how they correspond to IDMC displacement metrics. Given the lack of evidence of actual success in reaching durable solutions, be it through return to their habitual place of residence, local integration or resettlement, IDMC does not report on returns, local integration and resettlements as representing the end of internal displacement situations for this report. All movements that have reportedly led to one of the previously mentioned forms of solutions were characterised as partial or unverified conditions.

In the case of disaster displacement, we are dealing with a temporal bias in data collection and reporting processes: the vast majority of the data on disaster displacement

is collected and published during the emergency phase of the crisis. IDMC has found that for more than half of the largest disasters recorded since 2008, displacement data was collected for less than a month. Data stops being collected before the number of displaced people has returned to zero, and in many cases, it even stops being collected after a few days, long before many IDPs have achieved a durable solution.

3.6 Cross-border displacement

The methodological challenges extend beyond the data collection and analysis phases. Conflict and violence often generate severe protection challenges that impact the way in which IDPs move across and in the proximity of border areas, creating additional methodological challenges relating to the need to ensure that only people displaced within the borders of their countries are included in our estimates. On the borders between Myanmar and Bangladesh, for example, IDPs seeking security have been forced to seek protection in territories that are not claimed by either country, where they are neither internally displaced nor refugees. In other cases, IDMC faces challenges in distinguishing between movements of IDPs and refugees as people may flee to a border area, stay there only for a short time and then cross into the neighbouring countries. Others may need several days to get to the border, in which case IDMC's 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.

3.7 Reporting bias

We attempt to reduce reporting 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. For example, assessments conducted months after a disaster often people whose homes did not suffer severe damage but who became displaced for other reasons.

- **Use of proxies to determine displacement:** Our estimates for some disasters are calculated by extrapolating the number of severely damaged or destroyed homes or the number of families in evacuation centres. In both cases, we calculate the number of people displaced by using the average number of people per household, and the number of houses destroyed.

4

ACCOUNTING FOR DISPLACEMENT ASSOCIATED WITH CONFLICT AND VIOLENCE

4.1 Inclusion of countries affected by conflict and violence displacement

The inclusion of new countries or territories is dependent on the availability of data on displacement events (see sections 3.1 and 4.2). In some cases, despite tangible evidence of violence and population movements (often across borders), the absence of reliable data means that we will be unable to include certain countries in our dataset. In 2019, this was the case with Zimbabwe and Venezuela, the latter being particularly prominent in global news. Despite having access to reports on cross-border flights from Venezuela to Colombia, Ecuador and Peru, amongst others, we were not able to access reliable enough information on internal movements and people whose displacement remained within the country's borders.

However, throughout 2019, we also started collecting data for six new countries– Bolivia, Haiti, Kyrgyzstan, Malawi, South Africa and Tunisia - where we detected displacement generated by violence. The displacement triggers ranged from criminal gang violence in Haiti, to militant violence in Tunisia.

4.2 Methodological challenges specific to conflict and violence displacement monitoring

Although most challenges linked to conflict-induced displacement monitoring will be similar or identical to other forms of monitoring, some are more specific to this type of setting.

| Access to data

In many countries with conflict or violence displacement, population movement tracking is often limited only to the most affected areas, therefore limiting the geographical coverage, and therefore potentially leading to some movements not being captured. Also, with access being limited or inexistent in certain parts, certain datasets can show significant variations that are not linked to conflict dynamics improving or worsening, but rather to a greater or more restricted access to certain conflict zones.

| Volatility and visibility of displacement

Due to the nature of displacement caused by conflict or violence, these movements can happen very suddenly and in a repeated manner. They are therefore harder to detect, and data from our providers does not always reflect short-term or spontaneous types of movement. Additionally, due to security or protection concerns, some displaced persons or groups might not be identified until after having crossed an internationally recognised border, leading them to only be identified as migrants, asylum seekers or refugees.

The way in which IDPs move across and in the proximity of border areas can create additional methodological challenges relating to the need to ensure that only people displaced within the borders of their countries are counted. On the borders between Syria and Jordan, and Myanmar and Bangladesh, for example, IDPs seeking security have been forced to seek protection in no man's lands, where they are neither internally displaced nor refugees. In other cases, IDMC faces challenges in distinguishing between movements of IDPs and refugees as people may flee to a border area, stay there only for a short time and then cross into the neighbouring countries. Others may need several days to get to the border, in which case IDMC's 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. Even though we do not use a threshold of minimum duration or distance of displacement to consider someone as internally displaced, short term, spontaneous movements, or people rapidly fleeing across borders often lead to a lack of data on such displacements.

| Indicators used for reporting

Similar to the challenges linked to the terms used by the various sources, the scope of certain indicators can, at times, lead to data collection being more restrictive, as those indicators might be defined in a manner that excludes or includes people or groups who do not match

the agreed-upon definitions of internal displacement. An example of this is the registration of individuals as IDPs only if they are members or related to members of law enforcement officers or the military. Or the characterisation as "returnees" of people who have returned to their general area of habitual residence, but not the exact location, such as people who have returned to their village or neighbourhood, but not their residence.

IDMC works closely with sources and partners to properly understand how indicators are defined. This can result in the relevant caseloads needing to be broken down, differentiating between those that fall within IDP definitions and those that do not. Or, conversely, it may be necessary to include individuals or groups who, as a result of certain indicators being too restrictive, are not initially included in IDP records or registries. This is, for example, the case in El Salvador, for which our new displacements estimate is based on individuals reporting having had to change their place of residence due to violence or threat of violence.

Common standards between and within agencies

Indicators and definitions can vary from one agency to another, or within one same agency when it operates in different contexts or countries. This means that some indicators might refer to a specific thing in one place, and to something different in another. Hence the importance of understanding and documenting precisely the methodology used by each source in each context, in order to ensure the highest level of accuracy.

Continuity of engagement

Oftentimes, due to the volatile and challenging nature of field work for humanitarian or development agencies workers, continuous engagement can prove difficult over the long term. Therefore, our engagement efforts can, at times, be affected by high turnover and changes in personnel in the field, and cause reporting to be unequal or interrupted. This can result in data over time seeing some fluctuations more related to the availability of data, as explained earlier in this section, rather than due to the dynamics of the conflict or violence.

5 ACCOUNTING FOR DISPLACEMENT ASSOCIATED WITH DISASTERS

Our estimates for displacement associated with disasters are classified by event and 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.

There is no threshold for a displacement event to be recorded, 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 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", sources used, publishers, 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 other times, they are the aggregation of several reports that together cover the wide geographical area affected by said disaster.

The 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.

5.1 Methodological challenges specific to disaster displacement monitoring

| Temporal coverage

Our dataset records incidents of displacement 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. This is particularly the case in regions where there is a rainy, hurricane or monsoon season where continuous storms makes it a challenge to define when storm systems begin and end, as well as secondary effects such as triggering flooding and landslides. Given our monitoring of disasters is event-based, further research is required to improve the way in which we define these disaster events by considering both the temporal and geographic nature of hazards.

Sometimes our sources report on people who had fled from disasters but without reference to when or how they have become displaced. One of the main challenges for accurately estimating the number of internally displaced people is the lack of measurement of return flows. This estimates how many people were able to return to their former place of habitual residence, ideally their actual home. The measurement also includes those who have managed to find a safe place to live and have achieved "durable solutions" in those places.

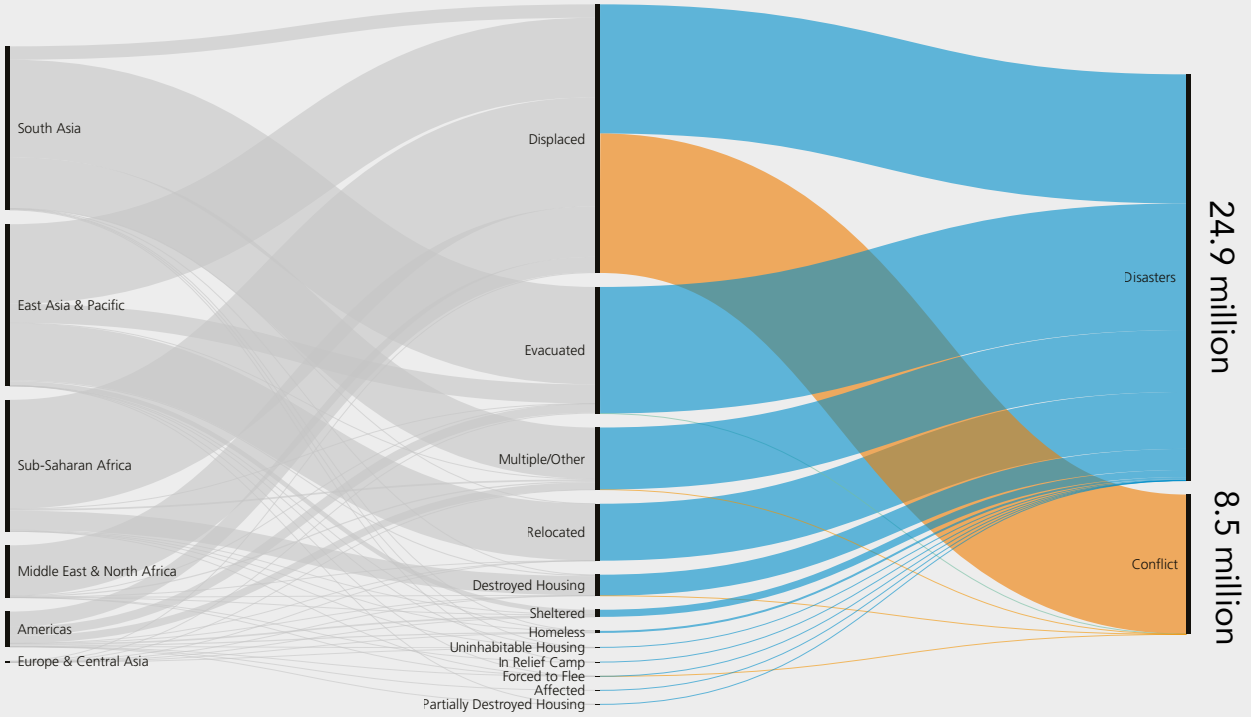
| Reporting Terms

We use the term "displaced", but it is rarely, if ever, adopted consistently and unequivocally by different countries or sources. Additional analysis is required to make sense of the terms that sources use, and to understand when and how they signal displacement. Even within the UN and coordinated international humanitarian reporting mechanisms there are inconsistencies in the way different populations are described and counted. Many terms and expressions are specific to internal displacement, and our database captures the most common ones (see section 1.4).

| Evacuation data

We often use data on mandatory evacuations and people staying in official evacuation centres to estimate event-based displacement. In 2019, IDMC used the number of people ''evacuated'' and those in ''relief camps''. This was the case for almost 8 million of the new displacements we reported on in 2019, or around 32 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 hand, 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

FIGURE A.4: Reporting terms in IDMC database for our new displacements recommended figures in 2019



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 forecasted in Japan, the cabinet office publishes situation reports that include figures for evacuation advisories, orders and people staying in temporary shelters. The discrepancies between them can be significant. At a minimum we consider 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 the length and severity of displacement in the aftermath of disasters

We produced a first scoping exercise in 2015, which aimed to shed light on the phenomenon by challenging 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 challenge, with significant implications for people who remain displaced but are not counted, and those responsible for protecting and assisting them.

5.2 Estimating the disaster displacement stock

People facing protracted displacement is a situation that is not unique to conflict contexts. Based on the available data, we estimate that there were approximately 5.1 million people in 95 countries displaced by disasters at the end of 2019. In addition to the people displaced by disasters in 2019, this figure includes people who were displaced by events in previous years, where updated information was available in 2019. This was the case for 33,000 people still displaced by the 2010 earthquake in Haiti (see box 1), 52,000 people displaced by the 2011 Tōhuku earthquake and tsunami in Japan, and 450 families still living in trailers after Hurricane Michael in October 2018 in the US, to mention a few.[7]

As we have observed in the past, it is particularly difficult to keep track of how many people remain displaced over time following a disaster. All too often, data collection stops a few days or weeks after the disaster. This limits our understanding of the needs and conditions of those displaced, and our ability to estimate how many people remained displaced at the end of each year.

As a result, in the past it has been difficult to compile an end-of-year estimate of the total number of people who are living, at a given moment in time, in internal displacement situations as a result of disasters (the "disaster stock figure"). Without this, the aggregate global estimates of the number of people living in displacement, including those quoted in previous GRIDs, are incomplete. For example, UNHCR adds its global number of refugees to IDMC's conflict stock figure to arrive at a global displacement figure that is often published or cited by the media and policymakers – but without a disaster stock figure it constitutes a considerable underestimate. This gap also encourages the framing of displacement as associated exclusively with conflict, when in fact it is a much broader and more complex phenomenon.

The lack of displacement data beyond the crisis response phase of a disaster often leads to the assumption that disaster displacement is a short-term setback for those displaced – that people have returned to their homes following the event and that their displacement has therefore ended. For many people, however, this is not true. Instead, they remain displaced for weeks, months and even years. The US government estimates that the average length of time it takes to reconstruct destroyed homes is 15 months.[13,14] Evidence also suggests that many people do not return even once their homes have been rebuilt or repaired.[15]

This major blind spot also has significant implications for the provision of protection and assistance to IDPs, and it underscores the need for much greater investment in monitoring displacement over time and across all contexts. If IDPs' needs and vulnerabilities are to be considered in disaster response, recovery and reconstruction processes, it is critical that data collection efforts continue for longer periods of time.

The figure of 5.1 million people living in conditions of internal displacement as a result of disasters at the end of 2019 is a conservative estimate. It is based only on those events for which we had at least some time-series data – which represent only 7 per cent of the disasters

Box A2. Haiti: A devastating earthquake leading to massive displacements – 34,500 people still live in a situation of displacement ten years later.

On 12 January 2010, a magnitude 7.0 earthquake struck the island of Hispaniola, near Léogâne, about 25 kilometres from Haiti's capital Port-au-Prince. It was one more disaster in a country that had already suffered from political, economic and social setbacks and inequalities for decades.

About 3 million people were affected by the quake, which destroyed some 105,000 homes and damaged more than 208,000, forcing hundreds of thousands of Haitians into displacement. The IOM estimated that 1.5 million people were displaced.[8,9]

As of October 2019, most of the people displaced by the earthquake had returned to their places of origin. According to IOM's most recent estimate, 34,500 people remain in 23 displacement sites across the country.[10,11] Those living in such sites are not willing to leave either because of the living conditions in their places of origin or because they are not yet ready to return – due to, for example, delays in the reconstruction of their housing. In this unstable context, exacerbated by recurrent disasters striking Haiti since 2010, further displacements are likely, triggered either by the critical living conditions of the population or by the deteriorating security situation in a disaster-prone country.[12]

Not only has this situation prevented the remaining displaced population from overcoming the challenges they are faced with and achieving durable solutions, but it also increases their risk of experiencing secondary or tertiary displacement.

that we monitored in 2019 and about 50 per cent of the events which we have housing destruction data for, plus the several events from previous years for which we had updated information about the number of people who remained displaced in 2019. Our headcount does not include people displaced from hundreds of events for which we recorded only one data point (i.e. one figure provided at only one moment in time). These figures often reflect the maximum number of people displaced, commonly during an evacuation, and including these figures would have led to an overestimate.

Our year-end estimate is based on time-series data and housing destruction data for specific disaster events, as well as aggregated figures on the number of people displaced by disasters recorded by governments and other stakeholders, including through tools such as IOM DTM. To generate this figure, we started with an analysis of all the disaster displacement data we had obtained and applied the following decision rules (see figure A.5):

- **Scenario 1:** Disasters that occurred prior to 2019 for which we have obtained updated information about the number of people who remained displaced in 2019. For these events, we based our estimate on this most recent data point.

- **Scenario 2:** Events for which we collected information on housing destruction and one data point on people living in situations of displacement. For these events, we consider having only one data point as insufficient, because it could refer to the peak displacement figure, which often occurs during the early stages of a disaster. For these situations, we based our estimate on housing destruction data multiplied by the average household size for locations where the disasters occurred.

- **Scenario 3:** Disasters that occurred in 2019 for which we obtained observational data on two or more dates following the disaster. For these events, we based our estimate on the most recent data point available (see Figure A.5).

- **Scenario 4:** Events that occurred in 2019 for which we were only able to obtain information on housing destruction. We based our estimate on the number of homes destroyed and the average household size for the locations where these disasters occurred.

Scenario 5: Events for which we recorded information on both housing destruction and multiple time-series information on people living in situations of displacement. With a clearer reference point about people remaining in situations of displacement six weeks after a specific disaster event, we based our estimate on the most recent data point about the number of people who remain displaced.

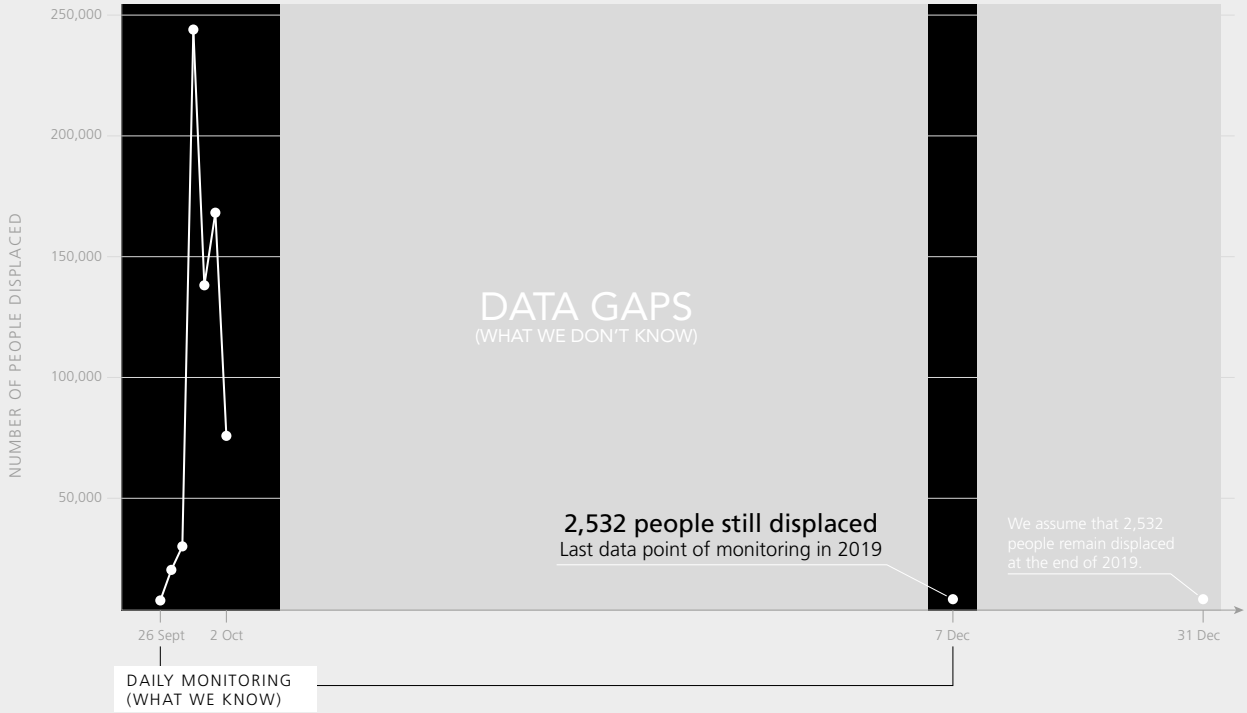
Scenario 6: Aggregated figures not linked to specific events but for which data was collected in 2019 on people displaced by disasters. Some of our partners published aggregated figures about the total number of people displaced and indicated that a fraction of these people had been displaced by disasters. For these situations, we based our estimates on these snapshots and cross-referenced these figures with our event-specific data in order to avoid double counting anyone.

Scenario 7: Events for which we were unable to obtain neither credible information on the number of people remaining in situations of displacement nor information on housing destruction. Since we lacked sufficient information to estimate how many people remained displaced at the end of the year, we excluded around 900 disasters from the estimate.

To effectively apply each of the disaster stock scenarios mentioned previously, the programming language R was used to write a script. Filtering the data into each scenario, the code reduced the 14,450 facts entered into IDMC's database for the year 2019 into a final IDP stock estimate. From about 2,000 events recorded as starting or continuing into 2019, 946 events (from scenario 7) were removed from the final figure to ensure that no overestimation occurred. The R code was written by the Department of Statistics, University of Oxford, and funded by the Engineering and Physical Sciences Research Council (EPSRC) Impact Acceleration Account grant.

Though conservative, an estimate of 5.1 million people displaced by disasters as of the end of 2019 helps to disprove the assumption that disaster displacement is a short-term phenomenon. We also chose to publish this figure in order to call attention to the persistent data gaps on the tens of millions of people displaced by disasters each year. Our methodology and the data upon which our figure is based remains a work in progress, and we look forward to publishing a more comprehensive figure in 2021.

FIGURE A.5: Time-series data collection after the Maluku earthquake in Indonesia, September 2019



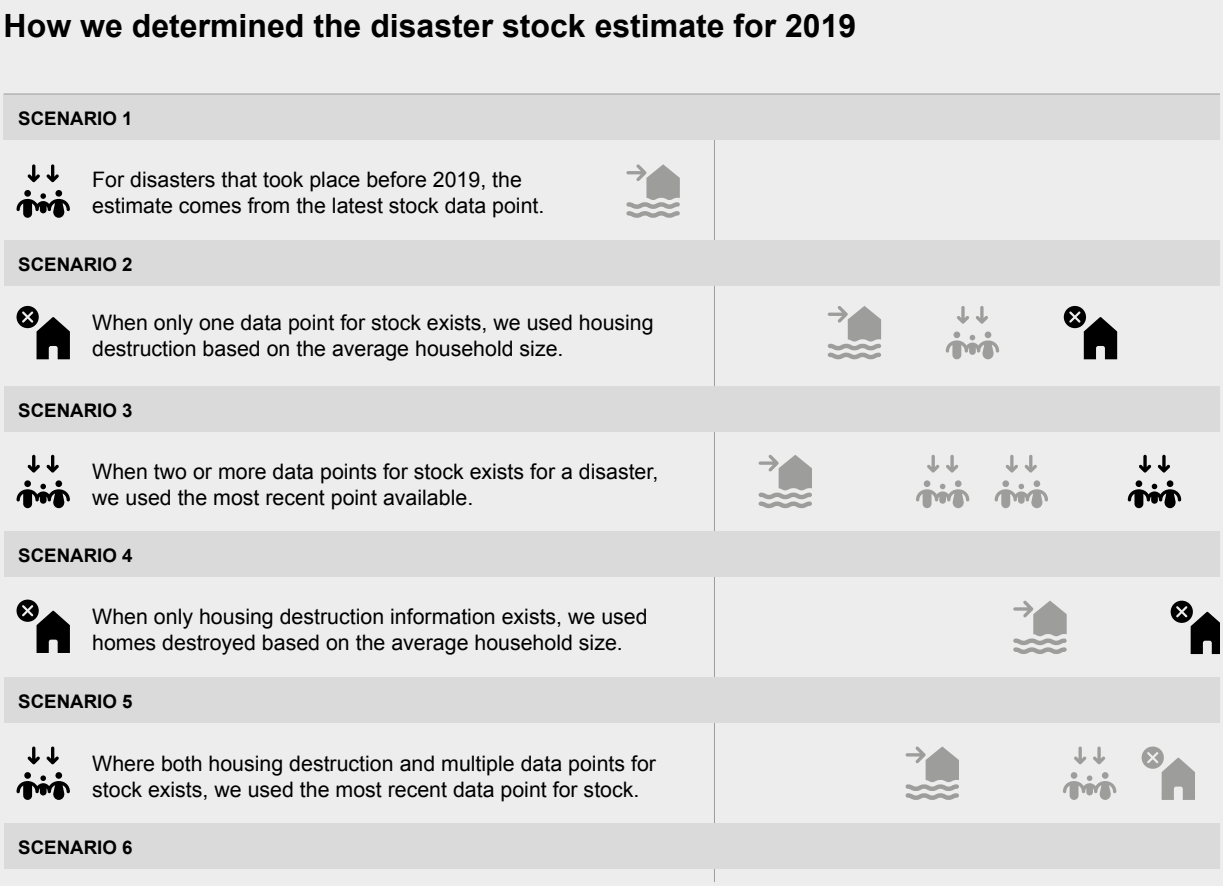
At least 20 people have died and more than 230,000 new displacements were recorded after a 6.8-magnitude earthquake jolted Ambon in Maluku province on 26 September 2019. More than 2500 people are still displaced at the end of 2019 (source: BNPB).

5.3 Accounting for displacement associated with slow-onset hazards

Displacement associated with slow-onset hazards such as drought, sea-level rise, coastal erosion and environmental degradation is challenging to monitor. The "slow-onset" nature of certain hazards and processes means that it is difficult to identify "incidents" of displacement or to relate population movements to specific hazard events. It is therefore often difficult to distinguish displacement from internal migration. Furthermore, displacement associated with slow-onset hazards is usually the result of a combination of factors, many of which are shaped by human actions and decision-making.

In some cases, monitoring slow-onset disasters such as droughts only becomes possible when it has reached crisis levels. In 2019, we increased our drought coverage and recorded information on coastal erosion, mainly in Bangladesh and Senegal. Data on drought-related population movements was available for 10 countries: Burundi Ethiopia, India, Brazil, Somalia, South Sudan, Honduras, Pakistan, Philippines, and Afghanistan. Although drought affected other countries, including El Salvador, Mauritania, Niger, Honduras, Sri Lanka, Namibia and Uruguay, we lacked enough information about the nature of population movements associated with the droughts to quantify them or characterise them as "displacement".

FIGURE A.6: Simplified decision tree and scenarios highlighting the methodology used to estimate the number of people displaced by disasters



6 ACCOUNTING FOR DISPLACEMENT ASSOCIATED WITH DEVELOPMENT PROJECTS

Displacement associated with development projects is not currently covered in global displacement data. That said, such projects have historically forced large numbers of people off their land "in the public interest" across the world, as states exercise their power to further development through compulsory acquisition based on the legal principle of eminent domain.

One of the methodological difficulties with monitoring development-induced displacement is that in many cases displacement occurs over long periods of time. Some people leave when they first hear about the project, others when the project starts, and their land is taken away. Some stay while the project is ongoing if their land has not been taken but are forced to leave months or years later because the project has hindered their access to natural resources, services or markets. Reports of such displacements may not be found in the press like mass displacement caused by conflict or sudden-onset disasters. In some cases, they are not made accessible publicly. In this sense, development-induced displacement is similar to slow-onset disaster-induced displacement.

Another issue related to the definition of displacement is the (in)voluntary nature of the movement. People who leave their homes when they first hear about a development project, without being prompted to do so, may not be considered displaced. IDMC consulted with experts in 2016 and concluded that people who are forced to leave their home because they have no legal option to oppose it, even if they sign an agreement and receive compensation for it, are to be considered displaced.

With the support of 30 online volunteers, IDMC analysed over 562 resettlement plans published by the World Bank between 2014 and 2017 over a period of 7 months.

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.

This analysis allowed the identification of people at risk of being displaced by these projects, amounting to around 130,000, and people at risk of being affected amounting to around 1,000,000.

In 2019, IDMC collected information on 28 development-induced displacement events, including evictions, in more than 15 countries, forcing a few thousands of people away from their habitual place of residence.

7 ANALYSIS AND PRINCIPLES OF QUALITY

7.1 Introducing IDMC's quality assurance process

To produce figures that are as accurate and comprehensive as possible, IDMC conducts a quality assurance process every year before it releases its global displacement dataset. Data that has been collected in IDMC's internal database, over the course of the year, is examined and controlled before being released to the public. The verification stage is as important as the data collection itself, as it allows for possible errors, data gaps, and caveats to be identified, and for the data to be refined before it is published. This process is led in-house, via a rigorous internal peer review process that is supplemented by an external peer review involving feedback and discussions with our partners in the field.

In 2019, IDMC collected displacement estimates for almost 1,900 disasters, and monitored displacement associated with conflict and violence in 61 countries. For disasters, not all displacement events were reviewed, but the 50 largest disasters were focused on. These 50

disasters collectively account for almost 85 per cent of the displacement in 2019. Regarding conflict, all countries for which IDMC had data, 61 countries in total, underwent the quality assurance process.

During the internal peer review process, analysts swap database entries related to the largest disaster events and all of the countries with conflict or violence induced displacement for the previous year. They analyse the estimates that have been produced by colleagues, ensuring that there is internal consistency in the monitoring and analysis; that decision rules have been followed and that all figures, sources and methodologies are clearly explained and documented; and that there is no missing information or potential sources of data that have been discarded.

7.2 Partner engagement and external peer review

Throughout the year, IDMC regularly engages with NRC offices, UN agencies, government agencies, universities and NGOs, who can be both the sources (primary data collectors) or publishers (reporting information) of figures for different displacement contexts. This is a crucial component of IDMC's global monitoring, both as a means of collecting and validating displacement data, but also just as importantly, to seek to understand the different methodologies behind the data collection and the possible limitations and caveats that may be present. Analysts aim to engage with as many partners as possible for each context, to make sure that the data draws from as many sources as possible.

As part of the quality assurance process, analysts at IDMC also undertake a peer review before the global dataset is published. This involves sharing preliminary estimates and the associated methodology with the partners, particularly those who produce data and act as primary data collectors. Obtaining feedback from the partners regarding the figures is crucial, to make sure that the data is correctly interpreted and the methodology behind the data collection is well understood. Oftentimes, IDMC may combine estimates from different sources in order to produce a national figure, for example in cases where coverage for certain displacement contexts is regional, and not nationwide. This requires a good understanding of the data eco-system, the data that is available and the role of each data provider.

Partners also provide valuable contextual information about conflict and disaster events, which provides crucial information for qualitative research, such as the humanitarian impacts and conditions of displacement. There is an understanding that data collection on displacement can be complex, particularly in the case of conflicts, which can be politically sensitive. In addition, IDMC does not publish data without a partner's permission. In 2019, IDMC participated in several in-country workshops to improve the understanding of the data eco-systems in Ethiopia, the Central African Republic, the Democratic Republic of the Congo, Niger, Mexico, Somalia and South Sudan, and we began working in close collaboration with governments in the Pacific to provide data and evidence on disaster- and climate-related displacement risk so they could use it to inform development, risk reduction and adaptation plans and to prepare for future disasters.

7.3 Confidence assessment

IDMC uses a comprehensive framework to assess the confidence that it has in the estimates that are published. This is presented below. To some extent, we are yet unable to apply these specific criteria to our data on displacement associated with disasters, we assess our confidence only in the figures associated with conflict and violence. We applied a common set of criteria to assess the data based on:

- The methodologies used
- The reporting unit
- Whether it could be independently validated
- The degree to which it is geographically comprehensive in terms of the extent of displacement associated with conflict and violence
- 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 weigh or rank these factors, nor have we assigned quantitative point values for each factor to generate an overall confidence score per displacement estimate. In order to do so rigorously, we would have needed to determine the relative significance of each of these factors, which can be subjective and difficult to achieve empirically.

Therefore, the confidence assessment can be better regarded as an overview of the comprehensiveness of the data that has been analysed rather than an empirical judgement of quality. It allows readers and users of the data to get an overview of the type of data that is available in each displacement setting associated with conflict or violence, and some of the main data gaps or caveats present.

Some of the data gaps reported can be attributed to the way governments and organizations 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, rather than the level of detail of all the data that exists or was published by each provider.

7.4 Figures analysis

The displacement estimates are presented in detail in Figure Analysis documents (both for disasters and conflict and violence) posted on IDMC's website. These provide a contextual update in each country, highlighting the main events that led to displacement that year and present the results of the different metrics for each country affected by conflict or violence. Depending on the data available, this includes new displacements, total number of IDPs, as well as partial solutions or unverified conditions. The methodology behind the calculation of each metric, the sources used, main caveats and monitoring challenges, along with significant changes concerning the methodology or the displacement context are all explained in detail. For disasters in 2019, IDMC produced figure analysis documents for 7 disasters events and 8 countries.

Box A3. Keeping the figures current

While the utmost care is taken to ensure that the data published is as accurate and transparent as can be, via the internal and external peer review process and regular partner engagement, constraints linked to the yearly reporting schedule can mean that new information comes to light after the GRID and the global dataset on displacement are already published. It is also possible that mistakes in calculation can occur, changing the results of the figures. In these cases, IDMC takes note of the new information and, in some cases, releases revised figures.

The figures released by IDMC can best be seen as a living dataset that evolves as new information becomes available, and IDMC is committed to improving the quality of its data over time. One example of this is the historical data review project, which seeks to fill data gaps for some of the largest displacement events that occurred since 2008.

When information is available, IDMC actively seeks to update and ensure the quality of the estimates we publish and report on. For example, in 2019, IDMC made changes to the new displacement estimates for the 2012 Nigeria floods, following an in-house quality assurance review which revealed that the figure previously available was referring to "people affected" rather than "people displaced" by the disaster event. This change and the update to the methodology used resulted in a new displacement figure that was half of what was previously estimated.

This same exercise and updating of figures was also done for Cote d'Ivoire. Upon a review of the 2017 figure, IDMC decided to change the estimate and to use the UNHCR/Joint IDP Profiling Service exercise to estimate the total number of IDPs in the country as a result of conflict and violence. These types of changes and continuous updating of figures when necessary reflect how IDMC is constantly seeking better and more up-to-date and accurate data.

8

PROGRESS ON IDMC'S INTERNAL DISPLACEMENT MONITORING

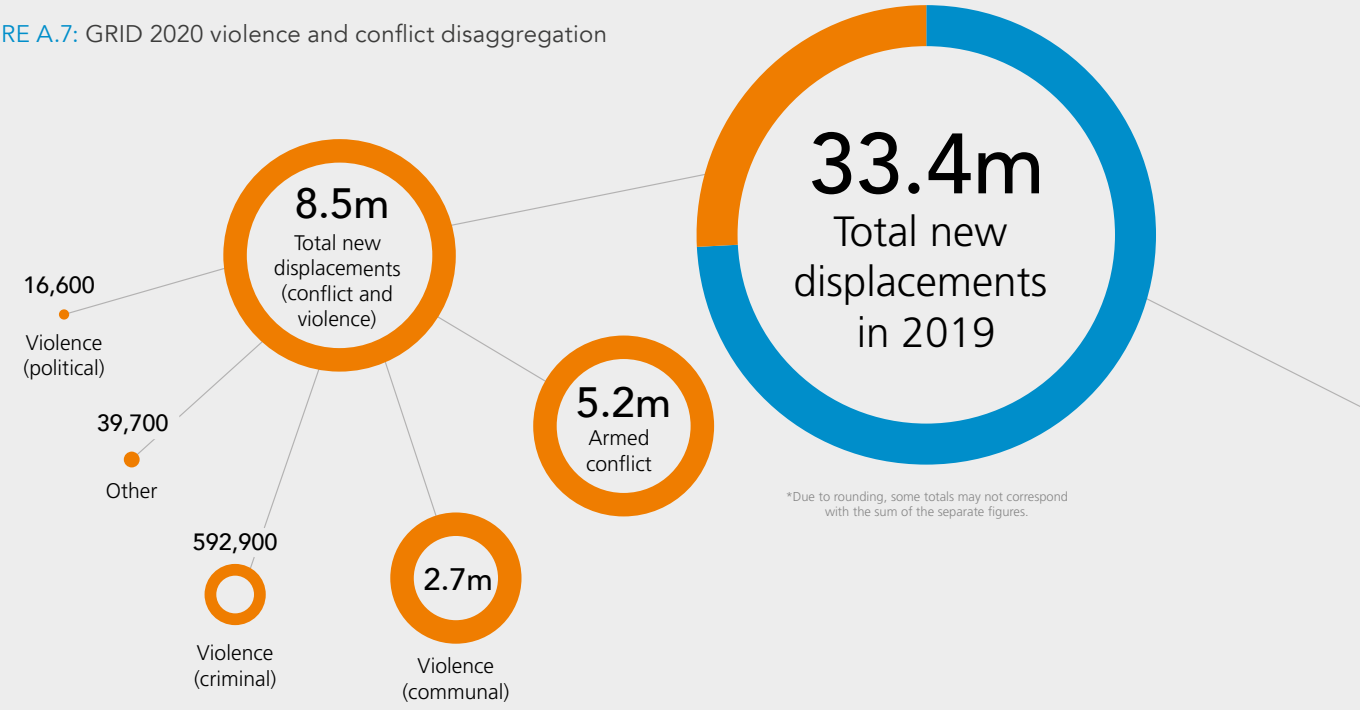
8.1 Conflict and violence typology

Over the years, IDMC has presented, in its annual report, a breakdown of new displacements based on the type of violence that caused them. This disaggregation breaks down displacements into five forms of violence: armed conflict, communal violence, political violence, criminal violence and "other". IDMC has been using this disaggregation since GRID 2017. Figure A.7 was part of GRID 2020. This disaggregation was carried out at the national level and based on the disaggregation provided by our main sources (mainly UN Agencies, INGOs and in some cases, Governments), or via analysis of trends observed through the data and contextual analysis. The purpose of this typology is to illustrate and then analyse the main drivers, triggers and patterns of displacement associated with conflict or violence.

IDMC's data collection and data-processing mechanisms and tools have improved consistently over the years. At the same time, many of IDMC's data providers have also refined and expanded their data collection (for example, the Armed Conflict Location & Event Data Project [ACLED] and IOM DTM). Consequently, we are collecting additional information and are capable of performing a more precise disaggregation, allowing for a more comprehensive understanding of displacement and its drivers. The capacity for event-based monitoring has also improved, alongside the increase in the amount and quality of information collected.

With this in mind, IDMC is in the process of implementing a new conflict and violence typology that allows for more comprehensive, in-depth analysis, in order to better understand the causes driving internal displacement and to facilitate further research on violence-induced displacement. Beyond allowing the analysis of the main forms of violence leading to displacement, this new violence typology identifies the actors, trends, and political and social events that are generating displacement in conflict and violence contexts. It also aims to highlight the situation of victims of displacement by reporting in more detail on the events that led to their displacement and the damage caused to their households and communities through different forms of violence.

FIGURE A.7: GRID 2020 violence and conflict disaggregation



The new violence typology will further improve our overall analysis of data on internal displacement as it relates to violence or conflict. Coupled with event-based monitoring, this typology will enhance our capacity to analyse and understand variations in displacement patterns over time and how these relate to changes in the use of violence by different armed actors, therefore allowing for a wider and stronger historical analysis of violence and displacement trends. This analysis, coupled with the collection of more time-series information, will allow us to paint a more comprehensive picture of the impact of tensions, conflict and violence over time, and their progression.

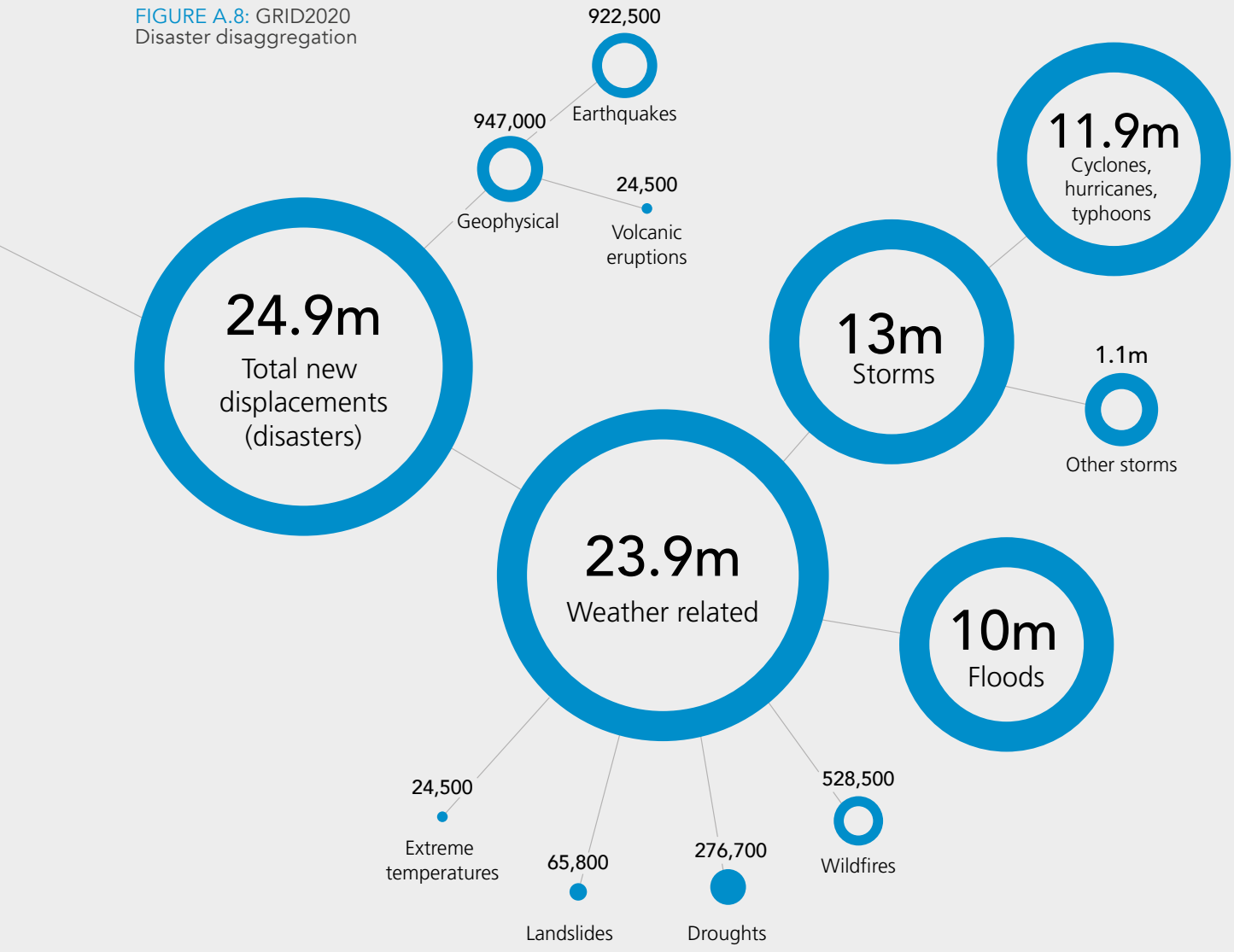
Among other changes, IDMC has revised the main violence types and consolidated their definitions, which will be included in the GRID's glossary. The variables of the typology have also been expanded, in order to include information beyond the violence type. The typology will include information on the triggers of displacement and whether these can be characterised as violence against civilians, battles, remote violence, or riots. It will also record information on the main armed actor/s that drive displacement and will further disaggregate the violence type into subtypes. For example, it differentiates between religious and ethnic violence, among other forms of communal violence.

Finally, these expanded violence variables are being disaggregated at the event level, which allows for a more granular breakdown of the violence generating displacement in each country. We expect to include this new violence typology as part of our upcoming publications in 2020 and in GRID 2021.

8.2 Disaster typology

Our estimates are based on displacements known to have taken place as a result of disasters for which natural hazards have been identified as the primary trigger.

FIGURE A.8: GRID2020
Disaster disaggregation



When available, we use the internationally acknowledged name of hazards and categorise them initially into 2 main types: weather related, or geophysical (see figure A.8). In 2018, we initiated a project to align our hazard classification with internationally recognized classifications used by EM-DAT based on the IRDR Peril Classification and Hazard Glossary.[16]

8.3 Assessing the severity of displacement

As highlighted in GRID2020, there were more 2,993,000 IDPs in Colombia than in Nigeria at the end of 2019. This does not inherently mean that displacement in Colombia is more severe than in Nigeria. The experience of IDPs, and their resulting vulnerability, differs significantly across contexts. In some cases, IDPs are exposed to high levels of violence, malnutrition and disease in overcrowded and unsanitary displacement camps. In others, IDPs are provided with free social housing, and priority-access to services. To assess these different experiences of displacement, IDMC has developed a severity assessment.[17]

The goal of the severity assessment is to compare displacement severity across conflict-related caseloads of IDPs living in different countries and contexts. In some instances, the country's total number of IDPs may represent only one caseload that needs to be evaluated, as seen in Iraq, Afghanistan and Syria. In countries such as Myanmar and Nigeria, in which there are several discrete conflicts related IDP populations associated with

FIGURE A.9: IASC Framework's on Durable Solutions' criteria

SAFETY AND SECURITY

- Is the area to which IDPs are displaced free from active fighting?
- Is the area to which IDPs are displaced free from explosive hazards?
- Are IDPs free from persecution or human rights abuses (including GBV) in the area to which they have been displaced?

LIVELIHOODS

- Are there income-generating opportunities for IDPs?
- Do IDPs have enough to eat?
- Can IDPs avoid resorting to negative coping strategies such as child labour, prostitution or child marriage?

HOUSING

- Are IDPs living in safe, adequate shelters able to withstand the local climate (i.e. not in unfinished buildings, tents, etc.)?
- Are accessible and effective mechanisms in place for IDPs to apply for property restitution or compensation for their lost or damaged property?
- Are IDPS protected from forced evictions?

SERVICES

- Do IDPs have appropriate access to water and sanitation?
- Are there accessible and affordable health care services?
- Are primary-age IDP children in school?

DOCUMENTATION

- Do IDPs have documentation to access services or assistance track?
- Do IDPs have access to easy and affordable mechanisms for replacement documentation?
- Are IDPs able to travel freely?

FAMILY REUNIFICATION

- Are IDPs living with their close family members?
- Are there any family tracing and reunification mechanisms available to IDPs?
- Are protection mechanisms in place for unaccompanied and separated children?

PUBLIC AFFAIRS

- Can IDPs vote in elections in their area of displacement?
- Are the issues of IDPs represented in the platforms of political parties?
- Are IDPs able to participate in decision-making regarding their displacement?

REMEDIES AND JUSTICE

- Do IDPs have access to legal counsel and/or representation?
- Do IDPs have access to effective law enforcement?
- Do IDPs have access to effective remedies and justice for harms that they suffered?

different displacement situations, the severity of each would be evaluated individually.

To enable comparisons at the global level, and in the absence of reliable quantitative indicators on severity, IDMC used a standardised set of evaluation criteria to obtain maximum consistency and comparability across situations assessed. The primary categories of the severity assessment are aligned with the eight criteria outlined in the IASC framework for durable solutions, namely safety and security; adequate standard of living; access to livelihoods; restoration of housing, lands, and property; access to documentation; family reunification; participation in public affairs; and access to effective remedies and justice.[18] Three questions have been identified for each category, based on the review of existing initiatives and IDMC's expertise on internal displacement. These questions are worded to limit subjectivity. They are also designed to assess the severity of displacement without comparing caseloads of IDPs to either host communities or national average.
For more details on the severity assessment methodology please refer to the IDMC's methodological paper on assessing the severity of conflict displacement.[7]

8.4 Assessing the economic impact of internal displacement

IDMC has focused its research on the direct and immediate costs and losses associated with internal displacement, for which quantitative data is publicly available at the global level. The estimates include the costs associated with IDPs' housing, health, education and security needs, and their loss of livelihood. Research has shown that internal displacement also has an impact on host communities and IDPs' communities of origin, but the available data does not allow us to estimate this.

IDMC has selected impact metrics that represent the key dimensions through which displacement affects the economy:

- livelihoods
- health
- education
- housing
- security

For more information, please see IDMC's "The ripple effect: economic impacts of internal displacement".[19]

8.5 Satellite imagery analysis

Satellite imagery analysis can be applied for assessing the damage to settlements or buildings, as result of conflict, disasters and development projects in hard to reach areas. This methodology consists in the interpretation of optical imagery to assess variations associated with major changes in structures or in their contours, using pre- and post- event satellite data –minimum of two images. The core components of the analysis consist of: (1) Determine the area of interest; (2) Assessing changes in structures using multitemporal images from the area of interest;(3) If possible, compare the preliminary results with additional documentation, pictures or other resources; (4) Assessing the damage category –e.g. Totally destroyed, severely damaged–; (5) Transforming the number of structures or areas damaged into displacement data by using the AHHS relative to the area, as illustrated below:

- Number of buildings totally destroyed or damaged*AHHS = potential number of IDPs

Some of the limitations of this methodology are the heterogeneity of the images (pre/post), the angle in which images are captured (nadir angle), the access to an updated AHHS. Furthermore, this method does not consider the height of buildings.

In 2019, the methodology was used for triangulation purposes for major disaster events such as cyclone Dorian using publicly available Copernicus layers.

8.6 Event detection, data storing and sharing

The global picture on internal displacement remains incomplete. Not all incidents of internal displacement are reported and only some of the figures can be verified. New tools, technologies and data sources represent an opportunity to strengthen data collection and verification efforts. At IDMC we see innovation as a way to tackle some of the practical challenges we face in our daily work with the best tools at our disposal, rather than an opportunity to experiment with the impact of new technologies and tools in the humanitarian sector. When it comes to innovation, we will keep investing in open source solutions and engaging with our partners from academic institutions, international organisations and UN agencies. We will continue to be curious and learn from other sectors. Our 2015-2020 strategic plan reflects these efforts by aligning IDMC's information

management system and data collection flow with technological advances.

One example is the Internal Displacement Event Tagging and Clustering Tool (IDETECT). This tool mines news data sets and uses natural language processing and machine learning algorithms to classify reports by type of displacement, while also extracting information about location and the number of people displaced in real time. The fact that IDETECT works in real time means that IDMC can collect and analyse a wide array of information, reporting on a greater number of displacement incidents in a more timely and responsive manner. The timeline below shows the volume of data extracted from thousands of local and international sources on Nigeria, and how this is correlated with the main events triggering displacement.

To speed up the data entry process and improve the analysis of displacement data in 2018 we launched our new real-time monitoring platform (figure A.10), which we are continuing to improve and develop with partners, such as the ISI Foundation. This will help us analyse information in more languages and do so more efficiently.

The global displacement monitoring platform displays data from multiple sources and provides the possibility to explore, filter and validate information.

It helps IDMC to easily identify new displacement events reported by the thousands of sources used; to visualise and compare displacement figures from different and independent sources and to analyse in a single place different layers of data. Throughout 2019, almost 12,000 pieces of information transited through this platform.

Our vision is for the monitoring platform to become the reference point for our analysts when looking for reports on internal displacement. In the coming months we plan to improve the link between the monitoring platform and our global displacement database, to reduce the time our analysts need to input into the database. We are also planning to expand and enhance the platform by adding more languages in the IDETECT tool and by expanding the number of sources the platform pulls data from.

FIGURE A.10: Flows of displacement tracked by IDETECT in Nigeria through 2017

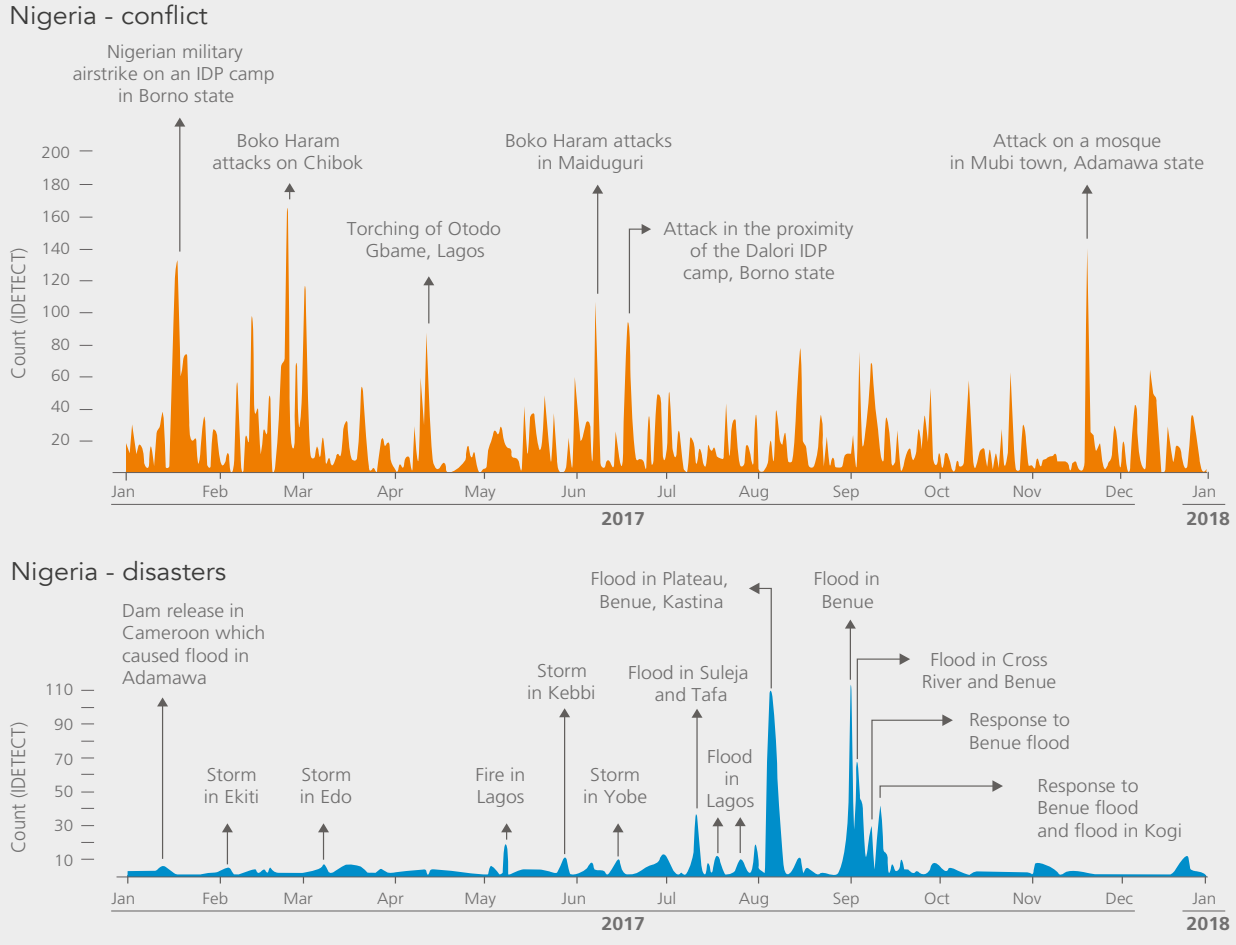
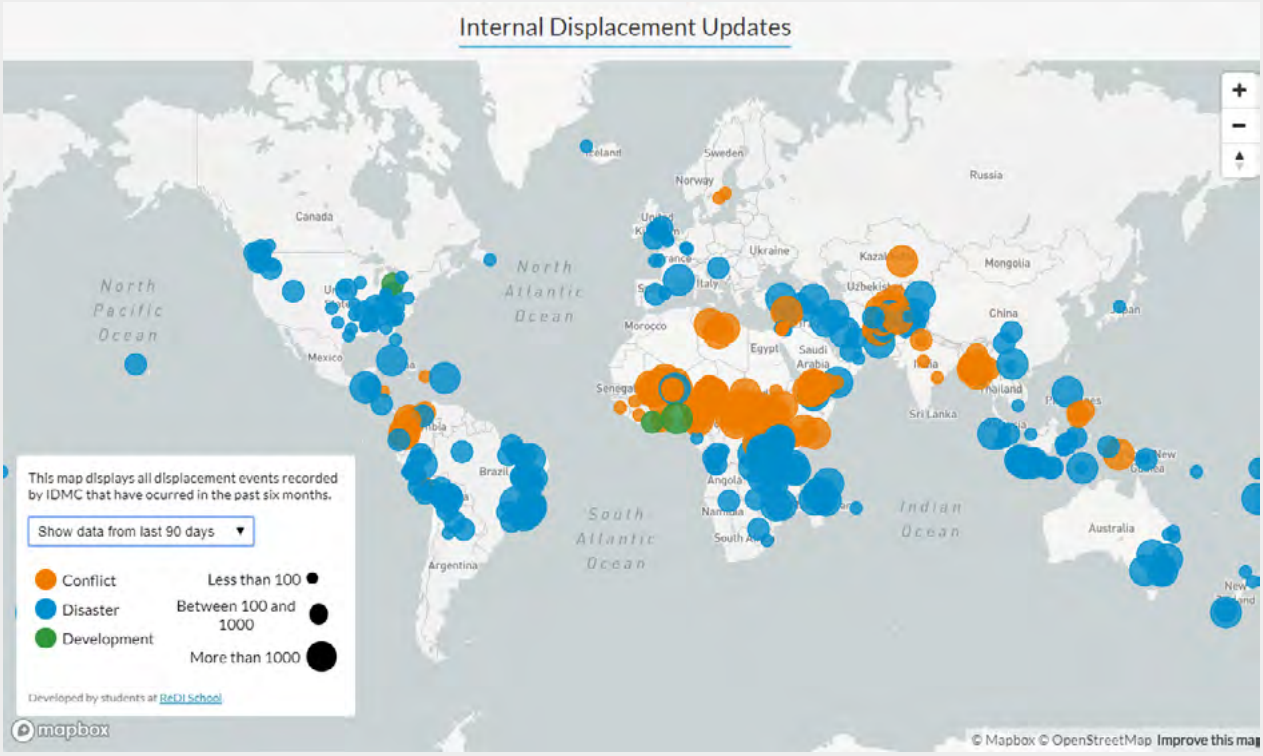


FIGURE A.11: IDMC's Internal Displacement Update (IDU) Map



8.7 Facebook displacement maps

IDMC has been working with Facebook as part of its Data for Good initiative since 2017, to improve their Disaster Maps products and specifically the methodology on measuring IDPs, supporting the release of this data through a portal called GeoInsights.[20]

This new source of displacement data from Facebook has complemented IDMC's analysis and allowed researchers, responders and planners to have a better sense of how many people have been displaced, where they have been displaced from, where they have been displaced to, and for how long.

The platform publishes aggregated and de-identified data from the application's users who have enabled location history. Using mobile phone localisation data, it can determine estimates of the number of IDPs from disaster events.[21]

The maps are based on an analysis of the patterns of people in the area affected by a disaster who have abrupt changes in their usual movement patterns, aggregated to a city level. This is determined in part by analysing people's normal movement patterns from their home before the crisis compared to their movements after the crisis. This information comes with some caveats. First, data can be extracted only from people who have the Facebook application installed on their mobile phone devices and who have agreed to share their location data. Second, many people lose mobile phone connectivity because of power outages and damage to communications infrastructure. As a result, only a small proportion of the total people displaced can be monitored using this methodology (see part 2 of GRID 2020 – Spotlight: Understanding disaster displacement patterns and duration in the Philippines).

As well as showing the number of people displaced at a moment in time, the maps can calculate displacement levels daily, enabling partner organisations to quantify the number of people displaced and those who return on a daily basis. This is central to understanding how long a disaster has affected a given area and why some cities recover faster than others. The continued collaboration between IDMC and Facebook on improving the displacement methodology allows disaster maps to be generated not only for large-scale disasters but also small ones, to help fill gaps where official statistics do not exist.[22]

CONCLUSION

As highlighted throughout this annex, monitoring internal displacement is not free from complications and requires sound and transparent methodologies to compile and report reliable estimates. This document presents the methodology that IDMC has developed to navigate these challenges posed by monitoring and generating estimates of internal displacement. It attempts to reveal in, a detailed and transparent manner, how we produced the figures included in this edition of the GRID and the data available via our website. It takes stock of our existing practices and outlines tools in development and potential future improvements in our monitoring of internal displacement.

More importantly, this methodological annex reflects IDMC's commitment to continuously improve our methods, and to make our tools and knowledge available and accessible to all audiences interested in learning more about internal displacement.

For any inquiries, comments or feedback, please contact us at data@idmc.ch.

ENDNOTES

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