Global Displacement Forecast 2023

Using data modelling to predict displacement crises

Illustration 1: AI prompts: Flooding in a Rohingya refugee camp, pixel painting
About DRC
DRC Danish Refugee Council currently operates in 40 countries around the world. We work with humanitarian, development and peacebuilding activities to ensure a dignified life for refugees, the displaced, and displacement-affected people. We work in conflict-affected areas, along displacement routes, and in the countries where refugees settle. The range of our work includes everything from relief operations to strengthening opportunities for a brighter future for refugees and internally displaced persons.

About the Foresight Model
The Foresight model can, with a high degree of accuracy, forecast the cumulative number of forcibly displaced people one to three years into the future. The model uses more than 120 indicators related to conflict, governance, economy, environment and population/society to forecast the future displacement. The model has been employed to forecast the cumulative number of people displaced from 26 countries. The countries included in the model account for approximately 92% of all global displacement or a combined total of 94 million people displaced in 2022. 100 of the 214 forecasts made so far for the coming years’ displacement have been <10% of the actual number of people living in displacement in the coming year.

The forecasts tend to be conservative, i.e. underestimate the level of displacement in the coming year. The Foresight model also has limited ability to forecast unprecedented events or high surges in displacement.
Executive Summary

Key messages

The gap between humanitarian needs and funding has grown to an all-time high with a 23 billion USD discrepancy in 2022 - the highest ever (and approximately 6 billion more than 2021). As the report illustrates, displacement is only going to increase in the coming years – and low to medium income countries will continue to be those hosting the majority of the world’s displaced. A fundamental change of approach is therefore required to address the needs which arise as a result and to accelerate efforts to reduce and prevent the multi-layered triggers of displacement.

Displacement is set to increase by another 5.4 million with Sub-Saharan Africa witnessing the biggest increase in new displacements over the coming two years. The combined forecasts for the 26 countries covered by the Foresight model suggest that the total number of people displaced (internally displaced persons, asylum seekers and refugees) will have increased by 5.4 million in 2024 (1.9 million in 2023 and 3.5 million in 2024) from an estimated 95 million at the end of 2022. This means that by 2024, the number of displaced people will have doubled since 2015 and increased by over 50 million. Of the 5.4 million people forecasted to be displaced by the end of 2024, 3 million are estimated to be living in sub-Saharan Africa. Furthermore, approximately 70% of the 5.4 million are estimated to be internally displaced.

Increase in displacement tends to occur in countries faced with a crisis in governance and where fragility on several parameters remains high including ongoing conflict and violence against civilians compounded by exposure to the impact of climate change and ecological degradation. 2022 witnessed a sharp rise in the number of incidents of violence against civilians, which rose by 28% in the 26 countries of focus, and battle incidents (5% increase), while the worst drought in four decades hit the Horn of Africa and flooding impacted several countries (including DR Congo and Cameroon). Future displacement is projected to increase particularly in complex, multi-crisis settings. A significant share of the displaced globally will therefore be living in countries experiencing high levels of violence and insecurity, significant economic and gender inequality, are prone to natural hazards such as earthquakes, droughts and flooding and are among the hardest hit by the effects of climate change.

On top of shrinking funding and growing humanitarian needs, the operating environment for humanitarian actors is becoming more complex and characterized by reduced humanitarian access and increased response costs. The multiple crises that deepen humanitarian needs - coupled with difficult operating environments - are driving up the cost of the humanitarian response globally, and this is a trend that will likely become more pronounced in the coming years. Countries with the highest humanitarian response costs and severe humanitarian access constraints, such as Myanmar, Ethiopia, and Yemen, are forecasted to see a much higher increase in the number of displaced people than countries with fewer access constraints and lower response costs.

While crises have only grown in scale and severity, ODA levels have not matched the increasing needs. Official development assistance (ODA) can make a significant contribution to reducing humanitarian needs, when it is used to help address root causes of the crises that drive these needs, including poor governance, climate change, poverty, inequality and conflict. However, the share of ODA allocated to the countries of focus has remained stable from 2012 to 2021, while the crises have grown in scale and severity and the number of displaced globally has more than doubled during the period. On top of that, in some of the major displacement-generating crises globally, such as Ethiopia, Syria and Yemen,
less than 7% of ODA was allocated to peacebuilding in 2021, despite the important role it can play in supporting communities recovering from conflict, when coupled with significant political investments.

**To respond to, prevent and bring an end to forced displacement, we need to address its root causes**

Towards that end, conflict resolution and peacebuilding efforts must be accelerated - both through increased support to peace negotiations, political diplomacy, and peacekeeping efforts and to locally led, bottom-up peace-building initiatives. In addition, governments, multilateral development banks and international financial institutions need to make funding more accessible to address the adverse impact of climate change and environmental degradation in complex crisis settings. This includes ensuring new and additional climate financing and channelling this - including through civil society-led efforts, to countries and communities impacted by both climate change and conflict which are currently only receiving a third of per-capita climate financing compared to climate-affected countries free of conflict.

**Recommendations**

Despite the positive momentum around the adoption of the Global Compact on Refugees in 2018 acknowledging the need for increased international cooperation in increasing protection of and access to durable solutions for the world’s displaced and support to the countries hosting them, progress in terms of more and equitable responsibility-sharing remains limited. As the report shows, the responsibility of hosting and supporting displaced people will continue to disproportionately fall on fragile, low income countries – including both new, forecasted displacements as well as existing protracted displacement.

More specifically:

1. **Address root-causes of displacement** through accelerated efforts to improve governance, resolve conflict and increase support to peacebuilding initiatives and resilience-building to climatic shocks in displacement-generating contexts, including through:
   - **Increased focus on solving conflicts from local to regional to national and international levels**, as displacement-generating countries are characterized by conflicts at a variety of levels.
   - **Prioritize fragile, conflict- and displacement-affected contexts in climate adaptation and loss and damage financing mechanisms**. There is a need for clear, time-bound plans to scale up climate financing for displacement-affected contexts.
   - **Increase focus on displacement-affected populations in efforts to mitigate the impacts of climate change** including through an enhanced focus on the plight of displaced people in a changing climate. From ensuring integration of displacement and protection considerations into disaster risk reduction, preparedness, adaptation, and resilience strategies - to better inclusion of displacement- affected people in global climate negotiations and discussions.

2. **Move away from responsibility-shifting towards real responsibility-sharing** including through:
   - **Delivering on resettlement commitments** for the most vulnerable refugees, safeguarding access to asylum and providing complementary pathways.
   - **Ensuring adequate support to respond to the humanitarian needs** and development challenges in hosting countries.

3. **Improve humanitarian access and take steps to reduce increased operating costs**:
   - **Engage with and hold the parties to conflicts accountable for violations of international humanitarian law** including protection of civilians and facilitate unimpeded humanitarian access to affected communities.
• Ensure displaced populations in areas under the control of de facto or non-state actors are not left behind. Displaced people in these areas are largely unable to benefit from development financing and their rights and needs must not be overlooked.

• Improve preparedness efforts to ensure better protection of people of concern to enable humanitarian actors to better respond to and address acute needs including providing adequate support to local actors who are most often frontline responders.

• Ensure the availability of evidence in support of innovative approaches to delivering assistance to hard-to-reach populations through enhanced data collection and analysis.

• Support conflict-sensitive approaches and programming.

4. Ensure ODA levels match current needs and provide adequate and better-quality funding:

• The humanitarian funding gap of USD 23 billion between needs and available funding in 2023 warrants urgent action and a review of current approaches. The projected increases in displacement in 2023 and 2024 mean that the gap between available funding and needs will only increase. Actions should include following through on the Grand Bargain commitment of empowering local actors as first responders in humanitarian action and increasing ODA-levels including towards peacebuilding.

• Refrain from diverting aid from pre-existing crises to respond to new emergencies and cover the cost of domestic refugee responses.

• Identifying ways of ensuring predictable, multi-year nexus funding geared to respond to the different cycles of displacement – from the acute, emergency phase to more protracted displacement settings and enable communities to adapt to climate change, foster social cohesion and build resilience to future shocks – to be able to respond to both current and future displacement contexts.
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Introduction

This report presents the expected forced displacement in 2023 and 2024, as forecasted by the Foresight model. The Foresight model was developed by DRC and IBM with funding from the Danish Ministry of Foreign Affairs and currently funded by ECHO. The model uses the historical relationships and patterns in the data on 148 displacement relevant indicators from 18 different open sources to, with a high degree of accuracy, forecast the cumulative number of forcibly displaced people one to three years into the future. DRC uses the Foresight model to support country operations and the wider humanitarian system with more accurate forecasts for strategic planning for better prevention, response to and protection of displacement-affected populations. The model has been employed to forecast the cumulative number of people displaced from 26 countries¹ that have ongoing and evolving displacement crises. These countries account for approximately 92% of all global displacement.

The report presents an overview of the displacement forecasts in 2023 and 2024 and highlights key trends and patterns in the forecasts, focusing on the overall and regional trends, developments in the underlying conditions and funding, and estimates of how the hosting of displaced people will evolve. The report then analyses in more detail how climate change relates to displacement; both as it relates to conflict and displacement, as well as to humanitarian assistance. Lastly, the report puts the spotlight on specific regions and countries, where significant displacement is forecasted to occur in the coming years. The countries of focus have been selected on the basis of the relative and absolute change, year-to-year as well as over the period end-2022 to end-2024.

A broader objective of this report is to show the opportunities for humanitarian actors to use artificial intelligence (AI) and machine learning in their work. In addition to the forecasts, the illustrations in this report have been generated using an AI software. Many tools in the displacement and migration space that build on these new technologies have been developed to support control of movement and mobility to benefit state control, rather than as a means to support and enhance the rights of migrants and refugees. By promoting and enhancing the use of these tools, where appropriate, by humanitarian, rights-driven actors, we aim to ensure that the tools are used to the benefit of displaced people and act as a counterweight to the wealth of tools currently being used to limit the rights of migrants and refugees.²

In this report, forced displacement is defined as refugees, asylum seekers and internally displaced people (IDPs). The official number of people displaced in 2022 for the countries covered by the model will not be available at the time of writing. Therefore, the level of displacement in 2022 has been estimated based on the latest available displacement updates from agencies such as the United Nations High Commissioner for Refugees (UNHCR), the International Organization for Migration (IOM), as well as the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). In most cases, the number of IDPs in 2022 is available to the end of November 2022, while the number of externally displaced (refugees and asylum seekers) is mostly available to the end of June. The forecasts are thus preliminary in nature and will be updated once the final, official numbers on the level of displacement in 2022 have been published around June 2023.

¹ The 26 countries include: Europe: Ukraine; Asia: Myanmar, Afghanistan; West Africa: Burkina Faso, Cameroon, CAR, Chad, Mali, Niger, Nigeria; MENA: Iraq, Libya, Syria, Yemen; East Africa & Great Lakes: Burundi, DR Congo, Ethiopia, Mozambique, Somalia, South Sudan, Sudan; Latin America: Colombia, El Salvador, Guatemala, Honduras, Venezuela
Future Forced Displacement
Combining the forecasts for the 26 countries covered in the model, the cumulative number of displaced people is forecasted to increase by 1.9 million people in 2023. This number is projected to increase by a further 3.5 million in 2024, meaning a total increase of 5.4 million between end-2022 and end-2024. This forecast indicates that the number of displaced persons in the 26 countries will pass the 100 million mark and will have more than doubled from the 48 million people displaced from these countries in 2015. These developments will likely trigger significant increases in humanitarian needs and needs for durable solutions in the coming years. OCHA is projecting that more than 339 million people will be in need of humanitarian assistance in 2023, requiring USD 52 billion in funding.\(^3\) Of the people likely to be in need of humanitarian assistance, 257 million will be living in the 26 countries of focus and will require USD 36 million in humanitarian support.

There are some clear geographical trends in the forecasts. Of the 5.4 million people forecasted to be displaced by the end of 2024, 3 million are estimated to be living in sub-Saharan Africa, while Europe and North America are only estimated to experience a combined increase of 86,000 in the number of displaced people being hosted. This is largely due to the fact that an estimated 70% of the 5.4 million displaced people will be IDPs.

**Figure 1: Displacement trends**

Displacement hotspots

The increased displacement in 2023 is driven in particular by significant growth forecasted in Afghanistan, DR Congo, Mozambique and Myanmar, where the forecasts suggest that displacement is likely to increase by more than 200,000 people in each country.

Figure 2: Forecasted displacement hotspots in 2023

DR Congo is experiencing a longstanding, complex humanitarian crisis, which has worsened in 2022 and is on a negative trajectory. Persistent violence in the east of the country continues to drive massive displacement and significant humanitarian needs. With the re-emergence of the armed group M23, escalating inter-ethnic violence in the Kivus and rising tensions between DR Congo and Rwanda, there is a significant risk of increasing armed violence in the region. With presidential elections expected in 2023, there is a further significant risk of an escalation in violence and insecurity. Intensified fighting will likely lead to further large-scale displacement. The Foresight model forecasts an increase of more than 250,000 in the number of people displaced from DR Congo in 2023.

In Myanmar, the humanitarian crisis escalated in 2022 as the situation severely deteriorated on several parameters. More than 17 million people are currently in need of humanitarian assistance, an increase from 14.6 million in 2022 and 1 million at the beginning of 2021. The combination of human rights violations and intercommunal tensions is causing widespread protection challenges for civilians. Displacement has soared in 2022, with the number of IDPs increasing by more than 1 million people. The fighting and destruction of properties means that return options are limited. Many IDPs are in informal sites in the jungle and forest and severely exposed to the monsoon rains. There has also been a 360% increase in the number of Rohingya people trying to cross the Andaman Sea compared to 2021, according to UNHCR, departing from both Bangladesh and Myanmar. The Foresight model is predicting that the cumulative number of displaced people from Myanmar will increase by 350,000 in 2023, while the United Nations expects that the number will increase by 1.4 million.
In the region of the Central Sahel (Burkina Faso, Mali and Niger), significant growth in displacement is also forecasted in 2023 with an increase of approximately 300,000 displaced people in the region. The region has emerged as a crisis hotspot in the last decade and has become one of the most violent areas in Africa, plagued by political crisis and coups, conflicts, inter-communal violence and violent extremism. Between 2019 and 2021, the number of violent events involving extremist groups has more than quadrupled. The violence has not only increased in intensity but also expanded geographically, spilling over into new areas. Two thirds of the districts in Mali, Burkina Faso and western Niger experienced attacks from extremist groups in 2022, while in 2017 it was less than one third of the districts. The violence is particularly intensive in the so-called Liptako-Gourma, the border region between Mali, Burkina Faso and Niger. Civilians are often the target of the violence; for example, since February 2022, armed groups affiliated with Jama’at Nusrat al Islam wal Muslimin (JNIM) have gained full control of access routes to the city of Djibo in Burkina Faso on the border with Mali, which has a population of 89,000 and hosts about 285,000 IDPs. The lack of military successes and growing social tensions led to political turnover and coup in Mali and Burkina Faso. This political transition is accompanied by a shift in international partners, with a withdrawal of France and stronger relationships with Russia, China and Turkey, amongst others.

The combination of political instability, violence and climate changes is driving displacement and leading to severe humanitarian needs in the Sahel. In June–August 2022, over 13 million people were projected to be acutely food insecure, including 1.4 million people in ‘Emergency’ (Integrated Food Security Phase Classification (IPC) Phase 4). This is almost 50% higher than in 2021. The outlook for Burkina Faso also looks bleak. Emergency food insecurity conditions are likely to persist into 2023 and some households may fall into catastrophe or famine conditions. Approximately 2 million people are already displaced, primarily, within Burkina Faso – and this number is forecasted to increase by more than 300,000 between end-2022 and end-2024. The Central Sahel region is forecasted to see a significant increase in displaced people, both in absolute and in relative terms. Mali and Niger are among the countries with the highest forecasted relative increase in displacement, with expected increases of 17% and 13% in the number of displaced people, respectively.

Libya, which continues to be impacted by political volatility and fighting between rival armed groups, is also expected to experience a high relative increase in displacement. The number of displaced people in the country is forecasted to increase by 23% in 2023 – the highest of the 26 countries. Mozambique comes second, with a forecasted increase of 21%.

The crisis in Mozambique emerged in the northern province of Cabo Delgado in 2017. Since then, a group linked with the Islamic State has initiated a violent insurgency that has left more than 4,000 people killed and almost 1 million displaced. The conflict has heightened food insecurity and malnutrition, with families forced to abandon their homes and fields. Displacement in Mozambique is forecasted to increase by 204,000 people in 2023 as a result of the violence.

**Looking ahead to 2024**, the biggest forecasted increase in displacement is found in Ukraine, where displacement is forecasted to increase by more than 600,000 people. This, however, comes after a...
forecasted decrease in displacement in 2023 of 700,000 people. Both Ethiopia and Venezuela are projected to experience an increase in displacement of approximately 500,000 people in 2024.

Figure 3: Displacement hotspots in 2024

The humanitarian crisis in Ethiopia escalated in 2020, when conflict erupted in the northern Tigray region of the country. More than 28.6 million people will be in need of humanitarian assistance in Ethiopia in 2023 – the highest in the world. The needs are primarily driven by conflict and extreme weather patterns, including the unprecedented drought currently affecting the Horn of Africa. While a cessation of hostilities in Tigray was agreed in November 2022, the humanitarian needs of populations that were isolated for most of the conflict remain extremely high and there is as yet no peace agreement or final settlement of the conflict. In addition, other provinces of Ethiopia continue to face conflict, including in western Oromia, Benishangul-Gumuz and around the al-Fashqa triangle. Combined with environmental factors, the multiple conflicts have had a severe impact on the country’s food security. In particular, the unprecedented drought resulting from five consecutive below-average rainy seasons has affected over 24 million people.

Ethiopia and Venezuela are among the countries with the highest forecasted relative increase in displacement in 2024. Burkina Faso and Mozambique are also ranked highly, with both countries forecasted to see an increase in displacement of 10%.

Of the 5.4 million additional displaced persons forecasted between end-2022 and end-2024, approximately 750,000 are from Venezuela, 700,000 from Ethiopia and 500,000 from Myanmar, Ethiopia, DR Congo and Yemen respectively.
Looking at the forecasts from a broader regional perspective, West Africa and East Africa have the highest forecasted growth in the number of displaced people. In East Africa, the number of displaced people is forecasted to grow by almost 2 million between end-2022 and end-2024, while in West Africa, the number of displaced people is expected to increase by slightly more than 1 million, an 11% increase compared to end-2022. In Asia, displacement is also forecasted to rise significantly, with almost 1 million more displaced people, which represents a 10% increase compared to end-2022. The number of displaced people in Europe and Middle East is expected to be stable, while some increase is expected in Latin America, mainly driven by the developments in Venezuela.

Lastly, the vast majority of displaced persons will be internally displaced. Of the 5.4 million people forecasted to be displaced between end-2022 and end-2024, 70% are estimated to be IDPs. This is slightly higher than the current level, where approximately 62% of the displaced in the 26 countries are IDPs.

**Trends in the underlying conditions and relationship to future displacement**

Displacement is continuing to grow as the principal underlying drivers – conflict and violence, and the effects of climate change – continue to increase. In 2022, there was a significant increase in the number of incidents of violence against civilians, which rose by 28% in the 26 countries of focus, while battle incidents rose by 5%. In fact, only 6 out of the 26 countries witnessed a decrease in incidents of violence against civilians. Countries such as Colombia, Guatemala, Mozambique, Niger, Venezuela and Ukraine were among those that witnessed significant increases in incidents of battles and violence against civilians. All six countries experienced more than twice as many events of violence against civilians as in 2021. Overall, there was a slight decrease (2%) in fatalities from conflict events, with more than 120,000 fatalities recorded. However, only 9 of the 26 countries witnessed a decline in fatalities. The decrease in fatalities was largely driven by developments in Afghanistan and Yemen, where the number of fatalities fell from more than 63,000 in 2021 to less than 11,000 in 2022. Countries that saw significant increases in fatalities include Colombia, Mali, Myanmar, Somalia, Ukraine and Venezuela, and where the number of fatalities in 2022 was more than double that in 2021.

Despite the immense need to address drivers of conflict, support to development and peacebuilding in displacement-generating countries is insufficient given the scale of the challenge. Development aid is a key instrument in promoting good governance, reducing poverty and inequality and fostering longer term, locally anchored peacebuilding and development. The share of ODA to the 26 countries of focus is approximately 23% of the total ODA provided by OECD/DAC countries. This share has been stable from 2012 to 2021 yet is low considering the severe needs in these countries. Further, as displacement-generating crises have evolved in these countries, the ratio between displaced persons and ODA has decreased by almost two thirds from 2012 to 2021.

At the same time, the total share of ODA allocated towards peacebuilding activities has decreased from about 13% in 2012 to 8% in 2021. In 16 of the 26 countries of focus the share of ODA allocated to peacebuilding declined between 2012 and 2021. In some of the major displacement crises, such as Cameroon, Chad, Ethiopia, Mozambique, Syria and Yemen, less than 7% of ODA went towards

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9 West Africa includes Burkina Faso, Cameroon, Central African Republic, Chad, Niger, Nigeria and Mali.
10 East Africa includes Burundi, DR Congo, Ethiopia, Mozambique, Somalia and South Sudan.
11 Asia includes Myanmar and Afghanistan.
12 Armed Conflict Location & Event Data Project (ACLED): acleddata.com
13 From USD 857 in 2012 to USD 370 in 2021 in ODA per displaced person
14 Using the definition and CRS codes developed by the UN Peacebuilding Support Office: https://psdata.un.org/blog/oda_peacebuilding/oda_peacebuilding
peacebuilding in 2021. The ODA towards peacebuilding also does not appear to be very responsive to evolving crises. There does not appear to be an established link between the share of ODA allocated to peacebuilding in the 26 countries in focus and the level of displacement in the preceding year (i.e. developments in the displacement context do not appear to lead to scale up of ODA towards addressing the root causes of the displacement). Without the financial support to address the root causes of conflict and displacement, the displacement crises will not be resolved.

For those countries – highlighted above – where a small share of ODA was provided towards peacebuilding activities in 2021, displacement is forecasted to increase by an average of more than 300,000 people (or 15%) between end-2022 and end-2024. In the countries where a high share of ODA was allocated to peacebuilding activities – El Salvador, Honduras, Iraq, Libya, Mali and Ukraine – displacement is forecasted to increase by an average of 2,000 people, or 6%. In three of the countries (El Salvador, Iraq and Ukraine) displacement is actually forecasted to decrease between end-2022 and end-2024, while none of the countries that receive a low share of ODA towards peacebuilding are forecasted to see a decrease in the same period.

With crises not being resolved, funding is needed to address the humanitarian needs arising from both newly emerging and ongoing, protracted crises. However, the scale of humanitarian funding is insufficient. In 2022, 55% of the required funding for humanitarian response plans (HRPs) was provided, compared to 53% in 2021, while the figure was 50% in 2020 and 64% in 2019. In 2022, the gap between needs and funding provided grew to USD 23 billion – the highest ever and approximately USD 6 billion more than in 2021. The share of funding provided towards the HRP decreased for 19 of the 34 plans, including those of 16 of the 26 countries of focus in this report. This was most noticeable in Myanmar, where the HRP was 75% funded in 2021 but received just 41% of the requested funds in 2022. Countries such as Syria, Iraq, Yemen, Libya, South Sudan, and Central African Republic all saw a drop in the absolute amount of funding being provided, ranging from a USD 650,000 decrease in Central African Republic to more than USD 120 million in Syria.

Among the countries of focus, Mali, Burkina Faso, Colombia, Venezuela, El Salvador and Guatemala were among the least funded in 2022, with only around one third of the required funding for HRPs being provided. For countries where the 2022 HRPs were more than 75% funded, displacement is forecasted to decrease by an average of 200,000 in 2023. In the countries where the HRP was 50–75% funded the number of displaced people is forecasted to grow by approximately 100,000 on average in 2023, while in countries where the HRP was less than 50% the number of people displaced will grow by 130,000 on average. Analysis of funding and displacement trends in more than 160 HRPs corroborates these findings. When response plans were less than two-thirds funded, the cumulative number of people displaced the following year increased by 46%, on average. If the plans were more than two-thirds funded, the average increase in displacement was just 10%. While many factors can explain this, the lack of humanitarian funding means that the humanitarian community cannot respond adequately to alleviate the suffering and ensure protection of vulnerable groups, implement early action and prevention activities and increase the resilience of displacement-affected communities.

The lack of funding is a growing concern given the vast increase in both displacement and people in need of humanitarian assistance. As noted above, 339 million people are in need of humanitarian assistance globally and 257 million of them are from the countries of focus in this report. The funding required to

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15 Including only those response plans that were in place in both 2021 and 2022 and using the Ukraine Flash appeal instead of the HRP, as the flash appeal superseded the HRP. Data extracted in January 2023
respond to humanitarian needs depends on the type, intensity and scale of the humanitarian needs, as well as the specific context in terms of operating costs. For example, the funding requirement for Syria entails a cost of USD 350 per person targeted for humanitarian assistance, while in Guatemala the equivalent cost is USD 54. In the countries with the highest cost per person targeted, the number of IDPs is estimated to grow by more than 202,000 between end-2022 and end-2024, while in the countries with the lowest costs the number of IDPs is estimated to grow by less than 116,000. Given the rising costs of responding to the humanitarian needs of displaced persons, the future humanitarian funding shortfall is likely to increase.

Funding is not the only major challenge in responding to the growing humanitarian needs arising from the displacement crises. Humanitarian access is also an issue: even in situations where funding is available, the ability of people in need to access services and assistance, and for humanitarian actors to reach people in need, is often challenged by restrictive environments. Of the 26 countries covered by the model, 19 are categorized as having either very high or extreme humanitarian access constraints and 6 have witnessed a deteriorating trend in humanitarian access between July and December 2022.\(^\text{16}\) Compared to 2021, some improvement has been noted, as countries such as Cameroon, Mali, Nigeria, Syria and Venezuela have improved humanitarian access and are no longer considered to have extreme constraints.

Forecasted displacement is on average higher in countries with poor humanitarian access. Countries with extreme access constraints, such as Ethiopia, Myanmar and Yemen, are forecasted to see an average increase of 562,000 people displaced from end-2022 to end-2024. In countries categorized as facing high access constraints, such as Sudan, Venezuela and Mozambique, the average forecasted increase is 278,000 displaced people. Lastly, in countries categorized as having only moderate or lower access constraints, such as Burundi, Guatemala and Honduras, average displacement is only forecasted to increase by 17,000 people. One explanation for this is that humanitarian access appears to be more constrained in more populous countries and that both displacement and poor humanitarian access, among other issues, are a result of the intensity and scale of armed violence.

**Future displacement hosting and solutions**

Low-income countries continue to be the main hosts of displaced people. However, the proportion of displaced people from the 26 focus countries that is hosted in low-income countries has fallen from 49% in 2021 to 43% in 2022. This is due to the Ukraine crisis, where displacement has mainly been to high-income countries in Europe. As such, hosting in high-income countries jumped from 6% in 2021 to 10% in 2022. The forecasted displacement is not estimated to significantly alter the distribution of displaced persons. The number of displaced people hosted in low-income countries is estimated to increase slightly, while the number in high-income countries is estimated to decrease slightly.

One third of Ukraine’s population was displaced within the first six months of the conflict, with about 7.3 million people fleeing the country. As of end 2022, the total number of refugees from Ukraine was 7.8 million, while 5.9 million remained internally displaced. Despite the difficult situation, there has also been significant returns of both IDPs and refugees. As of 5 December 2022, there had been approximately 5 million returnees.\(^\text{17}\) A survey among Ukrainian refugees suggested that 24% want to return but will wait for a certain time; 48% will return after the end of the war; and 8% said that they would not return home. If the active phase of the war lasts for a year or longer, even more people will leave the country, for family reunification purposes and other reasons. At least 5 million refugees are not expected to return home. The

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forecast suggests that there will be some return (750,000 decrease in the total number of displaced Ukrainians) in 2023, which will be offset by an increase in the number of displaced in 2024. It appears that the Ukraine crisis is likely to become a protracted displacement crisis, where the number of people in need of humanitarian assistance will remain high for years to come.

The Ukraine crisis mirrors the global pattern of displacement, that is, that a significant share of displaced people remain internally displaced, while those that cross borders mainly move to neighbouring countries.

Figure 4: Distribution of people displaced from the 26 countries in focus.

Both displacement and hosting are primarily increasing in East and West Africa. The number of displaced people living in sub-Saharan Africa is set to increase by 3 million by the end of 2024, while its set to increase by approximately 900,000 in Asia and 800,000 in Latin America. It is estimated that approximately 40% of displaced people will be hosted in sub-Saharan Africa by end-2024 and a further 20% will be hosted in the Middle East and North Africa (MENA) region. Only 14% will be living in Europe, one of the richest economic zones in the world. While the GDP per displaced person hosted in European countries amounts to USD 1.6 million per person, in sub-Saharan Africa it only amounts to USD 49,000. In the MENA region it amounts to USD 175,000 per person and in Latin America USD 338,000. As such, host countries in sub-Saharan Africa disproportionately bear the responsibility of supporting displaced populations, while having very limited resources to do so.
That major host countries of displaced people are facing development challenges is not new. These countries face many socio-economic challenges. Overall, 36% of displaced people are in countries with the highest levels of economic and gender inequality, including Afghanistan, Colombia and Yemen. Furthermore, 28% of displaced people are in the countries with the lowest levels of human development and highest levels of poverty, including South Sudan, Ethiopia and Chad.

Another major challenge facing host countries is climate change. Overall, 43% of displaced people from the countries of focus are hosted in countries that are among the overall most vulnerable to the impacts of climate change. In 2015, 16 million displaced people or 33% of the displaced were hosted in the most vulnerable countries to climate change. This has increased to 40 million in 2022 and set to increase further to 43 million by end-2024. For example, Niger, Chad, Somalia and Sudan are all ranked among the top five most vulnerable countries in the world. Further, 48% of the displaced people are living in countries that are particularly sensitive to climate change—that is, dependent on a sector negatively affected by climate hazards, or having a population particularly susceptible to climate change hazards. This includes major host countries such as Uganda, Pakistan and Bangladesh. Finally, 42% are hosted in the countries most exposed to the impacts of climate change, which include Burkina Faso, Mali and Kenya. Based on the forecasted displacement, the number of displaced people living in areas that are sensitive, exposed and generally vulnerable to the impact of climate change is likely to increase over the coming two years.

As such, many displaced persons are living in countries at significant risk of climate hazards. This is not only a longer-term risk—it is also a significant risk for displaced people now. Displaced populations often live in precarious and vulnerable situations with limited access to proper housing and services. This increases their exposure to the negative impacts of climate change. The Rohingya refugees in Bangladesh are living on the coast and so are susceptible to cyclones and storm surges. Shelters are often destroyed by flooding and landslides during the monsoon season. In Sudan, Ethiopian refugees arriving from Tigray were particularly exposed to severe weather conditions in 2021, including heavy rains, strong storms, severe floods and heat waves, which has destroyed 50% of their shelters and around 2,000 latrines. In 2022, disaster risk reduction efforts by international NGOs and humanitarian partners significantly reduced the impacts of floods in Sudan on Ethiopian refugees. Outside of camps, refugees are often living in informal settlements, where housing structures tend to be poor. This leads to elevated risk from most climate change impacts, including high temperatures, more intense precipitation, storms, flooding and landslides. In 2022, 110 million people were affected by natural hazards in the 26 countries of focus, while the average for the preceding 8 years was 21 million. Globally, 185 million were affected by natural hazards in 2022 up from 110 million in 2021. In 2023, 36 million displaced people will be living in countries that are among those at highest risk of experiencing an earthquake, 37 million will be in countries that are among those at highest risk of experiencing a drought and 52 million in countries with the highest risk of experiencing flooding. Many of the host countries are facing multiple hazards and as such almost 16

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18 Defined as among the worst 25% based on the scoring in the INFORM Risk Index.
19 This is developed using the ND-Gain scores from 2020. For more on the ND-Gain methodology, see: https://gain.nd.edu/our-work/country-index/methodology/
20 Degree to which a system is exposed to significant climate change from a biophysical perspective.
22 Medair.2022. How to Mitigate Disaster. Available at: https://reliefweb.int/report/sudan/how-mitigate-disaster
25 Defined as among the worst 25% based on the scoring in the INFORM Risk Index relevant indicators.
18 million displaced people will be living in countries that are among those most at risk of experiencing floods, drought and an epidemic. Those countries include Afghanistan, Iraq, Mali, Niger, Somalia and Sudan. Lastly, 92% of the displaced will in 2023 be living in a country among those most at risk of at least one of the natural hazards (drought, flood, earthquake and epidemic).

Hosting displaced people in these fragile, climate-exposed, low-income settings is also a result of the limited progress on realizing durable solutions to displacement, including the lack of resettlement of refugees from low-income hosting countries. In 2020, only 34,000 people were resettled to 21 countries – the lowest number in two decades.26 However, in 2021, there was some improvement, with 57,000 displaced people resettled. This trend continued into 2022, with 42,000 people resettled by June, according to UNHCR. The numbers are, however, still far below the peak in 2016, where more than 172,000 displaced people were resettled. The number of IDPs and refugees who have returned to their place of origin is significantly higher than resettlement and naturalizations, as more than 5.5 million returned in 2021. In 2022, slightly less than 1.5 million displaced people returned in the first six months, which was more than in the same period in 2021. About 51% of the returns were displaced people originally from low-income countries, but this group accounts for approximately 55% of all displaced people in 2022. Returns to low-income countries have consistently been lower than their overall share of the displaced over the past six years.27 This further underscores the challenges of displacement and hosting in low-income countries and explains why the share of displaced living in low-income countries is set to continue to grow.

Despite increases in 2021, returns still only amounted to less than 7% of the total number of displaced persons. The returns recorded by mid-year in 2022 was less than 2%. Given the lack of progress in resolving conflicts and addressing root causes, the share of displaced people able to return will remain limited. By the end of 2021, there were 51 protracted refugee situations28 in 31 countries.29 In 2022, the situation of Cameroonian refugees in Nigeria, Syrian refugees in Sudan and Venezuelan refugees in Brazil were added to this list, while Vietnamese refugees in China was removed. In 2023, five more situations could be added to the list of protracted crises, including refugees from DR Congo in Malawi and Honduran refugees in Mexico. By the end of 2024, Ethiopian refugees in Sudan and Azerbaijani refugees in Armenia could also be added to the list.

An overview of the specific forecasts for displacement in each of the 26 countries is available in the annex.

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28 UNHCR defines a protracted refugee situation as one in which 25,000 or more refugees from the same nationality have been in exile for at least five consecutive years in a given host country
29 UNCHR. 2021.
Changing Climate, Changing Displacement

As highlighted in the previous chapter, climate change and environmental hazards are already shaping both the areas people are being displaced from and the areas where they are being hosted. Given the climatic changes, the impact of conflict, displacement and humanitarian needs are only likely to grow in the future. This chapter seeks to highlight how the changing climate may potentially be changing displacement, conditions for displaced people, and the response to displacement.

There is a complex and dynamic relationship with feedback loops between climate change, conflict, displacement and the humanitarian response to address climate-conflict-induced displacement. While it is established that these links exist, the interactions between these factors and their impact need to be more fully understood and are highly context specific. Furthermore, distinguishing between the effects of climate change and environmental degradation, which can be caused by climate change but also by other factors, can be difficult.

The impacts of climate change are only indirectly included in the forecasts made using the Foresight tool. The model includes indicators related to the occurrence of natural disasters, as well as the number of people affected and death from such disasters. The prediction does not include the total numbers of forcibly displaced and disaster-displaced people.
Climate change and conflict
Climate change as a driver of conflict

The relationship between climate change and conflict is not straightforward and a single universal relationship has not been established. The links between the two are highly context-specific. Generally speaking, climate change can act as a “threat multiplier” that can exacerbate pre-existing conditions, such as poverty, economic inequality, political instability and resource scarcity, which can all contribute to increasing the risk of conflict. However, conflict is not an unavoidable outcome. When short-term climate shocks or long-term environmental degradation occur, the most immediate impact is increased suffering and loss of livelihoods and resources. Just as this can lead to conflict, it can also lead to increased cooperation to overcome these challenges. As an example, a study of the relationship between natural hazards and the risk of civil war from 1950 to 2021 found that such hazards, particularly drought, can reduce the risk of civil war by giving the government an opportunity to display competence and resolve, which can contribute to building its legitimacy and unifying the population.

Overall, analysing the relationship between conflict events and a country’s vulnerability to climate change, including its exposure, sensitivity and adaptive capacity, suggests that there is generally a fairly weak relationship. To date, the strongest relationship has been found between a country’s exposure to climate change and the number of riot events, events of violence against civilians and fatalities from conflict events, using data for 2022. This highlight how climate change increases exposure to natural hazards, which can lead to dissatisfaction in the population and instability, when not managed efficiently by authorities. The countries most exposed to climate change (lowest quartile) experienced an average of 153 riot events in 2022, while the remaining countries experienced 53 events, on average. Similarly, countries’ adaptive capacity has an inverse relationship with riots, with a poorer adaptive capacity being associated with more riots. Overall, the combined vulnerability of countries has a weak, positive relationship association with an increased number of battle events, riot events and fatalities from these two types of events. If the analysis only includes the 69 countries with more than 25 fatalities from conflict events in 2022, the relationship between conflict and exposure remains valid and appears stronger. However, for overall vulnerability, the strongest relationships are negative (i.e. the more vulnerable countries have experienced fewer conflict events and fewer protests). This suggests that the exposure to climate change, in particular, can act as a threat multiplier and increase the likelihood that countries will experience or be in conflict, but climate change in general does not seem to influence the intensity of conflict and, if anything, may act to dampen or decrease the intensity. However, the links between conflict

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33 ACLED conflict data for 2022 including protests, riots, violence against civilians, explosions/remote violence, battle events, fatalities from these events and the total combined number of events.
34 This is developed using the ND-Gain scores from 2020. For more on the ND-Gain methodology go to: https://gain.nd.edu/our-work/country-index/methodology/
35 Degree to which a system is exposed to significant climate change from a biophysical perspective
36 Pearson correlation r: 0.20
37 Pearson correlation r: 0.18
38 Pearson correlation r: 0.15
39 Availability of social resources for sector-specific adaptation
40 Pearson correlation r: 0.12
41 Pearson correlation r: 0.10
42 Pearson correlation r: 0.15
43 Pearson correlation r: -0.22
44 Pearson correlation r: -0.19
and climate change are not given, as there are important intervening variables, particularly the government capacity to manage the risks and address the impact, as well as the resilience and capacities of communities to mitigate and adapt to climate change.

Relationship between conflict and specific weather patterns – higher temperatures and rainfall
Some links have been established in the scientific literature between climate change and conflict in specific settings. For example, extremely high temperatures in Africa are associated with greater conflict levels and civil war. The theoretical link is that when either extremely high temperatures or prolonged periods of above normal temperatures damage crops, there is an impact on livelihoods and increased competition for water supplies, which in turn can lead to inter-communal conflict. However, this relationship is also mediated by the crop type, as tolerance to high temperatures varies between crops.\(^45\)

The relationship between higher temperatures and conflict is also influenced by the local agriculture and livestock practices. In Burkina Faso, climate change and environmental degradation is reducing access to fertile soil, pasture and water, which is affecting farmer and herder communities. This is upsetting the balance between herder and famer communities as traditional movement of herds according to the seasonal availability of pastures changes, creating the foundation for tension and conflict.\(^46\) In the Central African Republic, these movements are also likely to become a growing cause of tension and conflict between farmers and herders, as influx of cattle into the country has intensified in recent years due to poorer access to pastures and water in neighbouring Cameroon, Chad and Sudan. Agricultural practices, crop selection and agricultural productivity will all be affected by the predicted increase in extreme precipitation, longer periods of drought and rising temperatures, all of which are upsetting the balance between farmers and herders in the country and region at large.\(^47\) The country has limited capacity to cope with these changes and Central African Republic is ranked as one of the countries that is most vulnerable to the impacts of climate change.\(^48\)

The relationship between rainfall and conflict has also received attention, but again, a clear linear relationship has not been established. One study found that the pressure on food availability that arises from water scarcity increases the number of conflicts in Africa, but only if drought conditions have persisted in the 3 years prior.\(^49\) The relationship between precipitation and conflict has been found to be u-shaped: extreme water scarcity (drought) or extreme water excess (flooding), especially during the growing season, it can have an immediate and larger impact on the magnitude of violence in the area. Water scarcity may also have spill-over effects in neighbouring areas, as a lack of food due to dry conditions in surrounding areas can lead to competition for food and scarce resources in other areas, even if they are not directly impacted by the dry conditions.\(^50\) One example of spill-over effects is found across the Equatoria states in South Sudan, where pastoralists affected by floods move their livestock into new territories in search of pastures. The pastoralists are typically also responsible for protection of their communities and carrying arms, so when they relocate, the entire community moves with them. Moving to new territories brings them into conflict with the communities already present. Given that the groups are armed, such tension can quickly spill into violence. For example, in the Mundri and Lainya areas local

\(^{47}\) OCHA. 2021. Aperçu des Besoins: République Centrafricaine. October 2021
\(^{49}\) F. Cappelli, C. Conigliani, D. Consoli, et al. 2022. Climate change and armed conflicts in Africa: temporal persistence, non-linear climate impact and geographical spillovers. Economia Politica. Available at: https://doi.org/10.1007/s40888-022-00271-x
\(^{50}\) F. Cappelli, C. Conigliani, D. Consoli, et al. 2022.
community militias were mobilized to counter migrating armed Dinka cattle herders.\textsuperscript{51} In Nigeria, the violent conflict in the country is further deepened by climate change and environmental degradation, which have forced many herders in the northern regions to move south in search of pasture and water. This has in turn created conflict with local crop farmers and fuelled further tension and conflict.

\textit{Indirect effect by increasing support and recruitment for armed groups}

The various pathways through which changes in the climate can lead to conflict can also be a source of mobilization for armed groups. The devastation of livelihoods and individual and group effects on mental well-being can lead to a higher propensity for supporting or joining armed groups.\textsuperscript{52} For example, an individual may join seeking to obtain a source of income. Research in Borno, Adamawa and Yobe states in Nigeria has found that 16\% of former Boko Haram members highlighted climate change-related challenges as a reason for joining the group. Further, survey research in the same state showed that of those respondents who knew people that experienced livelihood challenges due to climate change, 15\% knew someone who joined Boko Haram as a result. Similar findings have been documented in Colombia and Syria.\textsuperscript{53} The support for armed groups can also arise from the frustration over an inadequate response by governments to mitigate the negative impact on individuals and communities arising from climate change, natural hazards and environmental degradation.\textsuperscript{54} And, just as governments can increase popular support by effectively managing and responding to a climate-induced disaster, so can armed groups gain support by engaging in disaster response. For example, armed groups in rural areas of Pakistan played a key role in responding to the 2010 flooding in the country, which bolstered their support locally.\textsuperscript{55}

\textit{The role of governments}

A government with limited capacity to address the negative impacts of climate change, natural hazards and environmental degradation can foster dissatisfaction, undermining its popular legitimacy and leading to protests that can turn into violence. Just as drought and high temperatures can give governments an opportunity to show competence that can lead to less conflict and violence, a government’s failure to respond and alleviate suffering can lead to violence.\textsuperscript{56}

As highlighted by the different pathways through which climate change and environmental degradation can impact conflict, a causal link cannot be established. The ability of governments to manage and respond to climate change, environmental degradation and conflict is a key intervening variable. Whether a natural hazard becomes a natural disaster is also often a result of the capacity and resources of the government to build resilience and adaptive measures in society to mitigate the impact of the hazards.

\textsuperscript{54} J.M. Regan and S.K. Young. 2022. Climate change in the Horn of Africa: causations for violent extremism. Behavioral Sciences of Terrorism and Political Aggression. DOI: 10.1080/19434472.2022.2061032
Conflicts as a driver of climate change

As highlighted above, climate change can drive conflict (or peace) through a number of different pathways. But the relationship is neither linear nor static and involves important feedback loops, as conflict can also contribute to climate change through various pathways.

One of the primary ways a conflict drives climate change is by eroding the capacity of governments and communities to mitigate and adapt to climate change and to make progress on reducing carbon emissions. Capacity is eroded by the impact of conflict on economic performances, amongst other factors. A recent study has found that many economic models do not properly consider the impact of conflict on future economic performance. When corrected for the impact of conflict, many poor and vulnerable countries demonstrate a much poorer economic performance, which suggests that the resources these countries have to adapt and mitigate the impact of climate change is lower than predicted by, for example, leading climate change impact models. Furthermore, as conflict can lead to displacement and persecution and crackdown on civil society, this reduces local communities capacity to adapt to climate change and the ability of civil society to protect and monitor the environment.

Conflict can also contribute to climate change through the military sector, which accounts for approximately 5.5% of global carbon dioxide (CO₂) emissions, making is equivalent to the fourth largest carbon footprint among countries. This is caused by the military sector’s working spaces, such as operating bases in extreme climates, and fuel use for vehicles and aircraft, as well as through its supply chain and the production of military equipment.

The destruction caused by conflict in urban areas also has significant climate implications. The clearance of debris is highly energy intensive. For example, it has been estimated that it could require more than 1 million truck journeys to clear the debris from Aleppo and Homs. Following conflict, the destroyed houses and infrastructure need to be rebuilt, which requires cement, which is highly carbon intensive. Again, in Syria, it is estimated that rebuilding the country’s destroyed or partially destroyed housing stock would emit around 22 million tons of CO₂. Officials from Ukraine have recently estimated that the reconstruction of the country will produce about 49 million tons of emissions. Oil production facilities are often targeted during fighting. In Ukraine, Russia attacked fossil fuel infrastructure 36 times in the first five weeks of the 2022 war alone, causing fires and the release of soot particulates, methane and CO₂ into the atmosphere. Oil infrastructure has also been targeted in conflicts in Colombia, Libya, Syria and Iraq. A study of the smoke from the Kuwait oil fires during the 1991 Gulf War found that the fires produced approximately 2% of global CO₂ emissions, as well as vast amounts of soot and sulphur dioxide.

References:
Rural areas are also significantly impacted by conflict, which can have detrimental consequences for the climate and environment. Agricultural lands can become targeted in scorched-earth tactics and rural areas often become contaminated with mines and explosive remnants of wars. Clearance of vegetation, which can release greenhouse gases into the atmosphere, is also common along the lines of contact and for establishing forward operating bases. Conflicts in Syria, Bosnia, Iraq and Afghanistan have been linked with both desertification and soil erosion, which can accelerate the loss of carbon from soils and reduce their potential to be effective carbon sinks. 64

Another environmental casualty of conflict is the abandonment of policies and practices to limit emissions. This is coupled with the fact that international funding for climate adaptation and mitigation often fails to reach conflict-affected countries. A recent analysis by the International Crisis Group shows that countries impacted by both conflict and climate change only receive one third of the funding provided to countries that also suffer from climate change but are not impacted by conflict. There are several reasons for this, including that donors can be risk averse in terms of providing development assistance into conflict zones, in particular when governments are a key party in the conflict. Also, the actual implementation of adaptation and mitigation projects can be hampered by insecurity. 65 As an example, the Global Environment Facility suspended projects in Yemen, Syria and Libya due to conflict. 66

Lastly, conflict can also lead to funding being diverted away from climate-related initiatives. The Ukraine crisis has seen a number of donors moving funding towards the response and away from climate-related programming. For example, the Danish Government reallocated DKK 100 million from their programme on climate, conflict and forced displacement and migration in the Sahel and Horn of Africa to the Ukraine refugee response. 67 Sweden initially cut SKK 1 billion in support to the Green Climate Fund, the Global Environment Facility and the Climate Investment Fund. 68 As the projected number of Ukrainians coming to Sweden declined, in August 2022 the Swedish government restored the funding to these initiatives. 69 The UK has also diverted funding away from support to poor countries’ adaptation to climate change to fund its support for Ukraine. 70 Similarly, the Norwegian government reallocated NKK 300 million from their climate and forest initiative to the Ukraine response. 71 Lastly, despite a commitment to providing USD 3.1 billion to climate-vulnerable developing nations, in March 2022, Congress allocated just USD 1 billion to international climate funding. While the funding shortfall is not directly due to funds being diverted to the Ukraine crisis, the focus on the Ukraine crisis has distracted policymakers’ attention away from climate change adaptation and mitigation efforts. 72 The war in Ukraine has, however, highlighted Europe’s energy dependence on Russia and accelerated the transition towards renewable energy in many European countries.

65 International Crisis Group. 2022. Giving Countries in Conflict Their Fair Share of Climate Finance. Available at: https://www.crisisgroup.org/content/fair-share-of-climate-finance
67 Udenrigsministeriet. 2022. Oversigtstabeller over omprioritering af udviklingsbistanden. Available at: https://via.ritzau.dk/data/attachments/00019/c694d6a8-e392-4e03-a6c4-73d0c261ee3.pdf
68 Utrikesdepartementet. 2022. Regleringsbrev för budgetåret 2022 avseende Styrelsen för internationellt utvecklingssamarbete (Sida), 3 February 2022. Available at: https://www.esv.se/statsliggaren/regleringsbrev/?rbid=22715
69 Utrikesdepartementet. 2022.
72 R. Hersher. 2022. The U.S. pledged billions to fight climate change. Then came the Ukraine war. NPR. Available at: https://www.npr.org/sections/goatsandsoda/2022/05/14/109800374/the-u-s-pledged-billions-to-fight-climate-change-then-came-the-ukraine-war
Climate change and displaced people
Climate change as a driver of displacement
Just as the link between conflict and displacement is complex and multifaceted, the link between climate change and broader migration and human mobility is complex and has diverging effects.

Disaster displacement
A clear direct link between climate change and displacement exists in the form of climate-induced displacement, i.e. displacement arising from natural hazards caused by climate change. In the past decade, an average of 22 million people were displaced by natural hazards every year. Much of this is short-term displacement, such as evacuations, and often only involves displacement of short distances.\(^73\) However, almost 6 million people displaced by natural hazards were in a state of protracted displacement by the end of 2021. Given the projected increase in the occurrence of natural hazard events due to climate change, the number of people displaced by disasters is projected to increase in the coming decades.

Impact on broader human mobility
The link to broader human mobility and migration is weaker but exhibits some of the same features as the link between conflict and climate change. Climate change potentially impacts a number of drivers of mobility, but it is not a primary driver for most people who move, and many of those who are impacted by climate change do not intend to move away because of those impacts. Often, people live for many years in unstable environments and only decide to leave as a last resort. Most people want to stay and are attached to their lands. A recent survey by Mixed Migration Centre shows that 50% of men and 40% of women surveyed in different African countries expressed hope and optimism for the future, despite experiencing severe impact of climate change.\(^74\)

Despite this, environmental degradation can erode opportunities for livelihoods and food, which can not only lead to conflict, but also drive households to migrate.\(^75\) This is an adaptation strategy that has been used throughout the history of mankind. Interviews conducted by the Mixed Migration Centre between February and September 2021 with migrants and refugees in Burkina Faso, Libya, Mali, Niger, Sudan and Tunisia showed that economic factors were the most common drivers of the decision to leave amongst respondents from both West (86%) and Central Africa (69%). Only 2% of West Africans and 5% of Central Africans cited environmental issues, but when prompted about whether environmental factors had an effect on their decision to leave, 41% of West Africans and 50% of Central Africans said yes.\(^76\)

Like the relationship between conflict and displacement, the role of climate change in the decision to migrate abroad is non-linear and depends on a number of contextual factors and underlying conditions that influence the mobility of households and individuals. While environmental conditions may initially lead to migration, beyond certain thresholds adverse conditions can also have the opposite effect of limiting mobility by depleting households’ resources needed to migrate. In this way, climate change can

\(^{73}\) L. Thalheimer et al. 2022. The role of anticipatory humanitarian action to reduce disaster displacement. Environmental Research, Letter, 17, 014043.

\(^{74}\) N.P. Simpson. 2022. Climate change will force up to 113m people to relocate within Africa by 2050 - new report. The Conversation. Available at: https://theconversation.com/climate-change-will-force-up-to-113m-people-to-relocate-within-africa-by-2050-new-report-193633


lead to ‘trapped populations’ or involuntary immobility. A recent study has explored this in more detail, analysing immobility, defined as an international move of resource-constrained populations that would have taken place in a world without climate change but does not in a world with climate change. The study shows that climate change reduces migration for the lowest-income levels by more than 10% in 2100, in a medium development and medium climate scenario, whereas in a more pessimistic scenario climate change may reduce migration by as much as 35%. This relationship underscores how income affects migration in two directions: a decrease in income reduced the capability to migrate but can increase people’s aspirations to migrate towards locations with better income opportunities. Significant populations will find themselves unable to leave in the face of climate change and thus in a state of extreme vulnerability.

Figure 4. Mixed Migration Centre illustration of the pathways to different climate mobility outcomes

This model also underlines how climate change will impact differently on different population groups depending on their existing assets and income levels. Climate change will essentially restrict access to high-cost, high rewards adaptation strategies such as migration for households at the lower end of the

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78 Shared Socioeconomic Pathways (SSPs) are scenarios of projected socio-economic global changes up to 2100. They are used to derive greenhouse gas emissions scenarios with different climate policies. The medium development scenario refers to SSP2: the so-called Middle of the Road scenario, where social, economic and technological trends do not shift markedly from historical patterns.
79 The medium climate scenario refers to Representative Concentration Pathway (RCP) 4.5, which is an intermediate scenario for the levels of greenhouse emissions.
80 Using SSP3 where economic development is slow, consumption is material-intensive, and inequalities persist or worsen over time and RCP7.0, where the scenario is medium-to-high end of the range of future emissions and warming.
81 H. Benveniste, M. Oppenheimer and M. Fleurbaey. 2022. Climate change increases resource-constrained international immobility. Nature Climate Change, 12, 634–641. Available at: https://doi.org/10.1038/s41558-022-01401-w
income spectrum that are unable to accumulate sufficient resources to deploy these coping strategies. This will lead to increased inequality, as households with lower access to financial and social capital will be even less likely to diversify livelihoods and adapt to climate risks. This becomes a vicious cycle, as increased environmental degradation, decreased resources and lower household mobility becomes a poverty trap that will become increasingly common in many developing country contexts.\textsuperscript{82}

The relationship between household capital and migration impacts future as well as current generations. A recent study has shown how adverse climate exposures in early life (from birth to 4 years) may influence migration behaviour over relatively long periods of time, with evidence that exposure to spells of anomalous temperatures and rainfall in early life affects the probability of migration by ages 30–39 years. Early-life exposure influences future migration by impacting human capital formation or socio-economic attainment, such as education, income and health. Facing adverse conditions in early life can suppress human capital formation; for example, significant above-average temperatures during the early years of life results in a 12-percentage point decline in the predicted probability of lifetime migration, from approximately 25% to 13%. In West and Central Africa, experiencing above-average rainfall, which improves agricultural yields and thus household economies, in early life leads to an increased likelihood of lifetime migration, from 23% to 33%. The effects of early-life exposure to changes in climatic conditions are particularly significant for girls and socio-economically disadvantaged households, who experience the largest migration constraints when exposed to early-life climate shocks.\textsuperscript{83}

Both existing resources and accumulated resources throughout a person’s life impact mobility patterns. For those that are able to move, most future climate-forced migration and displacement is expected to be within countries. Recent projections have found that by 2050, 47–113 million people could move due to climate change in Africa. Comparatively, only 0.5–1.2 million people are forecasted to cross borders by 2050 under a high greenhouse gas emissions scenario.\textsuperscript{84} More broadly, the World Bank’s Groundswell report forecasts up to 216 million internal migrants globally by 2050 as a result of water scarcity, declining crop productivity and sea-level rise, but in a more climate friendly scenario the number of internal migrants falls to 44 million. Most migration and displacement are internal because people on the move, if possible, without facing resource constraints, prefer to travel along known routes and remain as close as possible to their family and support network.\textsuperscript{85} In the Sahel region, some of the hotspots that people will likely migrate away from are found on the Mali-Mauritania border and in southern Niger. Coastal areas of Mauritania, Senegal and Nigeria are also likely to see climate-induced migration across borders due to sea level rise and increasing flood hazards.\textsuperscript{86}

\textit{Specific link to forced displacement}

Moving from broader migration to forced displacement, one recent study found that climate risk could be used to predict forced displacement, but only after omitting conflict from the model, which seems to confirm that climate and environmental factors work through conflict to affect displacement. The link to displacement is the way that climate change interacts with conflict dynamics as described in the previous section. Similarly, it has been highlighted that 80% of forcibly displaced people “originate from countries


\textsuperscript{85} C. Sturridge and K. Holloway. 2022.

\textsuperscript{86} UNISS. 2022. Moving from Reaction to Action Anticipating Vulnerability Hotspots in the Sahel. Available at: https://reliefweb.int/report/burkina-faso/moving-reaction-action-anticipating-vulnerability-hotspots-sahel
on the frontline of the climate emergency". This relationship exists because conflict-affected and fragile countries have weak readiness and capacity to address and manage the impact of climate change. The underlying driver of the displacement (conflict) is also driving the lack of adaptation readiness. Focusing the analysis on vulnerability to climate change, 55% of forcibly displaced people originate from countries that are the most vulnerable. Two thirds of the forcibly displaced people are from countries most sensitive to the impacts of climate change.

The link between displacement and climate change/environmental factors can also be understood as a factor shaping the ability of communities and individuals to cope in the face of instability. But if a natural hazard hits, such as below-average rainfall or the flooding of farmland, livelihoods are destroyed, food insecurity increases and markets are disrupted. Such events can erode the coping capacity of communities to the extent that people are forced to flee. Focusing on countries that experienced conflict-induced displacement in 2020, the most climate-vulnerable countries had a higher share of IDPs than the less vulnerable – 55% and 40% respectively. This is likely due to the resource constraints that can result from environmental degradation, which reduces mobility and thus ability to cross borders in search of safety.

**Impact of climate change on displaced people**

Climate change does not only influence and potentially drive displacement. Displaced people also continue to be exposed to the adverse impacts of climate change. Very limited research has focused on the impacts of climate change on displaced persons, but some evidence is starting to emerge.

Displaced populations often live in precarious and vulnerable situations with limited access to proper housing and services. This increases their exposure to the negative impacts of climate change. For example, in the Sahel, settlements for IDPs and refugees are often in regions with a higher degree of vulnerability to temperature extremes, flooding and drought. As displaced people are often marginalized, their specific needs are rarely incorporated into national adaptation plans, disaster risk reduction measures or climate adaptation projects.

Climate change impacts the displaced through different pathways. A key direct and highly visible impact is on shelter. The Rohingya refugees in Bangladesh mostly live in Cox’s Bazar, which is located on the coast and susceptible to cyclones and storm surges. The camp is frequently impacted by flooding and landslides during the monsoon season, which destroys the shelters in the camp. This climate vulnerability has been exacerbated by the construction of the camp itself, which has led to mass deforestation and soil erosion. Similarly, in Sudan, Ethiopian refugees arriving from Tigray were exposed to severe weather conditions in 2021, including heavy rains, strong storms, severe floods and heat waves, which have destroyed 50% of their shelters and around 2,000 latrines. In 2022, disaster risk reduction efforts by international NGOs and humanitarian partners significantly reduced the impacts of floods in Sudan on Ethiopian refugees. In Africa’s largest refugee camp, Dadaab, which is remotely situated in Kenya, climate change-linked flooding occurs at annual intervals, causing severe harm to the residents. On several occasions, the floods have

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87 UNHCR. 2021. Key Messages and Calls to Action. Available at: [https://www.unhcr.org/61855b574.pdf](https://www.unhcr.org/61855b574.pdf)
88 Using ND-Gain data and definitions. See section on climate change and conflict, where these terms are defined in more detail.
89 S. Schutte, J. Vestby, J. Carling, et al. 2021. Climatic conditions are weak predictors of asylum migration. Nat Commun 12, 2067. Available at: [https://doi.org/10.1038/s41467-021-22255-4](https://doi.org/10.1038/s41467-021-22255-4)
90 UNISS. 2022.
93 Medair. 2022
destroyed hundreds of shelters or washed the shelters away completely, leaving thousands of refugees homeless, and jeopardizing access to food supplies and crucial health care.94

Refugees living in informal settlements in urban settings are also particularly affected by climate change. Many informal settlements are on land unsuitable for settlements and are chosen because residents are less likely to be evicted as the land is unattractive. Housing structures tend to be poor. Living in informal settlements entails elevated risk from most climate change impacts including high temperatures, more intense precipitation, storms, flooding and landslides.95

Displaced populations are also affected by the general liveability of the areas where refugees are hosted and the impact this has on their well-being. A survey conducted among IDPs in two camps in Iraq highlights these aspects. The surveyed IDPs had observed issues such as reduced rainfall (observed by 78% of IDPs), extreme hot or cold weather conditions (62%), dust storms (55%) and recurrent droughts (45%). Of those surveyed, 74% believed climate change affected their life. One of the camps – Hassan Sham – is in an area that is severely affected by drought and heatwaves. The other camp is located in Duhok, which is a mountainous area where the temperatures are less severe. The study found that the residents in the Hassan Sham camp – being more exposed to extreme heat – had reduced ability to concentrate on tasks, socialize and maintain their sleep levels and were more irritable than those living in the less affected camp in Duhok.96 In the Ugandan refugee camp, Nakivale, with refugees from Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Rwanda and Somalia, climate change has been shown to be a reason why some refugees want to leave the settlement they had originally sought refuge in. Many of the refugees here have subsistence-oriented livelihoods, as refugees are typically given a small plot of land upon arrival. However, climate change has made the rainy season unpredictable and farming difficult, leaving those relying on subsistence farming particularly vulnerable to climate change.97

Generally, the way in which climate change may impact solutions for people in displacement has not been explored in great detail. One possible impact would be on limiting the opportunities for returns. Drought-prone areas or areas experiencing frequent extreme temperatures may become uninhabitable and thereby render return impossible. Increased conflict over access to land and water fuelled in part by climatic changes could also prevent return by those displaced due to such conflicts. Local integration, as another durable solution, can also become more challenging. Much of the impact of climate change will be on rural and pastoral households, who will become displaced to urban areas where a lack of transferrable skills makes integration in local labour markets challenging. Many displaced persons typically end up working in the informal sector in urban settings, where labour conditions can be negatively impacted by climatic changes such as exposure to extreme heat, which can also limit certain types of activities and jobs.

Climate change and displaced people in Asia

Afghanistan, Myanmar and Bangladesh have different geographies, histories and social and political make-ups, but in all three countries, conflict dynamics are embedded in structures of social discrimination, which often result in violence against minorities. Poverty is also widespread in all three countries, and a lack of institutional and state support, entrenched social inequalities, and heavy dependence on agriculture make livelihoods particularly vulnerable to climate change. Misguided development projects and land grabs by businesses and political elites further deprive local people.

In those contexts, climate change impacts – from gradual changes in rainfall, to extreme weather events – can overwhelm individuals and communities. That, in turn, can intensify tensions over natural resources, and it can also displace people or encourage them to migrate – though some of the most vulnerable populations cannot move at all. This is a major protection gap that requires more attention.

On the move and at their destinations, migrants and refugees face new risks. Marginalized and often denied any legal status or access to services, many live in hazard-prone areas – in camps or in urban slums – where they are exposed to flash floods, landslides and other hazards. Refugees and asylum-seekers living in cities may also be isolated from humanitarian assistance systems; this is the case for many Afghans in protracted refugee or irregular situations in Iran and Turkey, for instance.

An intersectional lens reveals that social identities such as gender, age, ethnicity and class play key roles in shaping people’s experiences with climate change, migration and conflict. Members of ethnic minorities are particularly likely to be marginalized, excluded from social protections, and even subjected to violence. Discriminatory policies and social norms sharply limit the mobility of Afghan and Rohingya women and girls and limits how much they can protect themselves from climate and disaster risks. Rohingya women and girls are also particularly exposed to violence during and after disaster events.

Climate change and the humanitarian response
Humanitarian response to impact of climate change

Responding to the humanitarian needs arising from climate change is a growing focus in the humanitarian sector but remains at a nascent stage. A review conducted in five countries in 2016-2018 found that of 5,558 proposed humanitarian projects only 99 (1.8%) of the projects were climate-change related. Just 40 of the projects received funding, amounting to a total of USD 184 million over three years, constituting 3.2% of the total project funding (USD 5.7 billion) provided to the five countries.98

Some of the key approaches in the humanitarian sector adopted in recent years revolve around disaster risk reduction (DRR), resilience and adaptation and anticipatory action programming. This essentially reflects a shift from a typical post-disaster or reactive response to a more pro-active pre-disaster response. This is not only a challenge in terms of a mind-shift in the response, but also in as far as it is spanning traditional silos of humanitarian, development and climate activities.99

DRR is a good example of a cross-cutting focus, which seeks to address root causes of humanitarian crises and brings together development, humanitarian, and peace-building efforts. DRR thus represents an opportunity to bridge these different sectors but is also at risk of falling between the gap of those sectors.100 In a similar vein, resilience programming seeks to help people adapt their lives and livelihoods to climatic changes and become more resilient to current and future climate shocks. This can include awareness raising and provision of weather and climatic information, livelihood diversification activities, smart agriculture, and nature-based solutions. An example of resilience programming is the DRC innovative regenerative agricultural initiative ‘Floating Vegetable Garden’ in South Sudan. The floating gardens are contributing to building livelihood resilience to flooding events in the country, which are becoming more frequent and more extreme.

Anticipatory action is in many aspects similar to DRR and resilience programming, but whereas the latter approaches are more generally building the capacity of communities facing vulnerabilities, anticipatory action seeks to support communities ahead of a specific, impending crisis or shock. An integral part of anticipatory action is Forecast-based Financing, which supports anticipatory activities by providing flexible funding towards addressing forecasted crises, rather than existing crises. This approach has been found to be valuable in reducing the risks and humanitarian impacts associated with disaster displacement.101

Lastly, climate change will also impact existing domains of humanitarian action, such as protection, economic recovery, humanitarian disarmament and peace building. For example, conflict mediators need to increasingly integrate climate-informed practices into peacebuilding activities to ensure that conflict parties address the risks related to climate change. Peacebuilding activities can also seek to harness the potential of bringing conflict parties together to collaborate on solving climate-related threats and shocks (see also the chapter on climate change and conflict, above) and how this can potentially spur collaborations.102

100 UNDRR. 2021. Scaling up Disaster Risk Reduction in Humanitarian Action 2.0.
Anticipatory Action to Respond to Drought-Induced Displacement in Somalia

With funding from ECHO, SIDA and the Danish Ministry of Foreign Affairs, DRC has been piloting an anticipatory action model to respond to drought-induced displacement in Somalia. The approach builds on a drought-displacement simulation model that DRC has developed together with IDMC. The model simulates how changes in forecasted rainfall could lead to displacement among pastoralist communities at the livelihood zone level in the future.

DRC has established local anticipatory action committees in three villages in Puntland and, with village representatives, defined the specific actions that the communities can take 4–6 months before a drought hits the community. Based on the defined activities, specific thresholds have been defined to indicate when the activities should be triggered. These triggers and thresholds are based on the simulations from the data model, as well as on data collected from the communities.

By implementing these anticipatory action activities and supporting communities ahead of a drought, the project aims to mitigate and reduce the humanitarian impact of the coming drought, such as by decreasing displacement and food insecurity. The model is also being developed in the Sahel region and DRC are aiming to expand the use of this and other models for anticipatory responses.
Environmental footprint of humanitarian aid

The humanitarian response is not climate neutral. The humanitarian system includes an estimated 5,000 organizations and more than 500,000 staff. Responding to the climate-induced humanitarian impacts, such as displacement, therefore generates a significant CO₂ footprint, contributing to climate change. However, there is no existing overview of the carbon footprint of the response and such initiatives are in many cases still in a nascent state. In 2021, a Climate and Environmental Charter for Humanitarian Organizations was agreed based on the initiation by ICRC and IFRC and has now been signed by more than 200 organizations. Signatories commit to prepare for climate change disasters and to reduce their own environmental impacts.¹⁰³

In 2020, UNHCR measured their carbon footprint as part of a wider United Nations effort. UNHCR operations include around 530 offices and 7,000 vehicles. Their operations generated annual emissions of 97,136 metric tons of CO₂ equivalent (tCO₂eq), chiefly generated by office infrastructure, followed by the vehicle fleet and air travel.¹⁰⁴

DRC has developed a tool to measure its carbon footprint. A pilot case in Kosovo showed that 8% of total emissions stems from facilities and vehicles, 66% from purchased electricity and heating, and 26% from business travel.¹⁰⁵ DanChurchAid (DCA) has also calculated its carbon footprint, which reached 1,190 tons tCO₂eq in 2019.¹⁰⁶ DCA then measured their carbon footprint from their 100 years of operations, which totalled 165,000 tons tCO₂eq.

Many organizations, including DRC, Christian Aid and MSF, have committed to reducing their carbon footprint by 50%. DRC has taken a number of initiatives to reduce greenhouse gas emissions and minimize the negative environmental impacts associated with DRC internal conduct and operations. The initiatives include developing a Sustainable Procurement Policy, Green Travel Guidelines and Climate Guidelines for DRC’s own premises and compounds. Further, DRC has signed up for The Clean Energy Challenge – an initiative to provide green and safe energy to forcibly displaced populations. As part of this initiative, DRC will explore new clean energy solutions to reduce use of fossil fuels in operations and across programmes.

¹⁰⁴ UNHCR. 2022. Transforming into a Green UNHCR. Available at: https://www.unhcr.org/615c6c3a4.pdf
Deep Dives

As highlighted in the Future Forced Displacement chapter, some specific hotspots of future displacement are emerging in the forecasts. This section examines the situation in select areas in more detail and considers how the context – conflict, climate change, etc. – is driving the observed displacement trends. The countries of focus have been selected on the basis of the relative and absolute change, year-to-year as well as over the period 2022-2024.
Central Sahel
The Central Sahel region has emerged as a crisis hotspot in the last decade and has become one of the most violent areas in Africa, plagued by political crisis and coups, conflicts, inter-communal violence and violent extremism. Spanning three countries – Burkina Faso, Mali and Niger – the porous borders and dynamics on the ground have seen violence and conflicts spill across borders and worsened the current insecurity epicentre. In 2023, almost 18 million people will require humanitarian assistance in the Central Sahel, up from 12.8 million in 2022.

The crisis in the Central Sahel is closely tied to the fragile political situation in the region. In 2022, Burkina Faso witnessed two coup d’état. In January, the elected President, Roch Marc Christian Kaboré, was toppled by the army led by Lieutenant-Colonel Paul-Henri Damiba. Then, at the end of September, Damiba, who was acting as transitional military leader, was himself removed by the army. The situation has underlined the fractured nature of the security apparatus in Burkina Faso. Tensions between opposing groups in the military remain high, although further conflict between the different sides has so far been avoided due to efforts by traditional, religious and community leaders. The Président of the transition is benefiting from a strong support by youths and public opinion in general. Following the September coup, the Constitution and the Transition Charter were suspended, and both the Transition Government and the Legislative Assembly of the Transition dissolved. In Mali, a military coup in August 2020 removed President Ibrahim Boubacar Keïta and named the civilian Moctar Ouane as new Prime Minister. However, in May 2021 Ouane was removed in a second coup by the military, together with the interim president Bah N’Daw. While Niger has a somewhat more stable political situation and held national and local elections in 2020-2021, it did experience a coup attempt in 2021. Furthermore, the insecurity in the two neighbouring countries, as well as from the Lake Chad Basin, has spilled into Niger and destabilized its border regions.

The political crisis is tightly linked to the governance crisis in the Sahel, where corruption and mismanagement of public finances and rural resources have fuelled public resentment and protests and led to a collapse in service provision in many areas. It also created fertile ground for the growth of insurgency groups in the region, as frustrations have allowed these groups to assert themselves. The weak governance in Mali and Burkina Faso has further hampered the fight against non-state armed groups. Between 2019 and 2021, the number of violent events involving extremist groups more than quadrupled. The violence has not only increased in intensity but also expanded geographically, spilling over into new areas. Two-thirds of the districts in Mali, Burkina Faso and western Niger experienced attacks from extremist groups in 2022, compared to it was less than one third of the districts in 2017.

The violence is particularly intensive in the so-called Liptako-Gourma, the border region between Mali, Burkina Faso and Niger. This is a semi-arid region with limited access to water and other resources, which makes it a challenging place to live. Many of the people in this area rely on agriculture and livestock for their livelihoods, but the harsh conditions make it difficult to sustain these activities. The area has long been a site of communal conflict, particularly due to competing claims over natural resources, such as grazing land and water. Additionally, the region has been plagued by the presence of armed extremist groups, which have carried out attacks on civilians and security forces. From experiencing almost no violent events between 2012-2016, violence started increasing in 2017 and it has now become the

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107 UNISS. 2022.
112 Africa Center for Strategic Studies. 2022.
epicentre within the epicentre of violence in Central Sahel. The region is host to both *Jama’at Nusrat al Islam wal Muslimin* (JNIM) coalition and groups aligned with the Islamic State in the Greater Sahara.\(^{114}\) JNIM ultimately aims to transform societies under their control to abide by their ultra-conservative interpretation of Islam.\(^{115}\) Niger is also facing a threat from Boko Haram and armed banditry spilling over from Nigeria.\(^{116}\) Since 2017, the region of Maradi in Niger has seen armed banditry from north-west Nigeria crossing the border to steal cattle and conduct kidnappings for ransoms. In 2021, 91 abductions were recorded in the area, in addition to several thousand cattle being stolen.\(^{117}\)

Both bandits and extremist groups target civilians in a deliberate tactic to force local communities into submission and cooperation or as a means to spur displacement, giving the extremist groups control of resources and territories. This includes control of revenue from gold and trafficking, which serves as an important source of funding for the extremist groups.\(^{118}\) As an example, since February 2022, armed groups affiliated with JNIM have gained full control of access routes to the city of Djibo in Burkina Faso on the border with Mali, which hosts a population of 89,000 and about 285,000 IDPs. JNIM has effectively prevented entry and exit. The aim of the group has been to force people to abide by their conservative rules and also to use the control strategically in negotiations with the local authorities. The few escorted convoys that bring supplies to the town are often faced with attacks from armed groups that have planted improvised explosive devices (IEDs) along the main entry routes.\(^{119}\) This is a common tactic by extremist groups, which are increasingly using IEDs to control territories and access. United Nations Mine Action Service data, as of 30 August 2022, shows that the average number of IED incidents has increased from 6 per month in 2020 to 8.8 in 2021 and 20.3 in 2022. Attacks on vehicles and convoys, as well as roadblocks, are also becoming more frequent across the region.\(^{120}\)

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\(^{114}\) B. Dakono. 2022. From a focus on security to diplomatic dialogue: should a negotiated stability be considered in the Sahel? Friedrich Ebert Stiftung.


\(^{118}\) Africa Center for Strategic Studies. 2022.


\(^{120}\) UNHCR. 2022.
**Displaced in Djibo.** Since February 2022, armed groups affiliated with JNIM have gained full control of access routes to the city of Djibo in Soum province, Burkina Faso. Armed groups have destroyed a number of water points leaving people in Djibo with access to less than 3 litres of water a day to cover all their needs. The road blockage between Ouagadougou and Djibo means the market has only been served occasionally by escorted merchants’ convoys. Since an attack on the September’s convoy, the market has been severely impacted and almost no supplies have been brought to the city. The population has resorted to eating tree leaves with salt, and even the leaves are missing now. As of 3 October 2022, at least eight children had died of hunger in Djibo. The town is home to 285,000 IDPs, including 57-year-old Belem, who has been living in Djibo for two years since fleeing Souma in Koutoukou, about 150 km from Djibo.

“We were well off in our home village. We used to farm, raise livestock and pan for gold. We were able to provide for our families and our children went to school. My co-wives and I used to come to the market here in Djibo and leave without fear. We fled our home in 2020 following the insecurity, threats, kidnappings and assassinations. My husband was kidnapped, and I have not heard from him since. I don’t know if he is dead or still alive. Following his abduction, we were ordered to leave the village. We left with only two carts, leaving behind our house and our equipment. We walked on foot and slept along the way before arriving in Djibo. We had to abandon many things in a hurry.”

Belem is now heading a household in Djibo of 28 people. This includes 2 co-wives, 9 daughters-in-law, and 16 children, of which 9 are girls and 6 boys. All the men in her family have gone.

“Here in Djibo the conditions are very difficult, and we can’t manage to provide for our families. There are no fields to cultivate, and assistance is rare. At times we have to beg or borrow. Most of the time we receive food and other things from people of good will. It is not easy to depend entirely on people.”
Across Central Sahel, vigilante and self-defence groups have emerged to combat the increasing threat from extremist groups and the inability of the states to ensure safety and stability. The groups vary in terms of their objectives, membership, level of governmental oversight and equipment. 121 In Burkina Faso, local self-defence groups or ‘Koglweogo’ have emerged to combat the extremist groups, which has created a vicious cycle of retaliatory violence between communities. 122 In the absence of state institutions and monopoly on force, these groups become the de facto guarantors of security, and in some cases justice, for local communities. However, these groups also undermine efforts to build state capacity and can become a source of insecurity as they escalate local conflicts. In January 2020, the Government of Burkina Faso created the Volontaires pour la défense de la patrie (VDP), local auxiliary forces made up of civilians that the state armed to deal with the threat from extremist groups. The Burkinabè army is responsible for the VDP, and in some areas the VDP have managed to defend their villages from attacks by extremist groups. However, the creation of the VDP also bears the risk of an increased stigmatization of the Fulani ethnic group. The VDP are widely supported by the public opinion and are seen as true defenders of the nation. Any criticism against VDP actions or reporting on exactions is perceived as an anti-patriotic positioning. Some cases of exactions on civilians and settlements of accounts/gangland killings have however been reported. On the other side, armed groups have warned populations that any community willingly engaging within the VDP would be systematically targeted; and this warning was indeed followed by multiple attacks and blockage on specific communities, cutting thousands of civilians from access to market and basic services. Civilians thus end up being caught in an obligation to choose side by either engaging within VDP or refusing and being perceived as supporters of non-State armed Groups.

In Mali, the transitional Government sought Russian military support, which caused a fallout with international military supporters such as France. The Russian Wagner group in in Mali has targeted civilians in 71% of violent incidents and ACLED has recorded more than 480 civilian fatalities resulting from joint operations involving Wagner and Malian state forces. 123 The withdrawal of French troops has also led to an immediate increase in violence and conflict. After the announcement of the withdrawal in February 2022, the Gao and Ménaka regions in the Liptako-Gourma border region have seen increased activity of Islamic State-affiliated groups that have targeted security forces, self-defence groups and civilians. The armed groups have burned and looted houses, markets and vehicles, and some pastoralists have reported cases of theft or their animals being killed in the fighting. 124 In Niger, communities have established self-defence groups to protect themselves from the extremist groups and banditry. These groups are increasingly organized along community and ethnic lines. 125

As a result of this vicious cycle of violence in the Central Sahel, eight civilians are killed on a daily basis, on average. In 2022, a massacre in Moura, Mali, saw the killing of 300–500 civilians. In Burkina Faso, approximately 79 civilians were killed and over 20,000 people injured in June 2022 alone. 126 Despite the current high levels of violence, the situation is expected to further deteriorate, as all parties to the conflict seem to escalate their level of armed response. 127

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127 WFP & FAO. 2022.
The result of growing insecurity and state failure, characterized by large geographical areas where the state is more or less absent, in the Central Sahel has led to a proliferation of arms, as individuals, households and communities seek to defend themselves. The proliferation of weapons means that small communal conflicts and tensions, such as between farmers and herders, make such conflicts more violent and deadly than in the past. Such conflicts are likely to increase in the future due to climate change. The Central Sahel countries are highly dependent on agriculture as a source of livelihoods for the vast majority of the population, with the agricultural sector employing more than 70% of workers in the Central Sahel. Climatic changes are worsening competition over natural resources. Desertification and changes in the rainfall patterns are altering the routes used by cattle-herding communities, which can bring them into farmlands during harvest seasons. For example, the Inner Niger Delta ecosystem in Mali is a source of livelihoods for farmers, herders and fishermen in the region. These groups are now increasingly competing for insufficient water and land resources. Climate change is not only decreasing the availability of natural resources, such as land and water, but also disrupting use patterns, which brings the different users into conflict. Conflicts are increasingly erupting during start of cultivation, harvesting seasons and during times of departure and return in the seasonal shifting of transhumant animals.

While communities have adapted to climatic changes for centuries, the scale, coexistence, and interaction with other challenges in the region make it very difficult for many. The weak governance in the region further hampers adaption to the changes. While there are several legal frameworks in place to govern natural resources, they have limited impact in practice. Land ownership is not formalized; for example, only about 6% of farmers in Niger and just 1% in Burkina Faso hold land titles or another land ownership document. Therefore, customary and traditional ways remain the primary means to secure land and water rights. In Burkina Faso, 44% of farmers believe it is somewhat or very likely that they could lose the right to use their property or part of it against their will in the next 5 years – 31% of farmers in Mali and 29% in Niger hold the same belief. The ability of local governments to manage natural resources is hampered by a lack of funding, staff, basic office supplies and space. The presence of armed groups also means that local governments often lack the ability to enforce rules and manage natural resources.

The ability to adapt is further hampered by the dire development conditions. Almost 50% of the population in the Central Sahel live in extreme poverty and the countries are at the bottom of indices such as Human Development Index and Gender Development Index. Both Niger and Mali rank among the countries most vulnerable and least ready to adapt to climate change. The wider Sahel region is expected to see an increase in temperatures that is 1.5 times greater than the world average. In a pessimistic climate change scenario, Niger and Burkina Faso would experience a reduction in GDP of 11.9% and 6.8%, respectively, by 2050, compared to a medium-growth baseline scenario. These negative impacts would largely offset annual growth in real GDP and GDP per capita and could lead to a 34% increase in poverty. The climatic changes will particularly impact rural areas, including some of the vulnerable border communities in Niger and Mali.

References:

128 UNISS. 2022.
129 UNISS. 2022.
133 UNISS. 2022.
The impacts of climate change are already being felt. In 2022, Central Sahel experienced significant floodings that lead to destruction of crops and livestock losses. In Mali, 79,000 people, mostly in Tombouctou, Mopti, Koulikoro and Segou regions, were affected by flooding, which destroyed more than 8,200 houses. In Niger, 195 people died and 327,000 were affected by flooding as a result of prolonged rainfall, with the southern regions including Maradi being the hardest hit. Drought conditions have also impacted areas in Niger including the Tillabéri region, northern Tahoua, southern Maradi and Diffa, and together with conflict led to displacements and the disruption of livelihoods.

The combination of political instability, violence and climate changes, as well as significant global inflation, is leading to severe humanitarian needs in the Sahel. During the June–August 2022 period, over 13 million people in the region were projected to be acutely food insecure, including 1.4 million people in ‘Emergency’ (IPC Phase 4). This is almost 50% higher than in 2021. The outlook for Burkina Faso is particularly poor. Emergency food insecurity conditions are likely to persist into 2023 and some households may fall into Catastrophe or Famine conditions (IPC Phase 5). In Burkina Faso, food insecurity adversely impacts, in particular, women, elderly people, people with disabilities, widows and orphans, who find it more difficult to access food. Furthermore, negative coping mechanisms put girls at risk of violence, abuse and sexual exploitation. Food insecurity also has a negative impact on girls’ school attendance, especially among IDPs.

The political climate in the region is worsening because the military response has triggered significant political competition for power. The violence and insecurity result in widespread human rights violations and reduce communities’ resilience. Affected communities experience destruction of their livelihoods, restrictions on mobility and significant human rights violations. Protection monitoring in key areas in the Central Sahel in the first quarter of 2022 showed that 11% of respondents knew survivors of rape. The most common protection incidents are assault and battery, theft/looting, extortion and homicides/murders. Furthermore, more than half of the households interviewed said that their children do not go to school regularly and that schools are often closed due to attacks by armed groups.

The ability to respond to humanitarian needs in the Central Sahel is hampered by the poor security conditions, which impede humanitarian access. Mali is among the five most violent contexts for aid workers, a situation that is particularly driven by JNIM targeting aid workers in kidnapping for ransom – in 2022, 41 aid workers were kidnapped in 16 separate incidents. In both Mali and Burkina Faso, armed groups set up blockades around certain areas, completely restricting the movement of goods and people into and out of these areas.

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137 These numbers also include Mauritania and Chad in addition to Burkina Faso, Mali and Niger.
138 WFP & FAO. 2022.
139 FEWS NET. 2022.
As a result of the violence, more than 2.6 million people in Central Sahel were internally displaced by conflicts by the end of 2022. Most of the IDPs are found along the border areas of Niger, or in the Liptako Gourma region, which includes parts of Burkina Faso, Mali and Niger.\footnote{UNISS. 2022.}

Based on the developments in the Central Sahel, the Foresight model is predicting that the cumulative number of displaced people from the Central Sahel will increase by 300,000 in 2023. The model further forecasts that the number of displaced people will grow by another 250,000 in 2024, a total increase of 550,000 by the end of 2024 (see Figure 5).

**Figure 5. Displacement forecast Central Sahel**

\begin{figure}
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\includegraphics[width=\textwidth]{displacement_forecast}
\caption{Displacement forecast Central Sahel}
\end{figure}
DRC in the Sahel
Across the region, DRC applies a comprehensive approach to respond to the needs of vulnerable and displacement-affected populations, including refugees, internally displaced people and host communities.

We provide lifesaving humanitarian assistance including food and non-food items, shelter and settlement support and water, sanitation and hygiene security; our economic recovery activities aim at strengthening livelihoods and the financial and nutritional resilience of affected populations; we carry out humanitarian mine action; our armed violence reduction activities aim at addressing local conflict dynamics, strengthening social cohesion and supporting the resilience of local communities to armed violence.

DRC reinforces market systems and financial inclusion to enable people and communities affected by displacement to better resist food crisis. DRC is responding to the humanitarian consequences of high pressure on diminishing resources fuelled by population growth, climate change and displacement, by innovative, long-term programming and tailored approach to mitigate the effects of climate change and increase resilience to climate change for populations affected by displacement.

DRC continues investing in access and alliances to expand a principled response in hard-to-reach areas. We collect evidence, monitor violations and document access restrictions to advocate against human rights violation and protect people affected by forced displacement. We also promote conflict sensitivity and work alongside affected communities to make our responses more inclusive.

DRC ensures that youth and women are able to participate in its interventions. We work to reinforce their leadership and influence in community processes; advocate for youth and women inclusion in decision-making processes; and develop programmes to reinforce their socio-economic autonomy.
Ethiopia

Illustration 11: Ethiopian refugee family in the desert, pixel painting, pixel grid, big visible pixels
The humanitarian crisis in Ethiopia escalated in 2020, when conflict erupted in the northern Tigray region of the country. More than 28.6 million people are likely to need humanitarian assistance in Ethiopia in 2023 – the highest in the world.\textsuperscript{145} This is primarily driven by conflict and extreme weather patterns including drought and floods.

The dynamics of the conflict are complex, with a multitude of actors involved: the Tigrayan Defence Forces, composed of Tigrayan Peoples Liberation Front (TPLF) and other allied actors on the one hand, and on the other, the Ethiopian National Defence Force, fighting alongside the Amhara Special Forces (and allied armed groups), as well as the involvement of the Eritrean Defense Force. On 24 March 2022, the Ethiopian Government declared a humanitarian truce, which was reciprocated by the TPLF the next day. The truce led to a cessation of hostilities, but according to Tigrayan actors, despite the truce limited humanitarian supplies were being allowed into Tigray.\textsuperscript{146} Efforts to turn the humanitarian truce into formal peace negotiations floundered and instead fighting broke out again in late August 2022. After the truce was broken, Tigray was quickly attacked on several fronts. In the span of just two months, an estimated 100,000 people died during the battles.\textsuperscript{147} All parties in the conflict in Tigray have been found to have committed violations of international human rights, humanitarian and refugee law, some of which may amount to war crimes and crimes against humanity, according to a joint report by the Ethiopian Human Rights Commission and the UN Human Rights Office.\textsuperscript{148} There are reports of ethnic cleansing, hate speech, arbitrary detention and arrests, enforced disappearances and gender-based sexual violence. At the beginning of November 2022, representatives from Tigray and the Ethiopian federal Government agreed terms to end the fighting. The agreement entailed that the Tigrayan forces are disarmed, federal authority restored to the region and Eritrean forces withdraw. The truce and cessation of hostilities agreement has had a marked effect on the overall number of battle incidents in Ethiopia, which dropped by 30% between 2021 and 2022.

However, the decline of battle incidents in Tigray masks the spike in conflict and violence in other areas of Ethiopia. Since 2019, Ethiopian Government forces and the Oromo Liberation Army (OLA) armed group have engaged in an armed conflict in western Oromia. The OLA was previously the military wing of the Oromo Liberation Front, which has been fighting a low-level insurgency for the self-determination of Oromos for decades. After the March 2022 truce in Tigray, federal forces stepped up attacks in Oromia targeting the OLA. On 18 June, 400 Amhara civilians were killed by armed groups in the Tole and Sene areas. The attackers also burned hundreds of homes and businesses and looted livestock and property. More than 500,000 people are estimated to have been displaced in western Oromia due to the conflict there.\textsuperscript{149} The number of battle incidents in Oromia tripled in 2022 compared to 2021 and was almost at the same level as in Tigray in 2021. Similarly, incidents of violence against civilians almost tripled in Oromia in 2022 compared to 2021 and accounted for about three quarters of such incidents in Ethiopia in 2022 (see Figure 6).\textsuperscript{150}

\begin{flushleft}
\textsuperscript{145} OCHA. 2021.
\textsuperscript{146} T. Yared. 2022. Truce in Ethiopia opens the door to African mediators. Institute for Security Studies.
\textsuperscript{149} Human Rights Watch. 2022. Ethiopia: Civilians in Western Oromia Left Unprotected.
\textsuperscript{150} Armed Conflict Location & Event Data Project (ACLED): acleddata.com
\end{flushleft}
Concurrently, conflict remains active in Benishangul-Gumuz, while there have also been small-scale flare-ups in conflict along the Ethiopia-Sudan border around the al-Fashqa triangle, which could be exacerbated by ongoing tensions over the Grand Ethiopian Renaissance Dam.

Figure 6. Battle incidents and incidents of violence against civilians in Ethiopia 2021-2022 (source: ACLED)

In addition to these broader regional conflicts, violence is also flaring up in the form of intercommunal clashes over border disputes and competition over resources, for example, between West Guji/Oromo and Gedeo/Sidama peoples along the Oromia-Sidama regional border; between Derash and ethnic Konso in the SNNP region; between Afaris and Issa communities along the Somali-Afar border (Sitti zone); and in Amhara region between Qemant and Amhara communities in Central Gondar zone. In late April 2022, inter-religious violence flared in several regions (Amhara, Afar, SNNP, Dire Dawa, Somali) following a series of
attacks against Muslim communities in Gondar town (Amhara) and resulting in the burning of churches, mosques and private businesses. Finally, a new actor has begun to emerge in Ethiopia – Al Shabaab. The Somalian armed group has been making inroads into Ethiopia, in particular into the Somali region, which shares a border with Somalia. In mid-July 2022, about 500 al-Shabaab fighters crossed the border into the Somali region and were able to advance 150 kilometres into Ethiopian territory, capturing several towns. Ethiopian security forces were later able to regain control of the towns, arresting a number of the fighters in the process. However, al-Shabaab continues to pose a growing threat in Ethiopia. In September, several al-Shabaab fighters were arrested in Ethiopia who were allegedly planning to attack hotels, religious festivities and other events, including in the capital, Addis Ababa.

The blockage of access routes during the various conflicts and violence has had disastrous humanitarian consequences as supplies and aid is prevented from reaching people in need. Civilians in Tigray were particularly impacted, being cut off from basic services, electricity, telecommunications, banking services and humanitarian assistance for almost two years.

In addition to conflict, environmental factors have had a severe negative impact on Ethiopia’s food security. The failed rainy seasons in much of the Horn of Africa have also heavily impacted Ethiopia and triggered the worst drought in four decades in many parts of the country. In other areas, heavy rains caused massive floodings. Over million people are living in drought-affected areas. More than 4 million livestock have been lost due to the drought, and the conditions of more than 30 million livestock have deteriorated due to the poor access to pasture and water. The result has been a significant increase in food insecurity, malnutrition, lack of water access and health conditions for the affected populations. During drought, families often have to resort to negative coping mechanisms to survive and there has already been an estimated increase of 51% in child marriages in drought-affected areas. Further, drought-induced displacement has been on the rise as people leave in search of pasture, water and access to services and support. This is most often women and children, while men stay behind and watch over the remaining livestock. The current seasonal forecast for 2023 suggests that the next rainy season, from late March to June, will also see below average rainfall, and as such the livelihoods of pastoralist communities will continue to be heavily impacted. More than 15 million people are projected to be food insecure in 2023. The food needs are expected to peak in June, where there is projected to be widespread Emergency (IPC Phase 4) and Crisis (IPC Phase 3) food insecurity, with some households potentially facing famine conditions. Food insecurity is furthermore driven by the significant inflation in food prices, as the year-on-year inflation rate has consistently been above 30% throughout 2022 and Ethiopia has been one of the hardest-hit low income countries in the world.

There is a link between food insecurity and conflict in Ethiopia. A recent study has found that an increase of 10 days in the year with high temperatures (>37 degrees Celsius) increases the number of food insecure households, on average, by 3% and that the increase of one food insecure household is correlated with a 3% increase of the likelihood of future conflicts at the local level. The most exposed regions to climate security risks are Afar, Somali and Tigray. Projected rainfall patterns for the Somali region indicate that average annual rainfall will increase by 2039, but that the location of the rainfall will shift in a north-

153 FEWS Net. 2022.
westerly direction, away from Ethiopia’s pastoral and agropastoral regions, leading to continued food insecurity and loss of livelihoods.\textsuperscript{156}

As a result of the conflict and violence, more than 4.7 million people were internally displaced as of October 2022. In addition, many people have been displaced by drought and floods. People displaced by the conflict, drought and frequent flooding generally have limited access to food, appropriate shelter and basic services. Displaced Ethiopians face significant protection risks including sexual and gender-based violence, housing, land and property issues and loss of civil documentation. Children’s access to school is interrupted, which will have severe short- and long-term consequences.\textsuperscript{157} Due to the lengthy period of conflict and drought, people’s ability to cope has started to erode, their humanitarian needs have deepened and there has been an increased use of negative coping strategies, such as survival sex and begging.\textsuperscript{158} The conflict in Tigray has not only led to significant displacement, but also to secondary displacement. Given the peace agreement, returns will likely increase, but many people will be returning to areas where critical infrastructure and homes have been destroyed and access to services is limited. Based on the developments in Ethiopia, the Foresight model predicts that the cumulative number of displaced people from Ethiopia will increase by more than 190,000 in 2023. The model further forecasts that the number of displaced people will grow by a further 490,000 in 2024, a total increase of 680,000 displaced people by the end of 2024 (Figure 7).

Figure 7. Displacement forecast for Ethiopia

\textsuperscript{157} OCHA. 2021.
\textsuperscript{158} ACAPS. 2022. Northern Ethiopia: two years into the crisis. Thematic Report.
DRC in Ethiopia
DRC has been present in Ethiopia since 2009 and is present in Addis Ababa, Gambella Region (Gambella and Dimma), Somali Region (Jijiga and Dollo Ado) and Tigray Region (Shire and Mai Tsebri). DRC’s country operations include a diverse range of activities across the emergency and development portfolios, including water, sanitation and hygiene (WASH), shelter and NFIs, multipurpose cash, livelihoods, and a range of specialist protection services including SGBV, Child Protection and Youth Empowerment. As a protection agency, DRC ensures protection is mainstreamed and underpins all programming across its operational areas. With a focus on supporting displaced populations, DRC works with refugees, IDPs, returnees and host communities.

In Addis Ababa, DRC manages protection and livelihoods programming to support the well-being and resilience of Eritrean refugees, as well as returning migrants. In Gambella, DRC provides shelter, WASH, livelihoods and protection support for South Sudanese refugees, with a particular focus on social cohesion. In Somali Region, DRC works with both IDPs and Somali refugees, providing support for protection, including access to justice and legal aid, livelihoods, including drought response, and durable solutions. In Tigray, before the crisis, most of DRC’s work focused on protection and resilience programming for Eritrean refugees in camp settings. Since the onset of the crisis, DRC has re-oriented its programming and is supporting the emergency response, including with protection programmes in the refugee camps (with a particular focus on social cohesion), and for IDPs, NFI distribution and emergency WASH support, including provision of water to IDP sites and hygiene and sanitation services. DRC is also expanding to support emergency risk education efforts. All of DRC’s work in Ethiopia aims to enable vulnerable displaced populations to live in dignity and security.
Special Feature: Ukraine
After years of conflict between Ukraine and neighbouring Russia, the situation escalated in early 2022. The Russian Federation military offensive launched on 24 February 2022 sparked the most rapid displacement crisis in years. More than 17.6 million people are estimated to be in need of humanitarian assistance in 2023 in Ukraine and approximately 13 million are displaced from their homes, either within the country or across borders.

Approximately 200,000 troops entered Ukraine across borders in the south, east and north of the country on 24 February 2022. After making initial progress, Ukrainian military resistance soon slowed Russian Federation advancements. The Russian military focus shifted towards the east and south and away from north and central Ukraine. By August 2022, Ukraine launched a counteroffensive and regained significant territory in the north-east, east and south of the country. In response to the counteroffensive, Russia initiated partial mobilization and called upon 300,000 new troops to join the campaign. Multiple series of missile attacks on critical infrastructure in Ukraine were also initiated. Currently, a diplomatic settlement to the conflict seems out of reach. As such, a protracted war appears to be the most likely scenario.

The conflict has had severe consequences for civilians in Ukraine. As of 2 January 2023, OHCHR had recorded 17,994 civilian casualties in Ukraine: 6,919 killed and 11,075 injured. Most of these casualties were registered in Donetsk and Luhansk oblasts. Civilian infrastructure has also been severely damaged due to the conflict. OHCHR has recorded damage or destruction to 252 medical facilities, 384 educational facilities and 90 places of worship. A survey conducted in Ukrainian found that 11% of respondents indicated that their home had been damaged since the start of the war. Critical infrastructure has also been damaged, which has a severe impact on the civilian population. According to Ukrainian authorities, up to 40% of Ukraine’s energy system has been destroyed. This includes destruction of 30% of the solar generation capacity in the country, damage to 5,000 km of gas pipelines, 3,800 gas distribution facilities, and 200 gas-fired boiler plants, leaving over 236,000 people without gas across the country. In Mariupol, electricity and water supplies were disrupted, impacting over 200,000 people.

The severe impact of the conflict on infrastructure and civilians has disrupted economic life in Ukraine. The Ukrainian economy is projected to shrink by 45% in 2022 and as much as 70% of the country’s population could fall below the poverty line. Public services are heavily impacted as civil servants are among those displaced, leaving authorities and institutions with too few staff to deliver essential services. Furthermore, significant government spending is being allocated to maintaining the military, while public revenue is plummeting.

The war will continue to impact civilians and the economy in Ukraine long after it ends. A rapid survey conducted by DRC only months into the war showed that most respondents believe that explosive ordnance (EO) contamination in their current residences is dangerous. Almost half of the respondents had encountered some type of EO. The State Emergency Services of Ukraine estimate that 174,000 square kilometres of land is contaminated with explosive ordnance. According to the Mine Action Sub-Cluster, over 400 people were reported injured or killed in explosive ordnance accidents between the start of the

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war and the end of 2022. Casualty rates are usually underreported and the actual number is likely much higher.

The massive humanitarian needs of the Ukrainian population are exacerbated during the winter months, when temperatures can drop to -20 degrees Celsius. The heavy impact of the conflict on the economy means that many people are without income-generating activities and will have to choose between heating their homes and meeting other needs. An estimated 12 million people need materials to repair their homes and shelters and are thus vulnerable to the severe winter conditions. This is a particular concern in non-government-controlled areas and in areas where there is ongoing conflict, as there is a high level of damage to infrastructure and disruption of electricity and gas. Considering vulnerability, susceptibilities to winter conditions are most severe in the central and eastern regions. Cold spot impacts will likely be most severe in Kharkivska, Donetska and Dnipropetrovska.

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165 ACAPS. 2022.
166 Data Friendly Space & IMPACT. 2022.
167 ACAPS. 2022.
Mykolaiv: A city without doors, windows and half of its citizens. “The missile hit the block right here at 3 o’clock in the middle of the night,” a woman explains, pointing to the apartment block that has been ripped apart by the blast. “It was back in April and has been like this ever since. There was a 16-year-old boy in his bed next door to the living room. He survived, but both his parents were killed. The boy now lives elsewhere in Mykolaiv with his grandparents,” the woman explains. She lives nearby and is at the site with her newly returned niece and the niece’s daughter who have come back after several months in Bulgaria.

Scarred by nearly a year of war, Ukraine’s southern city of Mykolaiv and its remaining residents are struggling through a winter of freezing temperatures, darkness and despair. For many, the main aim is to get through the day and organize practicalities – finding drinkable water, staying warm, sourcing food, and hoping for electricity to heat water, charge phones and connect with loved ones near and far from home.

From surviving in basements in Ukraine to safety in Moldova. “There was constant bombing. We heard the rockets nearby and a garage close to our place was destroyed. In our nine-story block, where our apartment is, we ended up spending most of the time in the basement where it was dark and cold even back then. It was too much for my grandmother. She died shortly after we arrived here in Moldova. My husband spent even longer in the basement. Now, he too has left Mykolaiv and taken his parents and my father to a rented apartment in Lviv in western Ukraine where he is looking after them. He is still very much marked by the long time in the basement. Of the first 275 days of war, there were only 30 days without shelling in Mykolaiv.”

For weeks – and in some cases months in a row – underground spaces, storage rooms and small basements in Ukraine are substitutes for bomb shelters. Spending time underground beneath houses, in metros and parking lots are protection measures known all too well across the country after war broke out on 24 February 2022. Millions have been displaced since then – internally and across borders where most refugees are women, children, and elderly people.
The conflict displaced one third of Ukraine’s population of 44 million within the first six months, with about 7 million people fleeing the country. As of the end 2022, the total number of refugees from Ukraine was 7.8 million, while 5.9 million people remained internally displaced. Displacement has particular affected women and those who have left Ukraine are primarily women between 30 to 39 years old with children and elderly parents.\textsuperscript{169} More than 90% of the Ukrainian refugees arriving in neighbouring countries were women and children. Most left in March 2022, to escape the active fighting and hostilities, but also due to fear of being personally targeted, fear of sexual violence, and deprivation of basic needs. Many experienced severe hardship, shooting and bombing as they fled. Close to 20% had to pay someone to be transported out of the country.\textsuperscript{170}

Two thirds of Ukrainian IDPs are believed to be women. IDPs have been particularly vulnerable during the winter as many have precarious living arrangements. Some IDPs are hosted in stadiums, churches, schools and kindergartens, which are ill-equipped to serve as longer-term accommodation or as suitable shelter during the cold months. The shelters suffer from crowding and increase the risk of gender-based violence.\textsuperscript{171} According to the findings of DRC Protection Monitoring conducted between October and December 2022, more than 75% of monitored households reported experiencing safety and security threats at the moment of displacement, while 58% of IDPs highlighted shelling or fear of shelling as their main safety concern. It is to be noted that 23% of IDPs reported actually experiencing these threats in the location of their displacement. In Kharkivska Oblas, IDPs interviewed by DRC teams identified the elderly, children, persons with disabilities, and persons with low mobility as the most vulnerable groups, as they cannot easily access assistance or services. Reduced accessibility to assistance and services had a particular impact on persons with limited mobility. For children, the emotional and psychological effects of the current situation, coupled with the social isolation of online schooling, were recognized concerns. Overall, the vulnerable groups reside in locations where state social workers are under-resourced and cannot provide assistance in all districts and in all facilities.\textsuperscript{172}

The continued shelling and air strikes causes security concerns for the movement and delivery of aid services. Especially active hostilities at the contact line, put lives at risk both for civilians and aid workers.\textsuperscript{173}

Despite the difficult situation, there have been significant pendular movements of both IDPs and refugees. As of 5 December 2022, there had been approximately 5 million returnees.\textsuperscript{174} Ten months into conflict, only one-third (33%) of IDPs interviewed by DRC had clear intentions to return, while the rest had not decided when to return or whether to return at all. 55% of interviewees were looking to integrate locally and about 4% expressed intention to move abroad. For those who were planning to return, their decision making was primarily influenced by the safety situation (as reported by 49% of respondents), restoration of infrastructure (16%), accessibility of location - linked to security situation (13%), accessibility to basic services, such as health, education, access to utilities, etc (18% cumulative) and restoration of housing

\textsuperscript{169} K. Odarchenko. 2022. Will Ukrainian Refugees Return Home? Kennan Institute, Wilson Center.
\textsuperscript{170} EUAA, IOM and OECD. 2022. Forced displacement from and within Ukraine: Profiles, experiences, and aspirations of affected populations.
\textsuperscript{171} International Crisis Group. 2022.
\textsuperscript{172} DRC. 2023. Protection Monitoring: Ukraine
\textsuperscript{174} IOM. 2022.
This underscores the needs for mine clearance as vast swaths of land are contaminated endangering the safety of returnees as well as those have stayed behind. A survey of Ukrainian refugees suggested that 24% want to return, but will wait for a certain time; 48% will return after the end of the war; and 8% said that they would not return home. If the active phase of the war lasts for a year or longer, even more people will leave the country, for family reunification purposes and for other reasons. At least 5 million refugees are not expected to return home.\footnote{176}

The future Ukraine displacement situation is difficult to forecast. It could either significantly increase or decrease, according to DRC’s Foresight model. Based on the model, the most realistic development is that, in 2023, there will be a decrease (750,000) in the number of displaced people due to returns, but this will be offset by an increase in the number of displaced people in 2024 (Figure 8). As such, the situation is likely to become a protracted displacement crisis, where the number of people in need of humanitarian assistance will remain high for years to come. The International Centre for Migration Policy Development expects an inflow of between 500,000 to 4 million Ukrainian refugees into the EU in 2023.\footnote{ICMPD. 2023. Migration Outlook 2023.}

\footnote{DRC. 2023.}
\footnote{K. Odarchenko. 2022.}
\footnote{ICMPD. 2023. Migration Outlook 2023.}
DRC in Ukraine

Operating in Ukraine since 2014 with around 400 staff, DRC delivers lifesaving assistance and emergency response where it is needed most. DRC’s coordination structure around the Ukraine crisis response is adjusted and reinforced to provide for sufficient attention to all elements of engagement. Currently, continuing to contribute to the emergency responses, DRC is developing strategies to respond to needs in Ukraine in the longer term, with activities in four out of five DRC core sectors: Protection, Economic Recovery, Humanitarian Disarmament & Peacebuilding, Shelter & Settlements.

At the onset of the escalation in conflict in February 2022, DRC launched multi-sector support to meet the most pressing needs of Ukrainians. A year later, DRC has now supported over 2.5 million people with support across 23 out of 24 oblasts in areas such as protection and legal assistance, economic recovery, cash assistance, non-food items, humanitarian disarmament and peacebuilding, and shelter.

During 2022, DRC’s Protection Unit has been able to provide support to over 11,000 Internally Displaced Persons (IDPs), conflict-affected people, and host communities. Individual assistance was delivered to people facing protection risks where DRC and partners have worked to reduce or mitigate them. Support has been provided to 32 shelters for IDPs across Ukraine focused on providing people sheltered here with access to necessary equipment and furniture, repairs, and winterisation efforts. In addition, DRC supported Civil Society Organisations that took part in the emergency response covering IDPs’ basic needs such as food, hygiene, and other necessities.

In response to growing legal needs, DRC with 25 local legal aid partners provided more than 20,000 individuals with one-on-one legal counselling, administrative, documentation, and in-court assistance. Nearly 23,000 people received information on relevant rights and entitlements through group awareness sessions. Based on the most prevalent information requests from DRC beneficiaries, DRC, together with partners, developed over 50 types of printed materials on the most pressing legal issues and disseminated them among 43,000 people.

DRC resumed Humanitarian Mine Action activities in April 2022 and the teams have already identified 835,798 square metres of Hazardous Areas, cleared 149,549 square metres of contaminated land, and identified 174 dangerous items for disposal by national authorities. DRC provided personal protective equipment and explosive ordnance disposal kits for 10 State Emergency Service of Ukraine (SES) teams and technical assistance to the Interregional Centre for Humanitarian Demining and Rapid Response. DRC specialists conducted non-technical survey training for 16 SES sta in Chernihiv Oblast and 16 more in Kharkiv Oblast.
Other Countries of Concern
**DRC**

DRC is a longstanding, complex humanitarian crisis, which has worsened in 2022 and is on a negative trajectory. Persistent violence in the east of the country has resulted in grave human rights abuses, massive displacement and significant humanitarian needs.

In March 2022, the armed group M23 re-emerged in eastern Congo, adding to the numerous armed groups already active in the area, including the group Forces Démocratiques pour la Libération du Rwanda (FDLR), whose members include Rwandese Hutu forces responsible for the 1994 Rwandan genocide, as well as a variety of other (Congolese) ethnic militia. The M23 group is well-armed and organized and has been able to take control of several towns in areas close to the provincial capital of Goma, with the Congolese army in turn mobilizing combatants of opposing armed groups. The fighting is taking an increasingly concerning inter-ethnic turn, with widespread hate speech and killings. M23 includes Congolese Tutsis with family and communal ties to Congolese refugees in Rwanda and the group’s re-emergence is closely linked with the Great Lakes region’s long and complex social and political history. The Congolese Government accuses the Rwandan government of supporting M23, while the Rwandan Government accuses the Congolese army of integrating FDLR combatants into its ranks. In December 2022 and January 2023, Congolese fighter jets were accused of violating Rwandan airspace and became the targets of Rwandese missiles. This illustrates the high risk that the crisis could spread across borders and draw in other countries, as bilateral relationships in the region, especially between DR Congo and Rwanda, are becoming increasingly tense.\(^{178}\)

Alongside M23, numerous other armed groups operate in the east of DR Congo; the Ugandan group Allied Democratic Forces (ADF) has been expanding its presence in eastern Congo and with the emergence of M23, DRC armed forces and United Nations peacekeeping forces have been withdrawn from ADF-affected areas, enabling the ADF to expand and consolidate their control.\(^{179}\) As with M23, the regional ties of ADF increase the risk of tensions spreading to other countries in the region, particularly Uganda, where ADF has carried out a number of attacks.

DR Congo has scheduled presidential elections for 2023, which could lead to further violence and instability. The violence in the east could lead to suspension of voting, calling into question the legitimacy of the results, while the political campaigns could fuel the increasing anti-Tutsi and anti-Rwanda rhetoric and intercommunal violence.\(^{180}\) A particular concern is if M23 decides to seek control of Goma, which is home to around 2 million people.\(^{181}\)

The re-emergence of M23 and continued violence by other armed groups continue to exacerbate humanitarian needs and displacement in DR Congo. This comes in addition to other challenges, such as poor economic conditions and a high infectious disease burden, with ongoing outbreaks of cholera, measles, bubonic plague, yellow fever and mpox.\(^{182}\) More than 271,000 people have been forced to flee internally and across the Ugandan border. Civilians are often targeted by armed groups. IDP camps and settlements have also been attacked by armed groups. In June, an IDP camp in North Kivu was attacked by an armed group, leaving seven people dead. Between July 2021 and June 2022, there were more than


16 attacks on IDP camps in South Kivu, North Kivu and Ituri provinces, during which more than 185 men, women and children were killed.\textsuperscript{183} Intensified attacks against civilians by armed groups, or civilian casualties during crossfire, may trigger further large-scale displacements in areas where host communities are themselves struggling to cope. A large majority of displaced people are women and children. They face specific protection risks, such as sexual violence or forced recruitment, in the locality where they shelter or as they flee violence.\textsuperscript{184}

Based on the developments in DR Congo, the Foresight model is predicting that the cumulative number of displaced people from DR Congo will increase by more than 250,000 in 2023. The model further forecasts that the number of displaced people will grow by another 200,000 in 2024, a total increase of more than 450,000 people by the end of 2024.

\section*{Mozambique}

Mozambique is another fast-growing crisis in Southern Africa. The crisis emerged in the northern province of Cabo Delgado in 2017 after, among other events, significant discoveries of natural gas and rubies in the region. The mismanagement of natural resources played into existing discontent over economic and political marginalization in the region, which enabled Islamic State to quickly expand in Mozambique beyond its geographic and ethnic support base. More than 4,000 people have been killed and almost 1 million displaced due to the violence.\textsuperscript{185} The insurgents often resort to looting or burning property and food stores, as well as injuring, killing or kidnapping civilian residents, particularly youth and women, in the areas they attack.\textsuperscript{186}

While the 2021 deployment of military and police from Rwanda and the Southern African Development Community helped to push the insurgents out of key coastal towns, the group has remained in other areas. Violence has spread to the southern parts of the province and into neighbouring Nampula Province, causing a new wave of displacement. As the underlying grievances around issues including marginalization, corruption and human rights abuses have not been resolved, the insurgent group will likely continue to gain local support and rally new recruits and sympathizers.\textsuperscript{187}

The humanitarian needs arising as a result of the crisis in the north of the country are significant. The continuation of the conflict and armed violence continue to drive displacement and deepen the humanitarian needs of displaced people. IDPs find it difficult to flee the country as refugees, as Tanzania, the country nearest to Cabo Delgado, according to authorities in Mozambique have forcibly returned those seeking refuge in Tanzania to Mozambique.\textsuperscript{188} At the same time, the ability of host communities to provide support and services to displaced people is increasingly stretched, given the economic conditions in the country. The conflict has also heightened food insecurity and malnutrition, with families forced to abandon their homes and fields.\textsuperscript{189} About half of the IDPs are children.\textsuperscript{190}

\begin{itemize}
\item \textsuperscript{183} Action contre la Faim, Danish Refugee Council, Magna, Mercy Corps, Medair, Norwegian Refugee Council, Save the Children and Solidarités International. 2022. International NGOs working in the Democratic Republic of the Congo condemn repeated deadly attacks on displaced civilians.
\item \textsuperscript{184} OCHA. 2022.
\item \textsuperscript{188} UNHCR. 2021. Insecurity in northern Mozambique continues to forcibly displace thousands
\item \textsuperscript{189} OCHA. 2022.
\item \textsuperscript{190} N. Cook. 2022.
\end{itemize}
The humanitarian conditions are being compounded by the impact of climate change. In 2019, Cabo Delgado province experienced the worst cyclone in Mozambique’s history, displacing several hundred thousand people and destroying homes and livelihoods. In the last rainy season, more than 1 million people were impacted by extreme weather events, which affected agricultural lands, flooded homes and damaged schools and roads.

Based on the developments in Mozambique, the Foresight model is predicting that the cumulative number of displaced people from Mozambique will increase by more than 200,000 in 2023. The model further forecasts that the number of displaced people will grow by another 118,000 in 2024, a total increase of close to 320,000 people by the end of 2024.

**Myanmar**

The humanitarian crisis in Myanmar escalated in 2022 as the situation severely deteriorated on several parameters. More than 17 million people are in need of humanitarian assistance, an increase from 14.6 million in 2022 and 1 million at the beginning of 2021. Almost half the population is thought to be living in poverty in 2023. Price hikes, severe inflation, movement restrictions, armed conflict and violence have forced many of the most vulnerable people to resort to crisis or emergency coping strategies to buy food and other basic supplies, often negatively impacting on their safety, well-being and dignity. The crisis has spread from specific areas in Myanmar and is now impacting the whole country.

The combination of violence, human rights violations and intercommunal tensions is causing widespread protection challenges for civilians. These challenges include incidents of killing and maiming, reported use of civilians as human shields, aerial bombardment and destruction of properties (including burning). Many communities have to restrict their movements due to the risk of assault, robbery and arrest. The movement restrictions are further hampering livelihood opportunities and people’s ability to meet their basic needs.

Attacks on doctors, hospitals and clinics have crippled the health system, leaving it unable to address the rising humanitarian needs. Food insecurity is also growing as the economy is still suffering from the COVID-19 pandemic, while the Ukraine crisis has contributed to rising food prices, with a 62% year-on-year increase in food prices.

Elections, scheduled to take place in 2023, could become a source of further tensions and conflict, as the legitimacy of the election can be called into question and there is likely to be mobilization of political support along ethnic and communal lines.

With the downward trajectory of the humanitarian crisis, displacement has soared in 2022, with an increase of more than 1 million IDPs. The fighting and destruction of properties means that return options are limited. Many IDPs are left to live in informal sites in the jungle and forest and are severely exposed to the monsoon rains.

In 2022, there was a 360% increase in the number of Rohingya trying to cross the Andaman Sea compared to 2021, according to UNHCR, departing from both Bangladesh and Myanmar. More than 348 people have died or gone missing at sea in 2022, the highest number since 2014. The Rohingya flee the persecution and violence in Myanmar, while those leaving from Bangladesh are fleeing the worsening living conditions,

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192 IRC. 2022.
harassment from government officials and exposure in the settlements to fires, cyclones, floods and landslides.\textsuperscript{193}

Based on the developments in Myanmar, the Foresight model is predicting that the cumulative number of displaced people from Myanmar will increase by 350,000 in 2023. The model further forecasts that the number of displaced people will grow by another 190,000 in 2024, a total increase of almost 550,000 by the end of 2024. The United Nations expects the number of displaced people to increase by 1.4 million in 2023 alone.\textsuperscript{194}

**Venezuela**

Venezuela has been one of the fastest growing humanitarian crises in recent years. In 2023, approximately 13 million people will require humanitarian assistance in and outside the country.

In recent years, Venezuela has faced a severe socio-economic crisis as a result of the political turmoil in the country and economic sanctions. With the onset of the COVID-19 pandemic, the economy further contracted and disrupted water, electricity and gas supplies and telecommunications. At the same time, hyperinflation has eroded household economies, which were also heavily impacted by the pandemic as remittances dwindled and unemployment increased.

With remittances recovering and oil prices increasing, boosting the economy, hardship in the country eased somewhat in 2022. Poverty decreased from 91\% of the population in 2021 to approximately 82\%. Extreme poverty dropped from 68\% to 53\% in 2022. Food insecurity has also declined, with the proportion of the population that has gone a whole day without eating dropping to 14\%, from 34\% in 2021.\textsuperscript{195} The health system continues to be under immense pressure due to the migration of health personnel, lack of clean water and transportation, and shortage of medicines and medical supplies. Regular disease prevention programmes have come to a halt and there has been a significant reduction in child vaccination programmes.

Climate change is also impacting the situation in Venezuela and driving displacement. The country was hit by heavy rainfall resulting in flooding and landslides in October and November 2022, impacting on as many as 26,000 households. In the hardest-hit areas, people have been left without access to food, health care, safe drinking water and sanitation services, and many livelihoods have been lost.

Many Venezuelans who have fled to other countries in the region have found their situation challenging and many have migrated towards the US in search of opportunities and safety. Their route typically goes through the Darien Gap, a dangerous region between the borders of Colombia and Panama that is controlled by criminal groups. People transiting through this area face risks of death, violence, kidnapping and extortion, among others. Between January and August 2022, 102,067 persons entered Panama from the Darien Gap and two thirds of these were Venezuelans. Research from the Mixed Migration Center found that 15\% of women interviewed reported having suffered sexual violence in the Darien Gap. Almost 50\% of the respondents had experienced robbery and about one third had experienced physical violence.\textsuperscript{196} With a recent change in US immigration policy, Venezuelans seeking to migrate to the US risk becoming stranded in Mexico. Many more will choose to stay in their current host countries, where many struggle to

\textsuperscript{193} DRC. 2022. Refugee protection, human smuggling, and trafficking in Bangladesh and Southeast Asia.

\textsuperscript{194} OCHA. 2023.

\textsuperscript{195} H. Marquez. 2022. New Political Agreement Finally Tackles Venezuela’s Social Crisis. Inter Press Service.

\textsuperscript{196} Mixed Migration Centre. 2022. Safety risks in the Darien Gap and assistance needed among refugees and migrants. 4Mi Infographic.
build new lives due to the difficult economic realities and increasing xenophobic rhetoric. Furthermore, Venezuelan returns are becoming an increasingly common challenge. Those returning are often driven by difficulties settling in the host country, combined with the wish to reunite with families and friends and to come back to their homes. Yet many do not see the return as permanent, as they expect they will face severe challenges and may need to engage in back-and-forth movement between Venezuela and other countries in the region.

Based on the developments in Venezuela, the Foresight model is predicting that the cumulative number of displaced people from Venezuela will increase by 180,000 in 2023. The model further forecasts that the number of displaced people will grow by another 550,000 in 2024, a total increase of more than 700,000 people by the end of 2024.

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198 Mixed Migration Centre. 2022. Returning to Venezuela: drivers, expectations, and intentions. Available at: https://mixedmigration.org/resource/returning-to-venezuela/
About the Forecasts

Framework

The Foresight model is based on a theoretical framework that focuses on the root causes or macro-level drivers of displacement (Figure 9). The dimensions and associated indicators have been grouped into five categories:

1. Economy: Covers the economic well-being and equality in a given country
2. Security: Covers the level of violence, different types of violence and fatalities
3. Political/Governance: Covers aspects related to the legitimacy of the state, public service provisions and human rights
4. Environment: Covers aspects related to climate disasters, access to water, agricultural stress and food security
5. Societal: Covers aspects related to marginalized groups, urbanization, size and composition.

Figure 9. Foresight Model Framework

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| | | 2.2 Impact | | |
| | | 2.3 Tactics | | }
| 2. Security | | 3.1 Corruption | | Cost of movement |
| | | 3.2 Rights | | }
| | | 3.3 Institutions | | }
| | | 3.4 Services | | }
| | | 3.5 Access to tech | | }
| 3. Political governance | | 4.1 Disasters | | }
| | | 4.2 Pollution | | }
| | | 4.3 Water | | }
| | | 4.4 Food security | | }
| 4. Environment | | 5.1 Size & growth | | }
| | | 5.2 Composition | | }
| | | 5.3 Urbanization | | }
| | | 5.4 Vulnerable groups | | }
| 5. Societal | | +120 indicators used to measure dimensions | | }

Micro level

Proximate / Precipitating factors

- Access to health care
- Access to education
- Access to social services
- Access to economic opportunities
- Access to political participation
- Access to justice
- Access to food security
- Access to clean water
- Access to electricity
- Access to transportation
- Access to communication
- Access to conflict resolution
- Access to displacement

+120 indicators used to measure dimensions
Data

All data used by the Foresight model is derived from open-source databases. The main data sources include the World Bank development indicators, the Armed Conflict Location & Event Data Project (ACLED), the Uppsala Conflict Data Program (UCDP), EM-DAT, United Nations agencies (UNHCR, the World Food Programme, The Food and Agriculture Organization) and Internal Displacement Monitoring Center (IDMC). In total, the system aggregates data from 18 sources and contains 148 indicators.

The data on forced displacement depends wholly on the information from UNHCR and IDMC. These organizations make an extraordinary effort to collect and verify the numbers. Even so, gathering this data is difficult and the total forced displacement numbers used in the modelling may leave out some people who have been displaced in 2022.

Given that the data is taken from reputable data sources, it is deemed to be highly reliable. However, the data has some shortcomings. Coverage is uneven across geographies and across dimensions. For instance, economic and labour statistics tend to have better availability than governance and violence statistics. Data from institutional providers can often be out-dated and the most recent indicators can be several years old. The data is collected globally.

The system uses several methods to address data gaps. We distinguish between the missing data in the features (or indicators) and missing target variable (i.e., forced displacement). Data with missing target variables is simply excluded from training. For missing values in indicators, we employ two methods. To address data lag, we make indicator projections for each country using an auto-regressive model (i.e. AR(n) model). An auto-regressive model is a time-series forecasting model where future values depend only on previous values of the variable. The ‘n’ denotes the number of lag variables and is determined using a heuristic approach. For cases where data is insufficient, we simply treat it as missing, which is preferable to projecting incorrectly. Intermediate missing values are computed by interpolation.

We follow a simple standardization scheme, intended to keep data-ingestion tasks lightweight. A data transformer is implemented for each of the data sources to ensure that each indicator data point is associated with a country and year. The resulting dataset can be cross-referenced and serves as input to the model.

For training we limit the data to the period 1995-2022, the latest data available for displacement. For cross validation, we use a five-year period: 2015-2022. Following the standard cross-validation set up for time-series data, models are trained on data for the years (1995, y) and predictions made for y+t, where y is in the five-year time period.

Model

The machine learning model employed is an Ensemble. An Ensemble model works by leveraging several constituent models to generate independent forecasts that are then aggregated. Here we employ two gradient-boosted trees to generate the point forecasts. The model hyperparameters were determined by means of a grid search. Each year-ahead forecast has a separate model. In other words, we train a set of Ensemble models for y(t + h) = f(x(t)), where h = 0, 1, 2, 3. The associated confidence intervals were generated by an empirical bootstrap method, where the source error distributions were generated on a retrospective analysis. Model training data was limited to data from 1995 onwards.
Accuracy
The average margin of error of the 188 forecasts made so far is 19%. Overall, 50% of the forecasts have a margin of error below 10% and almost two thirds of the forecasts are less than 15% off the actual displacement.

Figure 10 shows the average margin of error. In most cases, this is evaluated based on the last forecasts for 2015 to 2022. In a few countries, additional years are used in the evaluation, as a maximum going back to 2010. The figure shows both the overall margin of error and the margin of error for the last three years.

Figure 10. Model accuracy across 26 covered countries

Major missed forecasts in 2022 include:
- Ukraine: 0.94 million forecasted vs. 13.8 million estimated displaced
- Myanmar: 2.0 million forecasted vs. 2.8 million estimated displaced
- Somalia: 3.9 million forecasted vs. 4.7 million estimated displaced

Most accurate forecasts in 2022 include:
- Mali: 651,000 forecasted vs. 674,965 estimated displaced
- Honduras: 552,000 forecasted vs. 522,720 estimated displaced
- Yemen: 4.63 million forecasted vs. 4.60 million estimated displaced
Limitations

There are a number of limitations to the model that are important to bear in mind when using and working with the forecasts.

- The model tends to be conservative. Of the current +210 forecasts derived from the model, approximately 60% underestimate the level of displacement for the coming year.
- The forecasts are based solely on data and developments up until the previous year (i.e., 2022). As such, recent developments are not taken into account. As an example, the Ukraine war that erupted in 2022 was not taken into account in the preliminary or final displacement forecasts made for Ukraine for 2022 and 2023.
- Because the model is built around national-level indicators, it does not perform as well in cases where conflict and displacement are largely regionally confined within a country.
- Given the methodology of building on historical trends and patterns, the model generally does not tend to capture unprecedented developments or sudden surges in displacement, such as the Ukraine 2022 displacement or Rohingya 2017 displacement.
- The model does not distinguish between IDPs, refugee and asylum seekers, nor does it forecast where people might move to. The estimations used in the report for future hosting of displaced and number of IDPs are based on the current (2022) distribution of displaced people from the given country.
- The model only captures conflict-induced displacement and as such does not include climate-induced displacement. Climate related indicators are included in the model to capture how such indicators might act as a “threat” multiplier, but where climate is the main cause of displacement this is not included. This is for example the case for the +1 million people displaced by drought in Somalia in 2022.
- The results are the cumulative number of displaced people i.e. the total number of people living in displacement at year-end and not “new displacement”. The model therefore both captures new displacement and returns and as such more people than what is predicted by the model can be displaced over the cause of the year. As such it also does not capture secondary displacements.
- The model only includes data from the given country and is thus not sensitive to developments in neighboring countries that can impact on displacement. This could be the case in spill-over violence or when one country invades another.

2022 displacement estimates

As mentioned in the introduction, official figures for the number of displaced people displaced in 2022 will not be available until around June 2022. The IDP figures are typically released by IDMC in May, while the figures on refugees and asylum seekers are released by UNHCR in June. However, it is possible to estimate the number of displaced persons with a fair degree of accuracy by building on displacement updates being provided. These include:

- UNHCR mid-year displacement figures
- IOM Displacement Tracking Matrix assessment data on IDPs
- UNHCR ‘Situation’ website providing regional data on refugee and asylum-seeker figures for certain crises
- OCHA and UNHCR country operation pages

The table below shows the numbers and sources for the estimates.
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## Annex

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Founded in 1956, the Danish Refugee Council (DRC) is Denmark’s largest international NGO, with a specific expertise in forced displacement. DRC is present in close to 40 countries and employs 9,000 staff globally.

DRC advocates for the rights of and solutions for displacement-affected communities, and provides assistance during all stages of displacement: in acute crisis, in exile, when settling and integrating in a new place, or upon return. DRC supports displaced persons in becoming self-reliant and included into hosting societies. DRC works with civil society and responsible authorities to promote protection of rights and inclusion.

Our 7,500 volunteers in Denmark make an invaluable difference in integration activities throughout the country.

DRC’s code of conduct sits at the core of our organizational mission, and DRC aims at the highest ethical and professional standards. DRC has been certified as meeting the highest quality standards according to the Core Humanitarian Standard on Quality and Accountability.

HRH Crown Princess Mary is DRC’s patron.

To read more about what we do, see: www.drc.ngo