FOR A CLIMATE AGAINST HUNGER

OVERCOMING THE CONSEQUENCES OF CLIMATE CHANGE ON NUTRITION SECURITY, HUMANITARIAN NEEDS AND DEVELOPMENT

POSITION PAPER

ACTION AGAINST HUNGER

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CLIMATE CHANGE AND NUTRITION SECURITY ARE INTERRELATED. ACCORDING TO VARIOUS STUDIES, CLIMATE CHANGE COULD INCREASE STUNTING BY 62% IN 2050 AND LEAD TO AN ADDITIONAL 25.2 MILLION UNDERNOURISHED CHILDREN.

THIS REPORT OUTLINES ACTION AGAINST HUNGER'S ANALYSIS OF THE IMPACTS OF CLIMATE CHANGE IMPACTS ON NUTRITION SECURITY AND HUMAN LIVES, INCLUDING FORCED DISPLACEMENT AND THE CURRENT HUMANITARIAN SYSTEM, AND OUTLINES ACTION AGAINST HUNGER'S POLICY CHANGE RECOMMENDATIONS TO MITIGATE THE CONSEQUENCES OF CLIMATE CHANGE IN THESE AREAS.

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INTRODUCTION

2016 was the hottest year on record *(NOAA 2017)*. The 21st century has brought 16 of the 17 hottest years on record, leading to unprecedented humanitarian needs. In 2016, 96.6 million people needed humanitarian support and funding requirements reached US$22.1 billion *(UNOCHA 2017)*. In Southern and Eastern Africa and Central America, 60 million people were affected by El Niño's droughts and by floods in India and Brazil. Hurricane Matthew took a heavy toll on Haiti. Globally, natural disaster-related damages cost US$50 billion in 2016 to insurance companies[1], and an additional US$125 billion damages were uninsured. This figure has doubled since 2015. According to DARA International *(2012)* climate change is already impeding development. They estimate the cost of the impact of climate change in 2010 at 1% of global GDP or US$700 billion and dramatic cost to human lives: 400 000 death related to hunger and communicable diseases and 4.5 million additional deaths linked to air pollution and cancer.

The humanitarian community has failed to meet these unprecedented needs. Regarding the El Niño response, the funding GAP was close to US$1.7 billion *(UNOCHA 2016)*, and in general, requirements were only funded at about 55% (Siegfried 2016). With ever increasing needs, our collective capacity to respond to humanitarian crises is inadequate, due in large part to lack of funding and access. The perpetually under resourced humanitarian responses demand long term solutions, in order to build resilience of the most vulnerable and thereby avoid or reduce future humanitarian needs. Many discussions have emerged from this assessment, and new guidance and commitments were proposed during the World Humanitarian Summit in May 2016.

As climate change aggravates humanitarian crises, bridging the humanitarian development gap becomes increasingly important. This includes building resilience to reduce needs and supporting sustainable livelihoods to adapt to future shocks. These discussions also highlight the numerous unsolved issues around human rights in humanitarian contexts and particularly with climate change induced displacement.

Action Against Hunger recognizes that the impact of Climate Change could be disastrous and undermine years of progress in the fight against hunger and malnutrition. As a humanitarian and development actor working to eradicate hunger and under-nutrition and meet the sustainable development goals (SDGs), Action Against Hunger is committed to promote policy changes to improve the humanitarian system, international development assistance, and national and international climate change frameworks and initiatives.

ACTION AGAINST HUNGER MAIN RECOMMENDATIONS ON CLIMATE CHANGE

- **International processes, commitments, and funding related to climate change must respond to the humanitarian impacts of climate change and that nutrition security pillars (food security, health security, sanitary environment, mental health and care practices and education) are addressed, with a particular focus on the most vulnerable**
- **All national policies related to nutrition security must account for the impacts of climate change on the respective sectors through the inclusion of appropriate strategies and guidelines to mitigate these new challenges**
- **The humanitarian system must adapt to respond to the increasing and more unpredictable humanitarian needs resulting from climate change. This implies change from States, Donors and Aid practitioners**
- **Human rights and International humanitarian law must be respected in the face of climate change, this particularly applies to forcibly displaced people and people threatened by climate change and the measures taken for its mitigation or adaptation**

This report aims at giving a complete and coherent picture of Action Against Hunger's theory of change in the above mentioned areas.

1 - Reuters, 7 January 2017: http://www.reuters.com/article/us-disaster-insurance-idUSKBN14O0XG

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CLIMATE CHANGE, INCREASING SHOCKS AND NEW CHALLENGES

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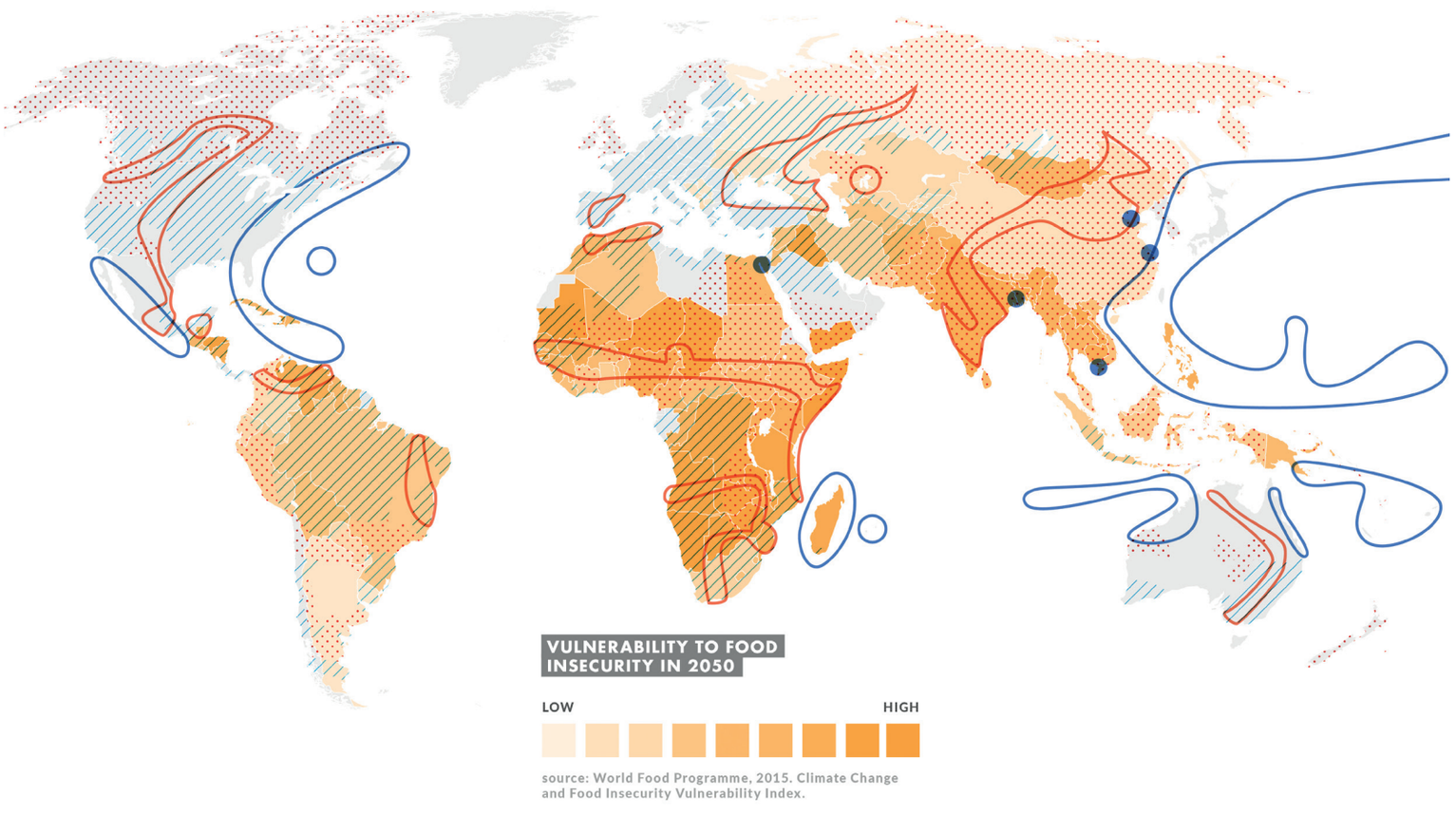
REPEATED SHOCKS AND LONG TERM CHANGES AFFECTING THE MOST VULNERABLE

Unprecedented droughts and increasing numbers of hurricanes, floods and heat waves are the most striking effects of climate change, affecting the poorest and the most vulnerable. These impacts can be partly contained in developed countries, but they take a heavy toll in the least developed countries.

In 2014, UNISDR asserted that 87% of the impacts of natural disasters, including casualties, were climate-related, confirming a 20 year old trend *(UN News 2015)*. These events are expected to become even more frequent and intense, as global warming will lead to more evaporation that may exacerbate droughts and the frequency of heavy rainfall and snowfall events *(National Academies of Sciences 2015)*. According to the Intergovernmental Panel on Climate Change *(2007)*, increasing trends in extreme precipitation and discharge in some catchments implies greater risks of flooding at a regional scale.

Heat waves are already more frequent and more intense. In April 2016, India recorded the highest temperature with 51°C. In 2015, another heat wave killed 3000 people in Pakistan.

FIGURE 1
MAIN IMPACTS OF CLIMATE CHANGE IN 2050



Source: Action Against Hunger 2017

The World Meteorological Organization *(2015)* has confirmed that the frequency and intensity of these events are likely to continue to increase. According to a study published in June 2017 *(Mora et al.)*, up to 74% of the world population could face deadly heat waves of more than 20 days in 2100.

Sudden onset climate related shocks are often accompanied by long term, slow onset changes. These changes are less visible but their impacts are more insidious, depleting livelihoods and general living conditions of hundreds of thousands of people. Glacial melting, seasonal changes in rain patterns, increasing temperatures, rising sea level, soil salinization in coastal area, ocean acidification are occurring worldwide. Climate related events disrupt cropping cycles, sterilize the ground by salinization, decimate herds, reduce access to water, accelerate desertification, shrink fishing stocks and thereby reduce sources of income and push more and more people into poverty. According to the World Bank *(2016)*, climate change could increase the number of poor by 122 million by 2020.

2015-2016 EL NIÑO

Meteorologists agree on the fact that climate change will trigger more El Niño Southern Oscillation (ENSO) extreme episodes and probably more intense ones. In 2015-2016 Action Against Hunger was particularly active on the El Niño crisis which pushed 60 million people into severe food insecurity. The impacts are still felt in 2017. Ethiopia, Somalia, Malawi, El Salvador, India and Indonesia were particularly affected. Action Against Hunger advocated for more emergency funding and long-term policy responses including social protection, preparedness and climate change adaptation.

Climate change is also interfering with other meteorological phenomena such as El Niño Southern Oscillation *(Caj 2014)* or the Indian Ocean Dipole (IOD) as it increases sea surface water temperatures *(Hoell 2016)*. El Niño Southern Oscillation (ENSO) is a major climate disrupter as it affects precipitation and temperature patterns over southern and northern America, eastern and southern Africa, eastern and southern Asia and Oceania. The most recent ENSO events – La Niña in 2010-2011 and El Niño in 2015-2016 – had disastrous impacts on the most vulnerable, affecting up to 60 million people *(UNOCHA 2016 (2))*. Impacts are still being felt today, especially in Somalia, Ethiopia and Papua New Guinea.

Progressive depletion of natural resources combined with unpredictable rainfall patterns and increased number of shocks has led to deteriorating living conditions and livelihoods of the most vulnerable, particularly small scale food producers *(FAO 2016)* and children and women, and offers a gloomy perspective for those who are already enduring the consequences of climate changes.

A DIRE IMPACT ON NUTRITION SECURITY AND A THREAT TO THE ACHIEVEMENT OF SDGS

UUndernutrition and climate change might seem quite disconnected at a first glance, but a growing body of literature highlights their interconnectedness. In 2015, the Global nutrition Report (IFPRI) dedicated a chapter to the pathways in which climate change affects nutrition, with a particular focus food security, diseases, water and sanitation, among others. In fact, climate change threatens all the pillars of nutrition security.

Climate change has a devastating impact on food security by disrupting local climate conditions *(Rosenzweig 2001, Hansen 2016)* and reducing agricultural output *(IPCC 2007 and 2014)*. Climate change also impacts the nutrient content of crops, especially proteins, iron and zinc *(Myers and al 2014)*, per-capita availability of fruits and vegetables. This could lead to an additional 500 000 deaths per year in 2050 *(Springmann 2016)*, and could push 35 to 122 million more into poverty by 2050 *(World Bank 2016)* and could lead to increases in seasonal and annual variability *(Feng 2013)*. As a result, the UNDP *(2007)* estimates that an additional 600 million people could suffer from hunger in 2080. More pessimistic studies raise this number to 1.7 billion additional people *(Dawson 2014)*.

Sanitation will also be adversely impacted. An estimated 500 million to 3 billion people will face increased water scarcity *(Gosling 2013)* and many will face an increased risk of water contamination *(Hunter 2003)* due to weather related disasters.

Health security is also directly affected by climate change with the increase of waterborne and vector-borne diseases, such as malaria *(Martens 1995)*, dengue *(Patz 1998)*, diarrhea *(Kolstad 2011)* and cholera *(Pascual 2000)*; and has many other health implications *(Patz 2005, McMichael 2006, Costello 2009)*. Also, extreme weather events damage infrastructure and can impede access to health and care facilities *(Watson 2007)*, placing pregnant women and infants most at risk *(Callaghan 2007)*. The World Health Organisation (*2015)* lists the different health implications of climate change as follows:

> *"Excess heat-related mortality; increased incidence of heat exhaustion and heat stroke; exacerbated circulatory, cardio-vascular, respiratory, and kidney diseases; increased premature mortality related to ozone, and air pollution produced by fires, particularly during heat waves; accelerated microbial growth, survival, persistence, transmission, virulence of pathogens; shifting geographic and seasonal distributions of e.g. cholera, schistosomiasis, and harmful algal blooms; lack of water for hygiene; flood damage to water and sanitation infrastructure, and contamination of water sources through overflow; accelerated parasite replication and increased biting rates; prolonged transmission seasons; re-emergence of formerly prevalent diseases; changing*

distribution and abundance of disease vectors; reduced effectiveness of vector control interventions; combined effects of undernutrition and infectious diseases. "

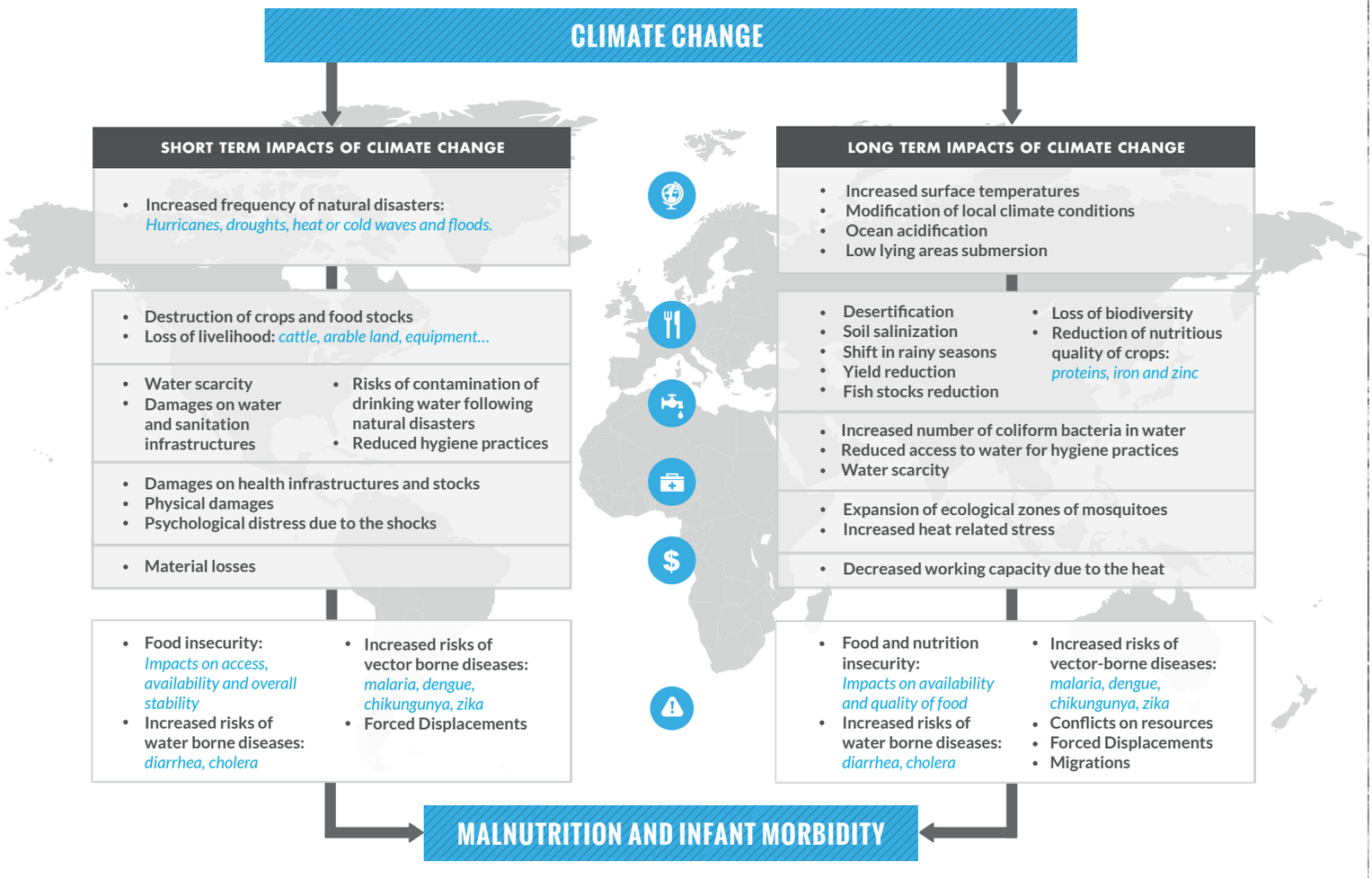
Finally, care practices and education are more indirectly impacted. Indeed, climate change is a trigger for conflicts *(Barnett 2007)*, forced displacement *(Ionesco 2016)* and migration *(Reuveny 2007)*, which lead to more stressful situations, undermining access to education and implementation of good care practices *(Machel 2001, Minoiu 2014, Justino 2012)*.

Climate change thus threatens development gains, particularly women and children who are often the most vulnerable members of society. Moreover, children suffering from malnutrition during the first 1000 days are most likely to become adults with lower mental and physical capacities *(Hoddinott 2013)*, adding a future burden to national economies.

It would also undermine the capacity of states to provide support to the affected populations in order to cope with the impact of climate change *(Barnet 2007)*. According to Ubelejit *(2014)*, climate change would impede development, intensify income disparities between rich and poor, weaken the capacity of states to provide the resources, opportunities and services that will help citizens to sustain their livelihoods, and ultimately lead to state failure.

ALL THESE IMPACTS BEING CONSIDERED, STUNTING COULD INCREASE BY 23% AND 62% BY 2050 RESPECTIVELY IN SUB-SAHARAN AFRICA AND IN SOUTH-EAST ASIA BECAUSE OF CLIMATE CHANGE *(LLYOD 2011)*.
THE NUMBER OF UNDERNOURISHED CHILDREN IN 2050 IS ALSO TO INCREASE BY 25.2 MILLION BECAUSE OF CLIMATE CHANGE *(PHALKEY 2015)*.

FIGURE 2
CLIMATE CHANGE IMPACTS ON MALNUTRITION AND INFANT MORBIDITY PATHWAYS



Source: Action Against Hunger 2017

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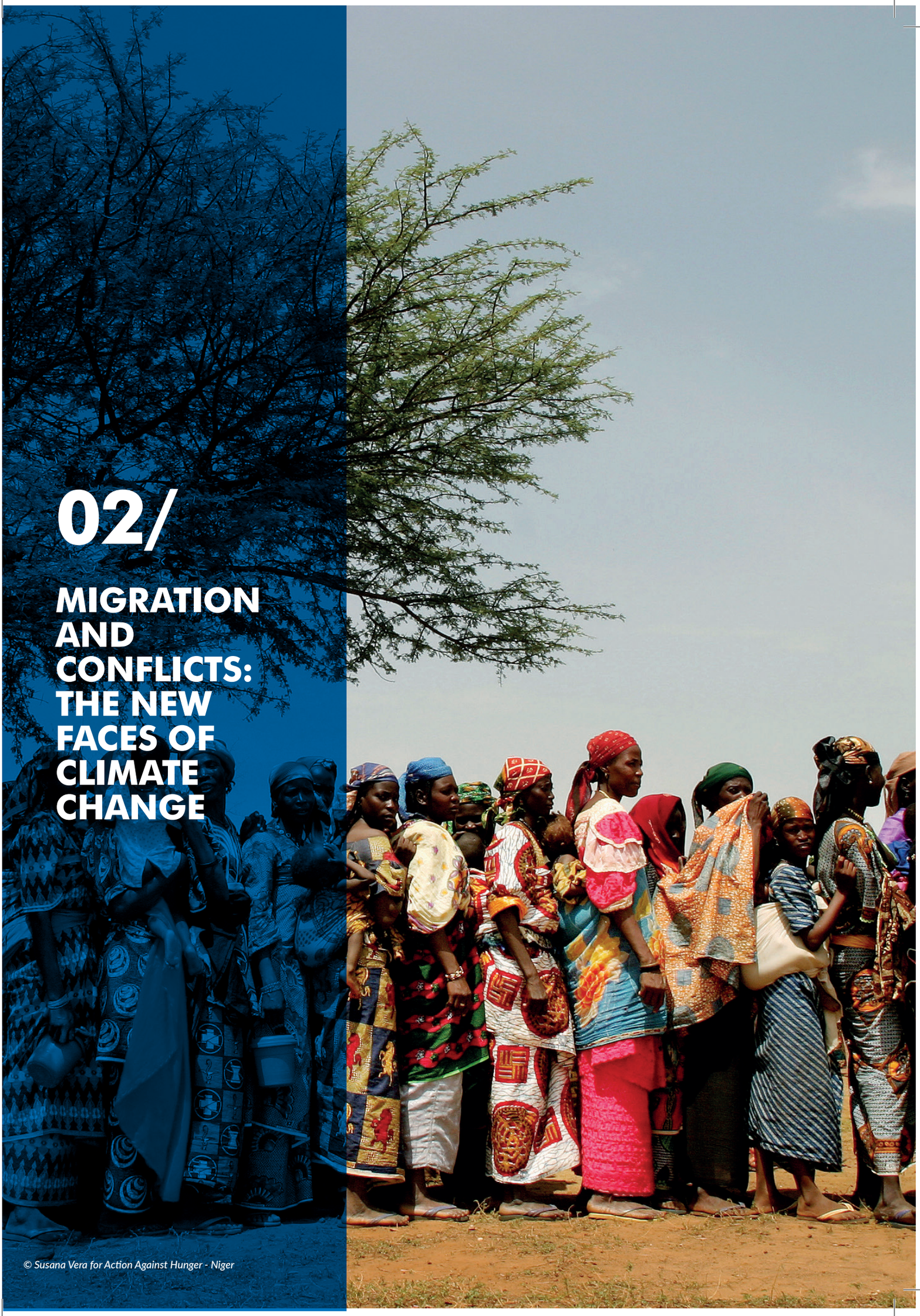
MIGRATION AND CONFLICTS: THE NEW FACES OF CLIMATE CHANGE



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CLIMATE CHANGE IS A THREAT TO HUMAN SECURITY

Climate change is increasingly being considered as a major risk factor for human security, and will play an increasing role in the future *(Barnett 2007)*. Indeed, the degradation of livelihoods and living conditions, and unstable access to natural resources such as water and arable land increases the pressure and competition on existing resources and can induce inter and cross-community violence. Forced displacement can also destabilize host communities and create new tensions as competition of increasingly scarce resources intensifies.

The link between resources scarcity and violence is not new. Thus, warmer years in Africa are associated with higher likelihood of civil war and projections for 2030 suggest a 54% increase in armed conflicts in Africa, resulting in an additional 393000 deaths linked to these conflicts *(Burke 2009)*. Another report from the International Organization for Migration *(2015)* explained the relationship between food insecurity, violence and migration in Central America, identifying climate change as a major source of food insecurity in the region. Agriculture issues associated with climate change have also been confirmed as a pathway for migration in Senegal and Burkina Faso *(Nawrotzki 2016)*. Indeed, migration can be the only coping mechanism in areas where there is a lack of arable land, desertification, no possibilities for irrigation, or a complete loss of livelihood following shocks. Forced displacement or temporary migration can also follow a sudden onset disaster such as a flood that destroys crops and livestock.

As the US National Security Advisor remarks in 2015,

> *"Humans, like every other species on this planet, scatter when their environment can no longer sustain them. As the Earth heats up, many countries will experience growing competition for reduced food and water resources. Rather than stay and starve, people will fight for their survival."*

Migration to find a more suitable place to settle and forced displacement to flee rising sea levels, other natural disasters or conflicts over resources will increase with climate change.

Climate change has notably been indicated as a factor of conflict in Syria *(Gleick 2013, Kelley 2014)*, in Somalia *(Reuveny 2007)*, in Nigeria *(Obioha 2008)* and is forecasted as future source of major conflicts in many other regions, like Central Asia *(Bernauer 2012)* for instance. In all these regions, the combination of conflicts and climate change has led to displacement.

It is very complicated to quantify all the future impacts of climate change on human lives and living conditions. Nonetheless, Myers *(1993)* estimated climate change would lead to 150 million forcibly displaced persons by 2050. He then revised his estimate to 200 million *(Myers 2005)* and finally to 250 million *(Christian Aid 2007)*. This was calculated based on the direct impacts of climate change through resource depletion, desertification, submersion of low lying areas and recurrent weather extremes. Estimating the impact of these population flows on human lives and living conditions, and the vicious spirals it could ignite is impossible. In May 2017, a new study highlighted the links between the climate change induced melt of the Greenland icecap and future drought in the Sahel, which could force 360 million people to leave the region *(Defrance et al)*.

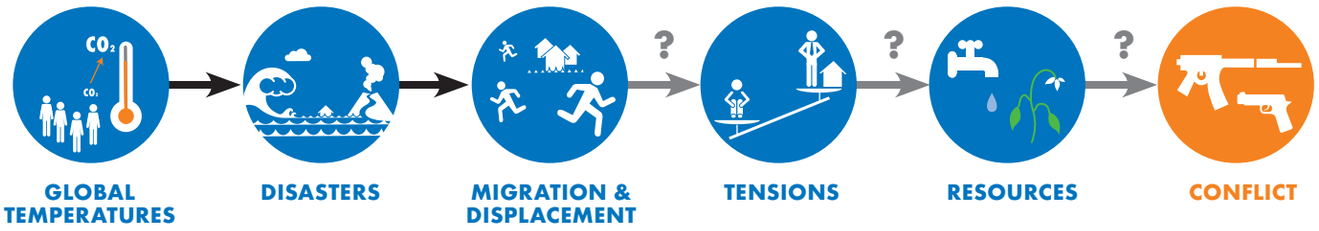
The main difficulty in projecting the real human security impact of climate change lies in the response capacity from states and adaptation measures taken to reduce the potential impacts and needs. Displaced people need to be fully resettled, protected, have their livelihoods rebuilt and be supported with durable solutions *(Jacobsen 2003)*, failing this has negative security impacts. The problem is particularly important in fragile states with limited capacity to host, resettle and support increased numbers of forcibly displaced people.

As this topic is ever more discussed at international levels, a state-led initiative was created in 2012 to address the protection needs of people displaced across borders in the context of disasters and climate change: the Nansen initiative. It evolved to become the Platform on Disaster Displacement (PDD) during the World Humanitarian

Climate change is clearly linked to conflicts, forced displacement and migration. At least four main pathways are identified:

- **Climate change leads to resources scarcity and increased competition,** which leads to violence and conflicts, which can lead to forced displacement;
- **Climate change leads to more natural disasters,** which leads to forced displacement, resettlement and subsequent tensions over local resources, leading to conflicts (see figure 3);
- **Climate change leads to more disasters,** which leads to forced displacement. Displaced people end up in refugee or IDP camps, where they can be recruited by militias and armed opposition groups, fueling existing conflicts.
- **Climate change slowly or suddenly depletes livelihoods and pushes people into poverty.** Poor people are more prone to be recruited by armed groups in order to secure an income, fueling existing conflicts.

FIGURE 3
AN EXAMPLE OF POTENTIAL PATHWAYS FROM CLIMATE CHANGE TO ARMED CONFLICTS



Source: Creation Action Against Hunger, inspired by Ionesco 2016 and UK climate change and migration coalition

Summit in Istanbul, 2016. The PDD's mission is to address knowledge and data gaps, enhance the use of identified effective practices, and promote policy coherence.

In February 2017, the Norwegian Refugee Council (NRC) and the Internal Displacement Monitoring Center (IDMC) published a policy brief explaining the links between disaster risk reduction and displacement. The report presents the multiple opportunities given by the newly adopted Sendaï framework on Disaster Risk Reduction (SFDRR) to address natural disasters and climate change induced displacement. It concludes stating that

> *"Increasing awareness and knowledge sharing on approaches to displacement data collection and displacement–related risks would do much to enable the translation of the Sendai Framework's commitments and aspirations into concrete action."*

UNSOLVED HUMAN RIGHTS IMPLICATIONS

While developing countries justify rising greenhouse gas emissions by the Right to Development, proclaimed by the United Nations in 1986, climate change directly threatens a broader set of rights: physical and mental integrity, health, food, water, property, education, healthy environment; and involves others, such as migrants' rights, international humanitarian law, right to relocation, and ultimately, the right to life.

Climate change can have a great impact on human rights and protection of people on the move. A refugee, according to the 1951 Geneva Convention, is

> *"someone who is unable or unwilling to return to his country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion."*

Some key principles accompany this definition: non-discrimination, non-penalization and non-refoulement to the country of origin for individuals with the refugee status. However, this definition does not include people fleeing an imminent or unfolding natural disaster, the complete desertification of their territories, the loss of livelihood subsequent to climate change induced environmental degradation, and more strikingly, the disappearance of entire countries following sea level rise and submersion. This legal definition makes it difficult for people being displaced across international borders due to climate change to have their basic needs fulfilled, to access aid and basic services and to receive protection. It leaves them without a specific legal framework defining their protection needs. Moreover, internally displaced persons (IDP) do not enjoy international protection and their needs and rights urgently need to be addressed, even if some of them may benefit from regional frameworks on IDPs, such as the Kampala convention. But most will not have such possibilities. However the office of United Nations High Commissioner for Refugees (UNHCR) and Office for the Coordination of Humanitarian Affairs (OCHA) developed *Guiding Principles on Internal Displacement*[2] which propose a comprehensive approach to the situation of IDPs and should be taken into account by

2 - http://www.unhcr.org/protection/idps/43ce1cff2/guiding-principles-internal-displacement.html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states when addressing the needs of affected populations.

This is also attested by the United Nations Office of the High Commissioner to Human Rights (UNOHCHR)[3], for whom a profound lack of a human rights based approach to displacements contributes to the on-going migration situation, with people on the move being denied access to services that could answer to their basic needs and to protection. In this respect, **it is important to recall that States have an obligation to respect, protect and fulfill the human rights of all individuals under their jurisdiction, regardless of their legal status.** New solutions, based on needs and humanitarian principles, must be found to assist and protect people forced to flee because of climate change.

In the frame of the Nansen Initiative, the cross border displaced persons *Protection Agenda*[4] has been adopted by more than 100 States in October 2015. This agenda identifies key principles to address protection and assistance needs of persons displaced across borders in the context of disasters. It stresses the necessity to find durable solutions, which includes safe and legal routes to migrate in dignity such as resettlement to a third country, in particular when voluntary and dignified return to the country or area of origin is not possible. The Agenda also focuses on the specific situation and needs of vulnerable groups such as IDPs. It is important that their specific situation is addressed and that their needs are prioritized and fulfilled. Finally, the Agenda touches upon the question of status for people being displaced due to climate change. While it recognizes the absence of clear provisions in international law, it recommends to States to grant visas, temporary entry and stay to people being displaced due to climate change, to prioritize the processing of regular migration procedures for them or to accelerate the review of their asylum application. Although this Agenda is not binding, **it is an opportunity to guarantee that people being displaced due to climate change receive protection and humanitarian aid based on their needs and not on their status.**

Also, as mentioned, links between climate change and conflicts might sometimes be complicated to identify or to prove. Therefore, whatever the root causes of a conflict might be, International Law must be respected (and International Humanitarian Law when applicable) to ensure the affected populations have access to basic services and can fulfil their basic needs, such as food and water security, shelter, health and protection.

3 - http://www.ohchr.org/EN/Issues/Migration/Pages/MigrationAndHumanRightsIndex.aspx
4 - The Nansen Protection Agenda is available here : https://nanseninitiative.org/wp-content/uploads/2015/02/PROTECTION-AGENDA-VOLUME-1.pdf

03/

THE HUMANITARIAN SYSTEM IS UNABLE TO FACE CLIMATE CHANGE

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INSUFFICIENT FUNDING TO RESPOND TO CLIMATE INDUCED DISASTERS AND PROTRACTED CRISIS

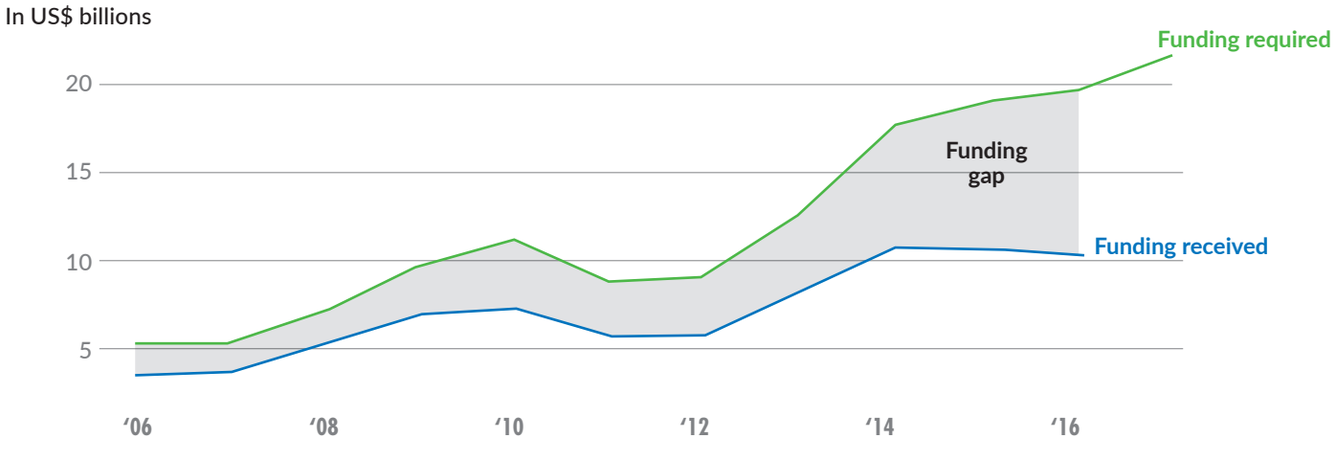
Climate change will increase humanitarian needs in many ways. It is hard to think that the humanitarian system, in its current configuration, will be able to cope with increasing needs. Indeed, the funding gap has been widening during the last decade, from US$1.7 million in 2006 to US$9.3 million in 2016, while humanitarian needs grew nearly fourfold *(Siegfried 2016 – see figure 4)*.

Putting aside the potential role played by climate change in recent conflicts, the main climate related humanitarian crises in 2016 were caused by 2015-2016 El Niño phenomena. From the beginning of 2015 to summer 2016, El Niño conditions over the Pacific Ocean resulted in major disturbance of local climate conditions in various parts of the world: cold waves in Papua New Guinea and in Mongolia, heat waves in India and Pakistan, drought in India, Indonesia, Central America and Eastern and Southern Africa, floods in Brazil and India, etc. The impacts of El Niño depend on local climate and seasons, and other meteorological influences such as the Indian Ocean Dipole (IOD). According to OCHA *(2016)*, the number of people affected by El Niño reached 60 million, with 32 million food insecure individuals in Eastern and Southern Africa only. In Ethiopia, OCHA *(2016)* estimated that 2.36 million children were affected by moderate acute malnutrition and 420 000 by severe acute malnutrition in July 2016. Despite this high figures and the seemingly encouraging global mobilization, the funding gap was huge: 3.1 billion over the US$ 5 billion requested or 62%.

It is thus fundamental to increase funding to respond to these increasing needs. This would allow both national governments and humanitarian actors to respond to the emergency needs, limiting human security impacts and avoiding losing developing gains.

While funding is critical to respond to humanitarian crises, a timely response in the most impacted areas is essential. More importantly though, long term solutions – in which humanitarian and development programs build off each other when the context allows – are fundamental. Furthermore, ambitious policies and programs must be developed in social protection, safety nets, disaster risks reduction, resilience building and climate change adaptation.

FIGURE 4
THE FUNDING GAP, DATA AT 6 DECEMBER 2016



Source: IRIN News based on data from OCHA

EARLY WARNING POORLY TRANSLATED INTO EARLY ACTION

The most recent El Niño crisis was an opportunity to renew well known messages: preparedness, early warning systems and early action are essential to ensure natural disasters don't become humanitarian crises. However, crisis after crisis, the humanitarian actors face a recurring situation: even when early warning systems are effective, response mechanisms fail to respond on time, and donors and governments miss the window to finance a timely response. Late responses lead to lost lives.

Preventing natural disasters from becoming humanitarian crises has been a key pillar of international action since the Yokohama Conference for a Safer World in 1994. The subsequent Hyogo and Sendaï Frameworks of Action for Disaster Risk reduction (HFA and SFDRR), respectively adopted in 2005 and 2015, confirmed its centrality and outlined ways of working and the priorities to develop it. Many of the key concepts have become embedded in the humanitarian vernacular, such as ***"prevention", "preparedness", "early warning system", "emergency response mechanism", "early action", etc.***

A timely and effective response to natural disasters is dependent on early warning systems that are adequately funded and staffed; prevention measures and preparedness tools (contingency plans) that are well implemented, with strong ownership from the local population; effective two way communication between communities and local/national authorities.

Nonetheless, even after 23 years of frameworks for disaster risks reduction, most of the early warning systems remain underfunded and understaffed, national governments tend to wait until crises begin before calling for international intervention, and very few donors have developed flexible funding mechanisms. During the 2015-2016 El Niño crisis, the necessary funding for efficient humanitarian action arrived late, leading to a profound depletion of affected population livelihoods. The last famine in Somalia, following 2010-2011 La Niña episode, led to 260 000 deaths.

Various international initiatives currently propose a renewed vision of these processes: the ***"Early Warning Early Action"*** initiative from the FAO, the ***"Anticipate, Absorb and Reshape"*** (A2R) initiative from the UNSG, the ***"Forecast-based Financing"*** from ICRC and the ***"Blueprint for Action"*** on future ENSO events, designed by the two special envoys from the UN, former President of Ireland Mary Robinson and

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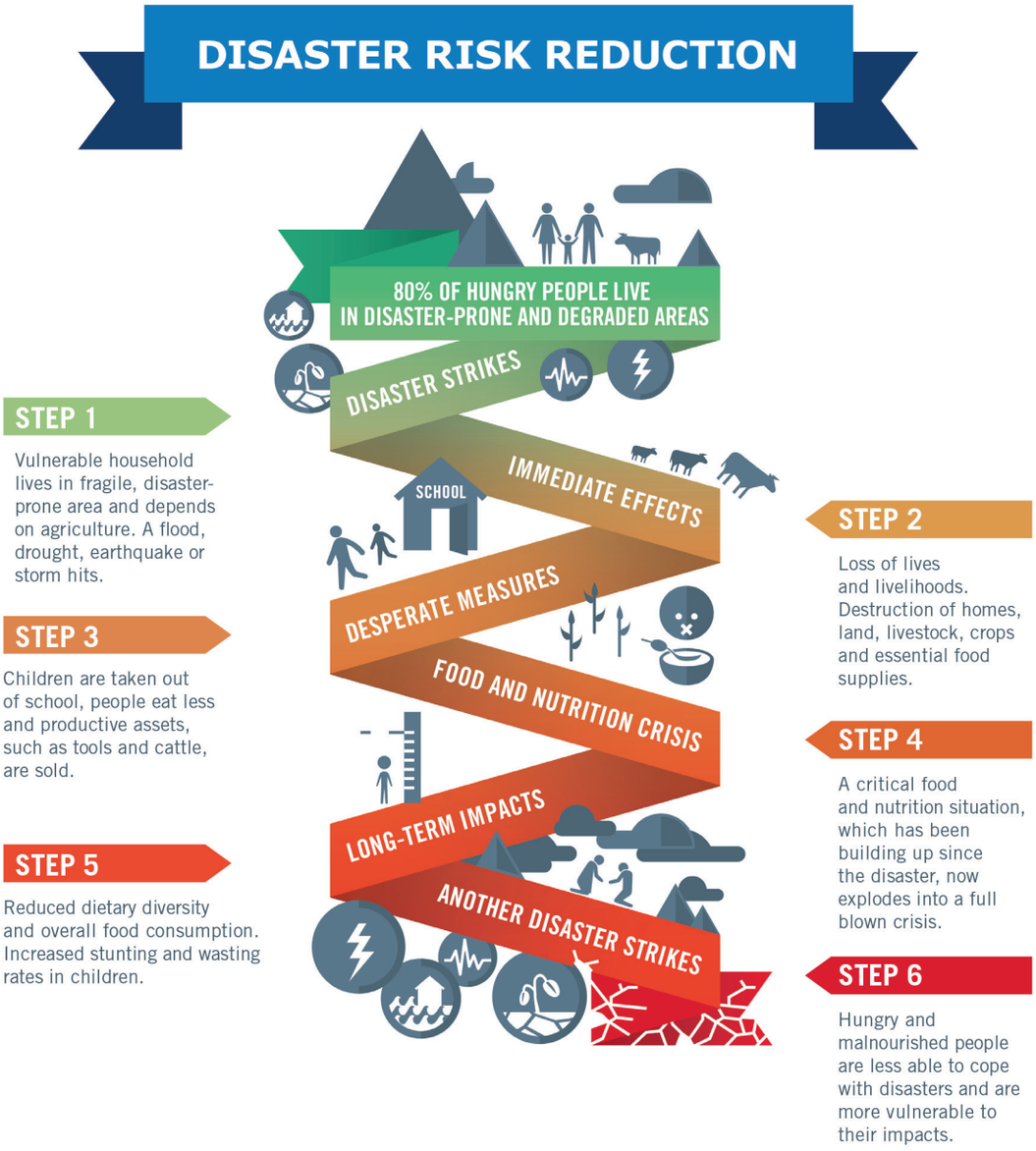
Ambassador Macharia Kamau. The Blueprint was presented during COP22 in Marrakech, recognizing the need to act quickly, in the context of climate change.

Indeed, climate change increases the risks of disasters and their impacts on the most vulnerable. The adjacent infographic developed by the World Food Program in 2015 clearly explains the relationship between climate change, disasters and humanitarian crisis.

On this regard, the Warsaw International Mechanism, an organ of the UNFCCC created in 2013, is working on a way to consider loss and damages caused by climate change to affected populations, including non-economic losses.

FIGURE 5
DISASTER RISK REDUCTION AND FOOD SECURITY



Source: Word Food Program, 2015

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A WAY FORWARD TO ENDING NEED

© Alicia Garcia for Action Against Hunger – Mali

Although climate change and the resulting challenges were not key themes within the World Humanitarian Summit in May 2016, one of the key outcomes was a more deliberate focus on building bridges between humanitarian and development actions.

THE NECESSARY ALIGNMENT OF FRAMEWORKS AND AGENDAS FOR DEVELOPMENT

Many international agreements were adopted in 2015 and 2016. These commitments and agendas could transform how we respond to development and humanitarian needs worldwide: the Sendai Framework of Action on Disaster Risk Reduction in March 2015 – which develops the actions to be undertaken in order to prepare and prevent the risks of natural disasters becoming humanitarian crises; the 2030 Agenda and its 17 Sustainable Development Goals in September 2015 – which sets a pathway to eradicate poverty in all its forms; the Paris Agreement on Climate Change in December 2015– which defines new goals for climate action, including ending poverty and ensuring food security, from 2020 onwards; and the World Humanitarian Summit in May 2016 – which developed commitments and a new Agenda for Humanity aiming at preventing and reducing human suffering.

These agreements and commitments share numerous converging goals. In order to fulfil them, it is fundamental to make sure their targets and indicators are aligned and they collectively outline inclusive and holistic pathways to end humanitarian crises and underdevelopment.

Climate change advocacy can influence these processes in two ways: 1) making sure the roll out of Paris Agreement fully integrates the topics, goals, and targets of the other agendas and 2) increasing the understanding of the transversal nature of climate change in all the humanitarian and development agendas.

At COP21, every Party to the UNFCCC submitted an Intended Nationally Determined Contribution (INDC) detailing what the country was aiming in terms of reduction of green house gas emissions (mitigation) and preparedness and prevention against the impacts of climate change (adaptation). This document proposes a nationally determined roadmap to climate action based on each country's capacity and specifying the necessary external support to reach it. If many of these INDCs consider food security as a priority, water, nutrition, disaster risk reduction and health are seldom mentioned. Parties to the UNFCCC will have to submit a new version called Nationally Determined Contribution (NDC) at COP24 in 2018 and should revise them on a 5 years basis.

This has a very strong resonance in national policies, where silos often impede cross-sector interconnections. Climate change adaptation and Disaster risk reduction are cross-sectoral topics and it is fundamental that public policies related to agriculture, food security, nutrition, health, rural development, water and sanitation, economic development fully consider these topics and offer a coherent set of policies, allowing inclusive development and nutrition for all.

SCALING-UP A PRINCIPLED ADAPTATION FOR SUSTAINABLE LIVELIHOODS

With a + 2°C scenario, the economic cost of climate change impacts could reach US$ 74 trillion by 2100 (Ackerman 2006). Developing countries will face the biggest impacts and will most probably have more difficulties to face the destruction of infrastructure and production means and the consequent losses of GDP; not counting social or non-economic losses such as those linked to culture or wellbeing or even to undernutrition, disabilities and death.

Timely and well-designed adaptation actions have the possibility to avoid these dramatic issues by mitigating the impacts of climate change on the most vulnerable through preparedness, risk reduction, both applied to the livelihoods and the organization of society. Nowadays, adaptation is clearly underfinanced. Contrary to mitigation, it doesn't consist in major infrastructures and attractive construction sites. Adaptation is about education, access to knowledge, but also experience sharing, norms, income diversification... and sometimes relocation, protective infrastructures, etc. Therefore, adaptation is not considered as a domain to invest in, but more as a bottomless pit. Adaptation remains underfunded: by donors who are reluctant to allocate sufficient grants and by states who are reluctant to take loans to finance it. In 2013-2014, only 16% of climate finance was dedicated to adaptation according to Oxfam (2016) while the Paris Agreement stipulates that adaptation and mitigation finance should be balanced. Adaptation finance must be increased quickly in order to avoid lasting damages, to the economy of developing countries and most of all, on the lives of the most vulnerable.

Nonetheless, increasing adaptation finance alone won't solve all the adaptation issues. For the time being, the Least Developed Countries Funds (LDCF – GEF) has mostly been used to finance consultation and the edition of NAPAs, and many other "adaptation funds" were used for NAPs and INDCs... missing the target of alleviating the burden of the most vulnerable. The 13 funds with dedicated funding to adaptation have altogether approved US$4.16 billion of projects; but only 24% has actually been disbursed so far *(ODI 2016)*.

Principles must be developed to ensure adaptation-oriented finance reached those who need it the most and actually

strengthen their livelihoods and build their capacity to face the adverse impacts of climate change.

Farmers, breeders and fishermen are the first to suffer the impacts of climate change and should receive a particular attention from adaptation policies and finance. In the face of climate change, these particular livelihoods are confronted to a triple challenge: adapt to climate change, produce enough food to ensure food security and reduce their environmental footprint, greenhouse gas emissions first, in order not to reduce there contribution to climate change. For these livelihoods, diversification is a key pillar to sustainability. In agriculture, the most appropriate way is the agro-ecological transition. It proposes a pathway to the optimal use of available resources, a reduced need for chemical pesticides and fertilizers and fossil fuels, it also reduces the dependence of farmers to suppliers, and their financial risk in case of crop failure. A co-benefit of these practices is the storage of carbon dioxide in soil organic matter and the drastic reduction of methane and nitrous oxide emissions, respectively 25 and 298 times more impactful than carbon dioxide as greenhouse gas.

Adaptation-oriented policies, finance and initiatives must develop clear criteria and principles in order to avoid miss-adaptation and make sure they target the most vulnerable and contribute to sustainably ensure food security and nutrition for all.

A CONDITION TO ACHIEVE 2030 AGENDA: STAYING BELOW THE 1.5°C THRESHOLD

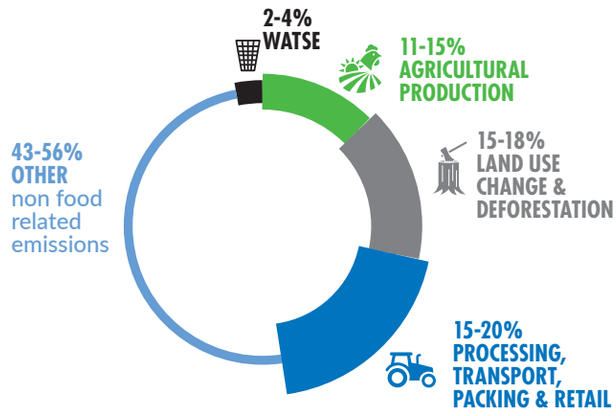
As described above, the impacts of climate on nutrition and human security are huge. They are already felt throughout the world by the most vulnerable communities and will increase while emissions and greenhouse gas keep growing, and a long time afterwards. In 2016, the atmospheric concentration of GHG reached 400ppm[5] in CO_2 equivalents. Giving the current trends of emissions and the pathway given through the INDCs, global temperature should exceed 3°C by 2100 and could keep increasing during the following centuries, as climate slowly adjusts to the high CO_2 concentration.

With only 1.1°C warming since pre-industrial era in 2016 *(WMO 2017)*, the impacts of climate change are dreadful. If we want to achieve the Sustainable Development Goals and nutrition security for all, it is paramount to make all the effort possible to stay in a world below 1.5°C. This supposes major cuts in emissions from all the sectors of the economy: energy, transport, industry, services and the land sector. Cross-sectoral domains, such as food systems must receive specific attention.

According to some estimates, food systems contribute to up to 57% of GHG emissions *(GRAIN 2011)*, when including all the steps from manufacturing the inputs and deforestation down to waste management through crop production, animal rearing, food processing, transportation and distribution. First victim and main contributor to climate change, the food systems must be completely reshaped in order to drastically reduce its emissions. Agroecology offers solutions to this challenge, putting food and nutrition back at the center of development issues *(IPES FOOD 2016)*.

FIGURE 6

CONTRIBUTIONS OF FOOD SYSTEMS TO GLOBAL GREENHOUSE GAS EMISSIONS



Source: GRAIN 2007. The forgotten link

The land sector is ever more pressured to provide offsets for greenhouse gas emissions (carbon markets). Offsetting prevents big emitters from deeply modifying their practices to reduce emissions through compensation. However, storing carbon in trees and in the soil is non-permanent and reversible: both practices and uncontrolled events can reverse the storage of carbon. Indeed, microbial activity due to heat could release 55 trillion kilograms of CO_2 by 2050 *(Crowther 2016)*, tillage is also renowned for its negative impact on soil carbon *(Lal 2004)*, insect outbreaks were identified as major factor of CO_2 releases from forests *(Kurz 2007)*, along with forest fires and drought *(Birdsey 2011)*. Agroecology is a way to contribute to mitigation while putting famers and food security first.

Action against hunger recalls the need for ambitious mitigation as food security and nutrition will be jeopardized in a warmer world. Nonetheless, mitigation actions should never be done in a way that threatens local communities' livelihoods and food security nor should countries avoid mitigation in agriculture under the pretext of safeguarding high GHG emissions food production systems.

5 - ppm = parts per million

MAIN RECOMMENDATIONS

POLICY CHANGES MUST HAPPEN AT MANY LEVELS. FOLLOWING THE PREVIOUS EXPLANATIONS AND EVIDENCE BASED IMPACTS OF CLIMATE CHANGE ON NUTRITION SECURITY AND HUMANITARIAN NEEDS, AAH PROMOTES THE FOLLOWING CHANGES.

01/ RECOMMENDATION ON
CLIMATE CHANGE AND NUTRITION SECURITY

- **Parties to the UNFCCC must engage in ambitious climate action,** through Nationally Determined Contributions and national policies which set a way to reach the 1.5°C target, while promoting nutrition security and human rights. The NDC revision should be transparent and inclusive in order to consider the needs for adaptation of the most vulnerable.
- **Parties to the UNFCC must consider agriculture and food systems** in a comprehensive way, including adaptation, reduction of greenhouse gas emissions, ensuring food security and achieving good nutrition and the overall SDG2. This could be done through a joint work program between the Subsidiary Body for Scientific and Technical Advice and the Subsidiary Body for Implementation.
- National policies, international commitments and overseas development strategies related to all nutrition security-pillars and involved sectors, such as agriculture, rural development, water, public health and education **must take into consideration the future impacts of climate change** at the relevant scale. This is the only way for these policies to achieve a lasting impact on the most vulnerable. This involves systematic mainstreaming of adaptation to climate change and disaster risk reduction.
- **The most vulnerable,** and particularly small scale food producers, **must be at the heart of agriculture and climate change policies** as they are the corner stone of food security and sovereignty. Available funding for adaptation to climate change must be increased, especially grants, and criteria for its best use must be defined.
- **Agroecology must be promoted in agriculture and rural development policies and strategies** strategies as it is the best answer to the triple challenge of agriculture: adaption, mitigation and food and nutrition security.

02/ RECOMMENDATION ON
CLIMATE CHANGE AND THE HUMANITARIAN SYSTEM

- States, donors and Aid practitioners must fully take into consideration **the current and future impacts of climate change on humanitarian needs and risks.** This is the basis for strategic planning, policies and the allocation of adequate resources.
- **Preparedness, disaster risks reduction and mitigation, along with social protection and safety nets must be promoted at national and local levels,** in agreement with the World Humanitarian Summit 2016 (WHS2016) recommendations and the Sendaï Framework for Disaster Risk Reduction (FDRR).
- **Innovative funding mechanism must be developed in order to improve the response capacity of States and donors** in case of sudden onset disasters and slow onset crisis..
- **Funding available for emergency response must be increased in order to fill the existing gap and prepare for increasing needs.**

03/ RECOMMENDATION ON
CLIMATE CHANGE CONFLICTS AND FORCED DISPACEMENTS[6]

- **States and United Nations institutions must consider climate change as risk factor in destabilization, violence and conflicts.** Therefore, conflict prevention and stabilization approaches must take into consideration climate change mitigation and adaptation measures.
- **Parties to the UNFCCC must recognize the impact of climate change on forced displacements** and address needs for protection through long term and sustainable solutions.
- People on the move should **receive protection and humanitarian aid** based on their needs and vulnerabilities, regardless of their status and of the initial cause of displacements.
- **States must ensure that vulnerable people**, such as women, children, Internally Displaced People **receive adequate level of protection and that their specific needs are fulfilled.** In particular, States must ensure that the situation of IDPs due to climate change is addressed in national and international laws and policies, such as in the Kampala Convention.
- **States must facilitate regular, safe and dignified migration** as a mechanism to cope with the effects of climate change. Although climate change induced displacements do not lead to the refugee status, hosting countries must admit people on the move due to climate change and give them protection, as stated in the Kampala Convention and the Guiding Principles on Internal Displacement.
- After the event, **host countries must ensure that the decision to return people is based on evidences** and a thorough and neutral impact assessment of the country's situation following a climate event and its abilities to develop adequate and humane reception conditions.
- When return is not possible, **States must guarantee that displaced people have access to durable solutions** (e.g. renewed or permanent residency in the host country, resettlement to a third country).

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6 - All recommendations take into account the Agenda for the protection of cross-border displaced persons in the context of disasters and climate change available at https://nanseninitiative.org/wp-content/uploads/2015/02/PROTECTION-AGENDA-VOLUME-1.pdf

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