



ACTION AGAINST HUNGER ANALYSIS ON CLIMATE CHANGE AND HUNGER APPROACH

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I. CHALLENGES OF CLIMATE CHANGE FOR HUNGER

Even though different definitions of climate change can be used, in this paper climate change will refer more broadly to the change over a long period of time in climate (precipitation, sea level, temperature and wind patterns) due to natural processes or human activity. The latter refers to activities like the burning of fossil fuels and agricultural practices, which create a greenhouse effect. Meaning that they produce greenhouse gases (GHG), such as Carbon Dioxide (CO₂), Methane and Nitrous Oxide that absorb heat from the sun and trap part of it in the atmosphere, increasing the world temperature.

The UK's Ministry of Defence sees climate change and its impacts such as sea level rise, desertification and extreme weather as a threat to national security and as a leading contributor to global conflicts¹, while climate related risks make up the majority of the World Economic Forum's 2021 threat report².

Currently we are course for 2.7 degrees of warming and many of the impacts are locked in³. Based on this trend by 2040 3.9 billion people will be exposed to major heatwaves by 2040, 400 million will be unable to work, with an additional 10 million deaths per year. There will be up to 50% loss in crop yields, 700 million more people will be exposed to drought risk and there will be increased flooding. The climate crisis is a threat multiplier that will exacerbate existing conflicts and reduce people's capacity to cope with its effects. Increased exposure to shocks widens inequalities within communities, slows economic growth, and reduces the impact of poverty reduction efforts⁴. Due to climate change, or and hydro-meteorological disasters, which include shocks and extreme weather events like droughts, rainfall, tropical cyclones, and heatwaves, are more frequent, severe and/or unpredictable. This has an impact on hunger by increasing vulnerabilities that directly harm natural assets and livelihoods. The resulting pressures on resources, food security, and ecosystems will exacerbate existing social challenges in the poorest regions of the world and bring an additional set of challenges.

Increasingly frequent extreme events and deepening poverty push more will force over 100 million people in low- and middle-income countries below the poverty line by 2030⁵. The number requiring humanitarian assistance will double by 2050. The cost will rise from between USD\$3.5 and USD\$12 billion in 2020, to USD\$20 billion annually by 2030⁶.

¹ Assets.publishing.service.gov.uk. 2021. Ministry of Defence Climate Change and Sustainability Strategic Approach: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/973707/20210326_Climate_Change_Sust_Strategy_v1.pdf

² World Economic Forum 2021 The Global Risks Report 2021 16th Edition. https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf

³ Quiggin, D., De Meyer, K., Hubble-Rose, L. and Froggatt, A., 2021. Climate Change Risk Assessment 2021 The world is dangerously off track to meet the Paris Agreement goals. The risks are compounded. Without immediate action the impacts will be devastating in the coming decades. [online] Chathamhouse.org. <https://www.chathamhouse.org/sites/default/files/2021-09/2021-09-14-climate-change-risk-assessment-summary-quiggin-et-al.pdf>

⁴ Hallegatte, S., Bangalore, M., Bonzanigo, L., Fay, M., Kane, T., Narloch, U., Rozenberg, J., Treguer, D. and Vogt-Schilb, A. 2016. Shock Waves: Managing the Impacts of Climate Change on Poverty. World Bank, Washington, DC. p. 2

⁵ Global Commission on Adaptation, 2019 file:///C:/Users/d.williamson/Downloads/GlobalCommission_Report_FINAL.pdf

⁶ International Federation of Red Cross and Red Crescent Societies, 2019. The Cost of Doing Nothing: The Humanitarian Price of Climate Change and How It Can Be Avoided. IFRC, Geneva. p. 5.

The human and financial costs of adapting to a changing climate are rising. Annual adaptation currently costs USD\$70 billion. Currently it is USD\$30 bn annually⁷, or \$40bn short. By 2030 adaptation costs are expected to be between USD\$140–300 billion⁸. Humanitarian response costs are compounding and each delay costs governments and donors more due to increasingly frequent and intense extreme weather events, and the infrastructure, health and human capital costs and impacts.

The reality of these vulnerabilities caused or perpetuated by climate change is that participants are affected differently across groups based on geographical location, gender, age, ability, and/ or history of social and political marginalization. Women who are head of household within these contexts often have weaker social networks and access to resilient livelihood strategies, impacting access to essential resources like nutrition. Climate shocks and natural disasters can also increase workloads for women, impacting caloric outputs and nutritional needs. These vulnerabilities also create issues of disparity for marginalized groups, men, and children already living in extreme poverty and/ or who may have an economic reliance on agriculture (Eastin, 2018).

Climate change will continue to impact livelihoods and outcomes of malnutrition, and gender equality efforts that include inclusive, transformative methods will have to be integrated to effectively address humanitarian and development needs at the nexus of climate change and growing hunger.

The IPCC (2007) stated that undernutrition caused by these extreme environmental changes and hazardous events might be one of the most significant consequences of climate change given the amount of people it would affect. Furthermore, according to the FAO, since 2014 undernutrition has worsened in Sub-Saharan Africa, South-Eastern Asia, Western Asia, and Latin America, and especially in zones that have experienced conflict and lower economic development combined with droughts and floods.

The ways in which climate change impacts livelihoods and acts as a catalyst for hunger, can be better understood by exploring specific ecological consequences and how participants are affected based on differences across gender. In particular, within areas of food and nutrition security, water and sanitation, and health security:

1. FOOD AND NUTRITION SECURITY:

AVAILABILITY

Production of food and its readiness for use through the food system.

- Higher temperatures and changes in rainfall patterns (quantity, distribution, intensity) reduce yields in crop and livestock systems.
- Reduced agricultural outputs from lack of pollinators and from distribution changes in pests and diseases.
- Reduced food quality through changing the population dynamics of contaminating organisms due to changes in temperature and precipitation patterns, humidity, increased frequency and intensity of extreme weather events, and changes in contaminant transport pathways.
- Food safety risks due to food storage and transport networks disruptions due to increase of extreme climate events.
- Women, gender diverse individuals, and marginalized groups often have less access to productive resources and hence less capacity to produce food.

ACCESS

Ability to obtain food.

- Depletion of natural resources, unpredictable rainfall patterns and increased number of extreme weather events reduce agricultural outputs, which changes small scale food producers' livelihoods and limits their ability to purchase food. This could mean the sale of key productive assets which maintains the cycle of poverty. As a matter of fact, according to the World Bank climate change could push up to 132 million more people into extreme poverty by 2030.
- Decreased agricultural productivity will depress agricultural supply, leading to price increases. This affects lowincome consumers (especially children and women) because their purchasing power will be reduced.

⁷ United Nations Environment Programme, 2021. Adaptation Gap Report 2020. UNEP, Nairobi. p. 24.

⁸ United Nations Environment Programme, 2021. Adaptation Gap Report 2020. UNEP, Nairobi. p. xiv

- Increase of extreme events impacts on food supplies can mean agricultural trade and transportation infrastructure disruption which reduces the overall access to food.
- Restrictive gender roles regarding mealtimes may signify smaller food portions for women and girls on a daily basis.
- An increase in ecological instability impacts the access of and decreases the safety of women and children who are required to travel by foot when accessing nutrition services and essential food sources.

UTILIZATION

Achievement of food potential (through nutrition and cooking).

- Negative impacts on food safety due to increased prevalence of microorganisms and toxins through changes in temperature and precipitation patterns, humidity, increased frequency and intensity of extreme weather events, and changes in contaminant transport pathways.
- Lower nutritional quality, especially proteins, iron and zinc in crops due to increasing atmospheric CO₂ (which in turn increases temperatures by trapping heat).
- Children aged 5 or younger and women experience higher rates of zinc deficiency due to the impact of CO₂ emissions on food crops.
- Unequal gender roles can impede the frequency and quantity by which foods and nutrition services are accessed. This is only intensified due to climate-related disasters and a decrease in the nutritional value of food crops.
- Gender differences for women within these contexts can create an increased need to secure or diversify livelihoods by increasing labour outputs. This can increase caloric outputs of women, threatening nutritional security as well as adequate access to nutritional needs during pregnancy and while breast-feeding.

STABILITY

Less frequent availability and access to food.

- Rising instability of food supply (food price rises and spikes) due to an increase in extreme events frequency and severity which disrupt cropping cycles, sterilize the ground by salinization, decimate herds, reduce access to water, accelerate desertification, shrink fishing stocks. All these climate change impacts disrupt the food system and hence, signify agricultural income instability.
- Forced displacement, migration, and conflict between communities due to widespread crop failure. This undermines access to education and has a long-term negative impact on a nation's development.
- Climate change intensifies income disparities between rich and poor, as it weakens the capacity of states to provide the resources, opportunities and services that help citizens sustain their livelihoods.
- Income disparities further exacerbate existing gender inequalities by affecting women, men, and gender-diverse individuals based on differences in accessing natural assets, livelihoods, information, education-level, and property rights.
- Women and marginalized groups often have fewer options and decision-making power that allows for needed adaptation to climate-based disasters and changes to the natural environment, which subsequently affects agricultural capacity and food production (Bryan, 2017).
- Women are more likely to be disproportionately affected by price spikes because when food is scarce women reduce food consumption relative to other family members.

2. WATER AND SANITATION

- Water availability:

- Climate related events can reduce access to water, promoting poor sanitation and hygiene conditions. Currently around 70% of the world population face water scarcity at least one month a year and 500 million people face it throughout the entire year (Mekonnen & Hoekstra).
- Unstable access to water can generate competitions on existing resources and can induce inter and cross-community violence or forced displacements.
- Water scarcity, drought, and inadequate sanitation services can bring insecurity to livelihoods and the capacity for achieving well-being, and ultimately increase vulnerabilities. Gendered roles and norms become intensified within these contexts increasing vulnerability risks and disparity experienced among women, children, and marginalized individuals (Dicken et al., 2021).
- Poor water availability could also mean more workload for girls and women with additional impact on the care of children.
- Low access to water and sanitation can have an economic impact on households, especially within rural and low-socioeconomic contexts, and among marginalized groups. In 2016, research by Hutton & Chase stated that up to 7% of a country's Gross Domestic Product can be affected by poor access to adequate resources supplying water, sanitation and hygiene.

- Water quality:

Water contamination, lack of environmental sanitation following natural disasters increases the exposure to water-borne diseases (e.g. diarrhoea, cholera).

- Flood damage to water and sanitation infrastructures increased by the lack of integrated water resources management and governance of the natural resources at basin and micro-basin levels.



3. HEALTH SECURITY

- Increased flooding risks boost vector-borne diseases (e.g. malaria, dengue, chikungunya, zika), accelerates microbial growth and accelerates parasite replication. This increases the need for food and reduces the absorption of nutrients.
- Climate change has other health implications like heat-related exhaustion and premature mortality due to air pollution by fires, which frequency and severity increase as a result of climate change.
- People exposed to extreme temperatures can experience changing metabolic demands and physiological stress. These people may require more food to cope, whilst at the same time being impaired from producing more, which makes them prone to health issues.
- Extreme weather events worsen the economic condition of vulnerable people, particularly women, children and marginalized individuals, making them more disposed to malnutrition. Children suffering from malnutrition during the first 1000 days are most likely to become adults with lower mental and physical capacities. According to DARA International (2012) in 2010 Climate Change cost 400,000 deaths related to hunger and communicable diseases.
- Extreme weather events can damage health care infrastructure. This in turn, impedes access to health care facilities, putting vulnerable and marginalized groups at risk.

Even though all of these challenges have a serious impact on exposed vulnerable and often marginalized communities, not everyone has the same level of susceptibility and therefore, are not affected equally. Special attention must be paid to women, children, gender-diverse people, the elderly, the internally displaced, and people with disabilities who experience poverty, along with socio-economic, political, and identity-based marginalization. Typically, these social groups are amongst the most vulnerable to the burden of climate-related hazards and climate change because they:

- Live in areas that have greater exposure to climate-related hazards.
- Rely on climate-sensitive resources and natural resource-based livelihoods.
- Lack access to assets and services that would enable them to cope and adjust with climate changes (daily-basis economic struggle).
- Impacted by restrictive gender norms that increase barriers to accessing nutritional needs. E.g.: reduced food intake and increased labour to compensate for agricultural and climate changes that may increase nutritional need; restrictions to owning and operating agricultural land;

local and regional policies, state laws, and customary laws that act as barriers to accessibility, participation, and decision-making; and, unaddressed differences in nutritional needs based on age, activity, unique health requirements, and pregnancy or breastfeeding.

- Resort to coping and non-adaptive strategies that further exacerbate or perpetuate food and nutrition insecurity. E.g. selling/ liquidating productive assets; reduced food intake to support feeding the household; migration with minimal economic support; borrowing with high interests rates; early child marriage to alleviate economic and resource constraints; early dropout from education to support household needs; earlier entry into labour market for both boys and girls (Bryan et al., 2017; Bassetti, 2019).



NATURE, BIODIVERSITY LOSS AND CLIMATE

Biodiversity loss is accelerating around the world. It provides food, water and shelter; influences climate; controls disease; and regulates nutrient and water cycles. In 2021 the World Economic Forum (WEF) said biodiversity loss is humanity's third greatest existential threat, behind weapons of mass destruction and state collapse⁹.

The failure to slow biodiversity loss and address climate change⁴ has humanitarian consequences affecting the resilience of communities and making people more vulnerable to change. It has been proven that if biodiversity is not restored the battle against hunger and climate change will be lost¹⁰. Biodiversity loss and climate change share some of the same drivers such as the food system where land-use change is both the biggest driver of biodiversity declines and the second biggest source of GHG emissions.

Biodiversity is essential to our food system. Crops and livestock have evolved under and adapt to specific conditions. Local crop and livestock varieties tend to be resilient and adaptable in the face of a changing climate as they have evolved in that location, have great adaptive capacity and there will be wild crops relatives, a plant closely related to a farmed one. The global rate of species extinction today is orders of magnitude higher than the average rate over the past 10 million years. Over the past 50 years, the conversion of natural ecosystems for crop production or pasture has been the principal cause of habitat loss.

A nutritious diet is built on varied local production systems and species. Yet just twelve crops and five animal species provide 75% of the food produced. Of the 250 000 - 300 000 known edible plant species, only 150 to 200 are used regularly by humans. Only three - rice, maize and wheat - contribute nearly 60% of calories and proteins obtained by humans from plants. Since the 1900s 75% of plant genetic diversity has been lost as farmers worldwide have left their multiple local varieties and landraces for genetically uniform, high-yielding varieties¹¹. The results of this loss of agricultural diversity has contributed to climate change, ecosystem destruction and hunger. While producing more calories than ever micro nutrition deficiency and hunger are both on the rise.

As a major contributor to global greenhouse gas emissions, food systems are driving climate change, which further degrades habitats and causes species to disperse to new locations. In turn, this brings new species into contact with each and with people, this leads to competition for space and resources and can result in invasive species taking over. It also creates new opportunities for the emergence of infectious disease¹².

⁹ World Economic Forum (2021) The Global Risks Report 2021, www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf

¹⁰ Pendrill, F., U. M. Persson, J. Godar, T. Kastner, D. Moran, S. Schmidt, and R. Wood (2019), 'Agricultural and Forestry Trade Drives Large Share of Tropical Deforestation Emissions', *Global Environmental Change*, 56, 1-10

¹¹ <http://www.fao.org/3/y5609e/y5609e02.htm>

¹² Cissé G. Food-borne and water-borne diseases under climate change in low- and middle-income countries: Further efforts needed for reducing environmental health exposure risks. *Acta Trop.* 2019 Jun;194:181-188. doi: 10.1016/j.actatropica.2019.03.012. Epub 2019 Apr 1. PMID: 30946811; PMCID: PMC7172250.

II. COMMITMENT FRAMEWORKS

In 2015 three international agendas marked a milestone for the struggle towards a sustainable future: the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals (SDGs) within the framework of the 2030 Agenda for Sustainable Development, and the Paris Agreement.

By better understanding the commitments and connectedness of these agendas, it will be easier to understand in the following chapters the challenges and opportunities they present to key actors globally and to Action Against Hunger in terms of climate action and hunger reduction.



SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION

The Sendai Framework for Disaster Risk Reduction is the UN system's successor to the Hyogo Framework and it takes a people-centered approach to Disaster Risk Reduction (DRR). It is a call to action to reduce disaster risks and losses in lives and livelihoods over the next 15 years, which applies to disasters of every scale produced by natural or man-made hazards.

This framework has a set of priority action areas to prevent and reduce vulnerability and increase preparedness for response and recovery:

1. Understanding disaster risk: by comprehending the relationship disaster risk has to vulnerability, exposure, capacity, hazard characteristics and environment.
2. Strengthening disaster risk governance to manage disaster risk: to guide and encourage the public and private sector to address disaster risk.
3. Investing in disaster risk prevention and reduction for economic, social, health and cultural resilience: to save lives, prevent and reduce losses and ensure effective recovery and rehabilitation.
4. Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction: more participation of women and persons with disabilities in the response and reconstruction phases to promote accessible approaches.

By working on these areas, the framework hopes to pursue seven targets:

1. Substantially reduce global disaster mortality by 2030.
2. Reduce the number of affected people.
3. Reduce direct disaster economic loss in relation to GDP. \$1 invested in resilient infrastructure can save \$7 or more in response and recovery costs.
4. Reduce damage to infrastructure and disruption to basic infrastructure.
5. Increasing the number of countries with DRR strategies.
6. Enhance international cooperation to developing countries.
7. Substantially increasing public access to multi-hazard early warning systems and disaster risk information.

2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

It is a global agenda for action towards sustainable development, with 17 Sustainable Development goals (SDGs) and its respective associated targets. They replace the Millennium Development Goals (MDGs), which focused on tackling poverty by 2030. However, the SDGs approach is deeper in the sense that it focuses not only on poverty, but on its root causes as well.

Its 13th goal, in particular, is related to combating climate change and its impacts by strengthening resilience and adaptive capacities to climate-related hazards. Even though Disaster Risk Reduction is essential to achieve the 13th goal, it's important to highlight that it is essential to achieve sustainable development overall. In fact, every Sendai target is related to all or some of the SDGs: like ending poverty and hunger, achieving gender equality and more equal participation of women and girls, promoting sustainable economic growth and decent work for all, increasing health and wellbeing for all, facilitating access to education and resilient infrastructure, and making human settlements sustainable and safe.



THE PARIS AGREEMENT ON CLIMATE CHANGE

It is a legally binding international treaty on climate change adopted in the COP21, the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), which limits global warming well below 2C, preferably 1.5C compared to pre- industrial levels, and it works on a 5 years cycle of ambitious climate action.

According to the agreement all countries must communicate their Nationally Determined Contributions (NDCs) to the response to climate change. The NDCs general goals are:

- Setting actions to reduce their GHG emissions in order to reach the goals of the Paris Agreement.
- Communicating actions that will be taken to build resilience to adapt to impacts of rising temperatures. This might include information on adaptation and finance flows.

Collective progress towards achieving those goals will be assessed every 5 years by a global stocktake, this will lead to recommendations for countries to set more ambitious plans in the next round. The Paris Agreement also provides a framework for financial, technical and resilience-building support to those countries who need it. This includes acknowledging the diverse effects of climate change on gender equality, marginalized groups, the right to health and development, and intergenerational equity (UN 2015). As well, Adaptation efforts are supported under the convention through the National Adaptation Plans (NAPs) process, which aims at reducing vulnerability to the negative impacts of climate change. Adaptation efforts include acknowledging the importance of gender-responsive and intersectional actions that follow a country-driven response inclusive of vulnerable groups as well as evidence-based and traditional knowledge (UN 2015).

ALIGNMENT BETWEEN DISASTER RISK REDUCTION, SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE

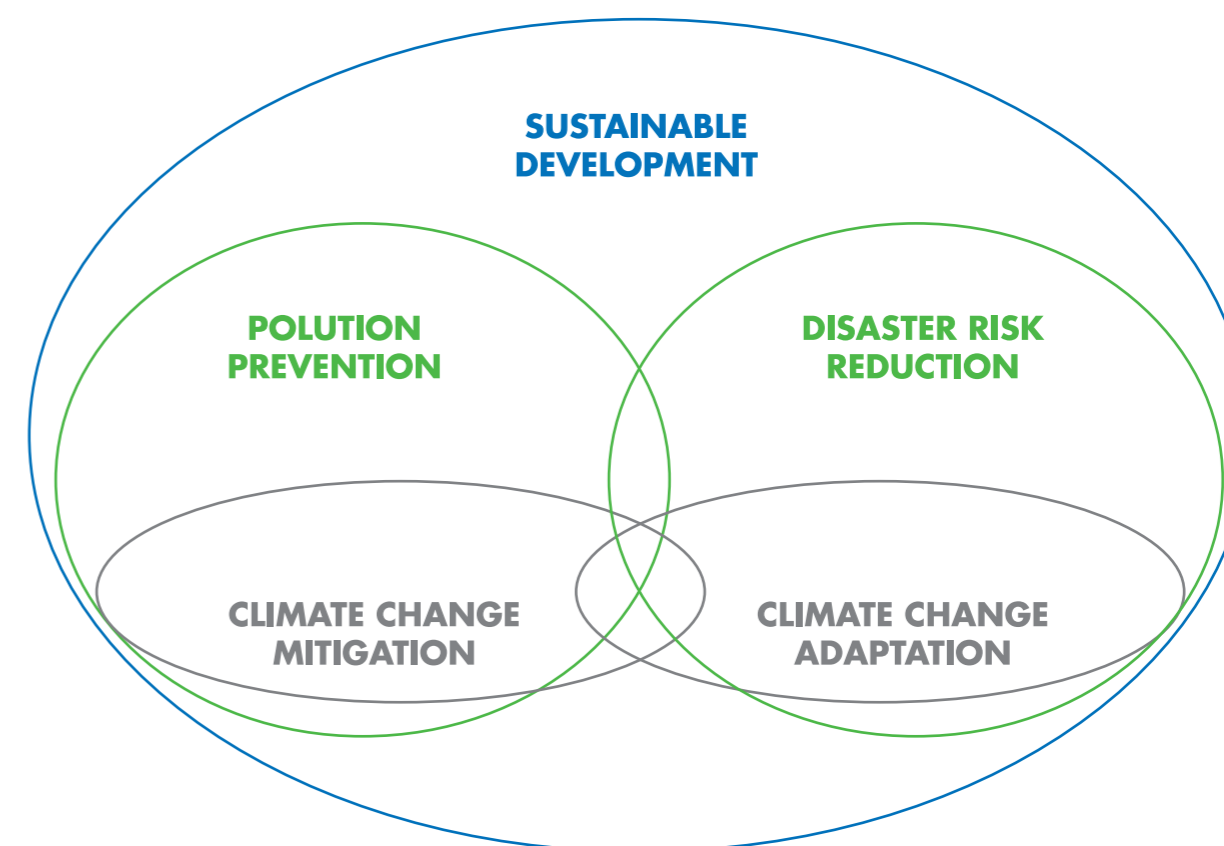
In order to understand their relation it is necessary to explore what each area refers to. According to the UN office for Disaster Risk Reduction (UNDRR), Disaster Risk Reduction aims at preventing and reducing existing disaster risks and managing residual risk, in order to strengthen economic, social, health and environmental resilience and ultimately achieve sustainable development. This includes risk

reduction that is gender sensitive and aware of the different impacts disasters can have across vulnerable groups (UNISDR 2011). Additionally , when climate change is discussed, mitigation and adaptation must be mentioned. Mitigation refers to reducing anthropogenic GHG emissions and adaptation is about moderating harm or exploiting beneficial opportunities by adjusting to actual or expected climate and its effects. Finally, sustainable development refers to development that meets the needs of the present without compromising the ability of other generations to meet their own needs.

The separation of historical development in these 3 areas, has caused underlying key concepts to have different uses, particularly the concepts of vulnerability, hazard, exposure, risk and capacity. Nevertheless, these three areas are interconnected. Climate change directly affects sustainable development as it affects the frequency and severity of hazardous events, and hence, the levels of vulnerability and exposure need to be improved further.

On the other hand, mainstreaming CCA into DRR by coordinating and collaborating approaches among different stakeholders is consistently more appropriate as they both share common aims like vulnerability reduction, inclusiveness promotion and long-term disaster risk management.

More importantly, these three fields share common objectives: reducing risks, protecting the environment and promoting sustainability and development. The connectedness can be easily seen in the framework created by professor Ilan Kelman:



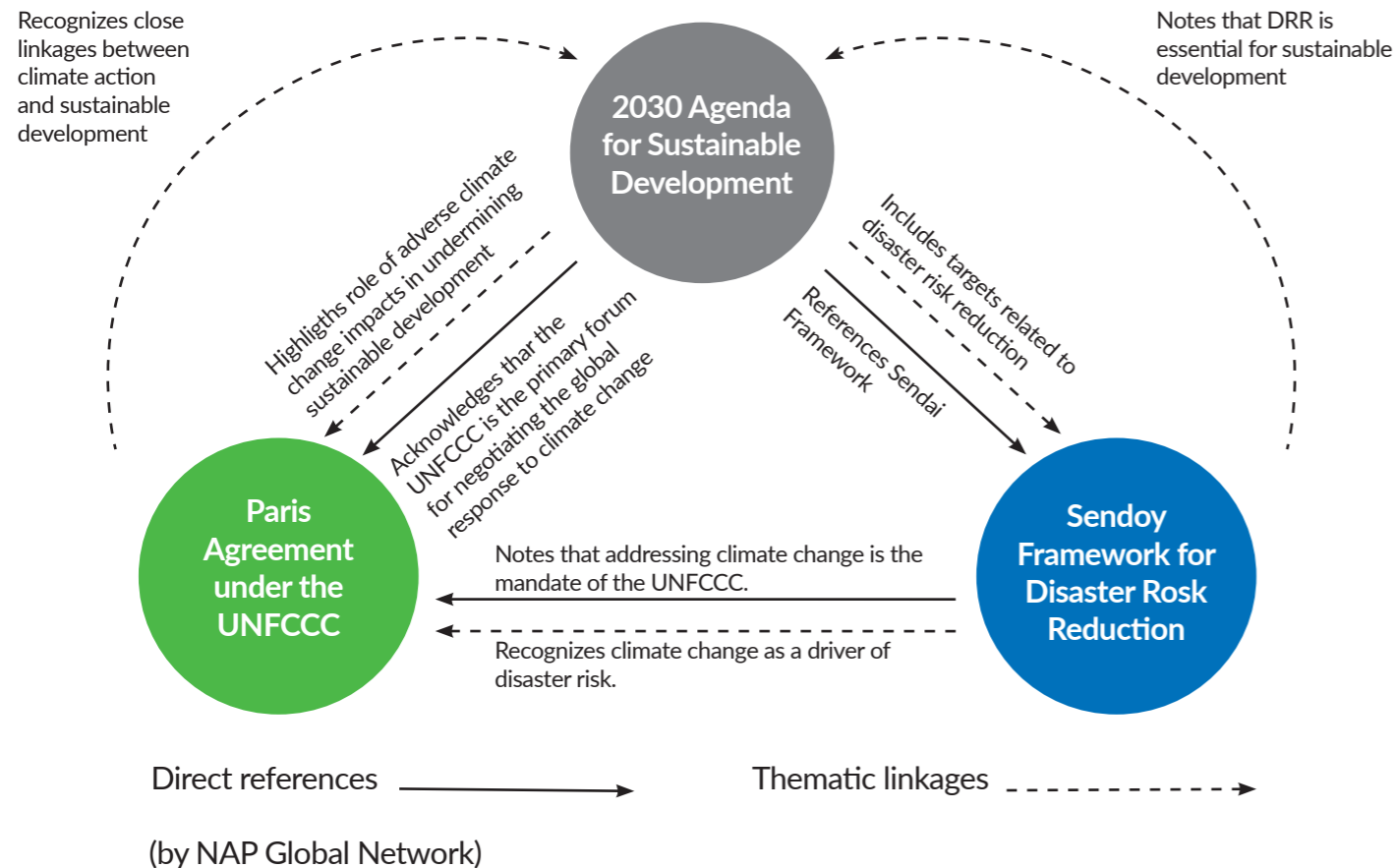
Furthermore, the concept of connectedness between these fields is also supported by the idea of resilience as an outcome of the development, humanitarian, climate and disaster risk reduction arenas, rather than it just being a set of activities (Peter et al, 2016).

This connectedness is also represented by the global agendas. The Sendai Framework for Disaster Risk Reduction addresses the fact that climate change is the mandate of the UNFCCC, but also recognizes climate change as a driver of disaster risk. In this way the Sendai framework is linked to the Paris Agreement through direct references and thematic connections.

The Sendai Framework notes that disaster risk reduction is essential for sustainable development, and the 2030 Agenda for Sustainable Development Goals reference the Sendai Framework in its mandates, and includes targets related to disaster risk reduction.

The 2030 Agenda for Sustainable Development and the Paris Agreement are also linked. The former recognizes the UNFCCC as a primary forum for negotiating the global response to climate change, and highlights that climate change plays a role in undermining sustainable development. Concurrently, the Paris Agreement effectively recognizes the links between climate change and sustainable development.

SINERGIES AMONG THE GLOBAL AGENDAS



3. FRAMEWORKS STATE OF PROGRESS

SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION

The online Sendai Framework Monitoring system (SFM system) is the official Member State reporting mechanism and is complemented by the preparation and release of technical guidance notes. Monitoring requires significant effort by Member States to collect, enter and validate all data required by the indicators that were agreed by the United Nations General Assembly and the United Nations Statistical Commission. According to the SFM system there are 53 countries whose reports are in progress of being overviewed, only 5 have been validated and 1 is in progress of being validated, while 132 have not yet started.

The progress in achieving the global targets has been evaluated in the 2019 Global Assessment Report on Disaster Risk Reduction and the key take-aways are the following:

- 1. Mortality:** Number of deaths and missing persons attributed to disasters has decreased in relative and absolute terms.
 - 2. People affected:** Number of people directly affected by the impact and outcomes of disasters. This includes injuries, disruption of livelihoods, agriculture, and differences in outcomes based on gender, age, ability, and experiences with marginalization (UNISDR, 2011).
 - 3. Economic loss:** Refers to the direct economic loss attributed to disasters in relation to GDP. With respect to the gravity and magnitude of the impact of disasters, Asia and Africa continue to be the most affected. Actually, Asia incurred 42% of the total economic losses recorded at the global level between 2005 and 2017, despite accounting for 23% of disaster occurrences. The burden is disproportionately high in small islands developing states (SIDS), which are forecasted to have average annual losses of approximately 4% of their GDPs.
- The most damaging hazards are droughts and floods, according to the FAO. However, many drought-affected countries of different continents don't report their losses to the SFM. At the same time, high-income households have more to lose, and those losses are more visible as they tend to be insured and better reported. Hence, these data gaps make it hard to monitor and account for the overall progress in this specific target.
- 4. Critical infrastructures and services:** which are attributed to disasters. The damage to health and education facilities relative to population size presents a downward trend in the 2005-2017 period. The

ratio of damaged roads compared to the total length of the road networks presented the same trend until 2016. Disruptions of basic services due to affected facilities relative to population sizes present a tendency to decrease. Some of these trends are the result of the DRR efforts of many countries with campaigns such as Safe Hospitals and Safe Schools. The GAR report takes into account that a large-scale disaster can happen which would completely change the data like the Nepal earthquake of 2015.

5. Disaster risk reduction strategies: This global target requires national strategies to be “in line with the Sendai Framework”, and local strategies to be “in line with National Strategies”. There is a series of criteria that member states use to conduct their own self-assessment and the scores given don't reflect on the implementation of the strategy but rather its alignment to the Sendai Framework.

A tendency has been shown for an increase in the number of Member States reporting the status of their national and local DRR: 47 reports in 2017 compared to 27 in 2016. From the 47 reporting countries, however, only 6 reported that their DRR strategies are in 100% compliance with the Sendai Framework. Furthermore, the scores were higher in reducing and understanding risk than implementing priority number 3 (investing in disaster risk prevention and reduction).

6. International cooperation: There is not enough information to draw relevant conclusions on the progress of this target. The Data Readiness Review study revealed that only 38% of the member states would be capable of reporting on one of the indicators, while similar or lower numbers were reported for the other indicators. However, the OECD shows that development assistance for DRR has remained a small fraction of the total international aid financing and that disaster expenditure is mostly ex post.

7. Early warning and risk information: Only 34 countries have reported at least one indicator of this target. The results reveal that there is room for improvement demonstrating that most countries need comprehensive risk assessment for their defined major hazards. Even though there are several countries that have multi-hazard monitoring and forecasting systems that cover major hazards well, there are still many other countries that do not.

2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

The following provides current progress on the 17 SDGs according to the 2020 Sustainable Development Goals Report:

1. End **poverty** in all its forms everywhere: Progress has slowed since before the COVID-19 pandemic outbreak. Even though poverty reduction has decelerated, the global poverty rate has been decreasing since 1998 with the exception of 2020 when a small percentage increase was projected. Given this goal is not in track of being achieved by 2030, the report notes the need for effective emergency preparedness.

2. End **hunger**, achieve food security and improved nutrition and promote sustainable agriculture: Since 2014, the global prevalence of undernourishment (chronic food insecurity) has remained practically unchanged around 9 per cent. However, the total number of people going hungry has slowly increased. Almost 690 million people were undernourished in 2019 with nearly 60 million in 2014. Stratified data by sex and age and reports on gender indicate that these outcomes manifest differently based on gender, sex, age and socio-economic status (Thurstons et al., 2020; Levy et al. 2020).

3. Ensure **healthy lives** and promote well-being for all at all ages: Progress has been made regarding maternal health, over the 2000-2017 period the global maternal mortality ratio declined by 2.9 percent each year. The global neonatal mortality has been reduced as well, the rate fell from 31 deaths per 1,000 live births in 2000 to 18 deaths per 1,000 in 2018. However, as the COVID-19 epidemic continues to disrupt healthcare 118 low- and middle-income countries could experience an increase in under 5 and maternal deaths per month.

If current trends continue only 39 to 63 per cent of the global population will experience universal health coverage by 2030. Efforts to maintain and manage early warning systems have always been needed, but more after the consequences of the COVID-19 crisis. Mitigation and disaster risk management strategies are needed that take into account and address the barriers to achieving healthy lives based on gender, socio-economic status, migratory status, age, and ability.

4. Ensure inclusive and equitable quality **education** and promote lifelong learning opportunities for all: the targets of this goal aren't on track of being achieved by 2030. Before the coronavirus crisis, projections showed that more than 200 million girls and boys would be out of school, and only 60 per cent of young people would complete upper secondary education in 2030. Nevertheless, the absence from school due to the pandemic could have a long-term effect in retention and graduation rates. This could be more noticeable among vulnerable and disadvantaged communities or poor countries, affected by the digital divide, where lack of access to computers or the internet prevents students from accessing remote learning.

5. Achieve **gender equality** and empower all women and girls: child marriage and female genital mutilation (FGM) have declined in recent years, and women's representation in politics is higher than ever before. However, COVID-19 and the movement restrictions this brought have contributed to an increase in cases of violence against women and girls. As well, women are still spending more time in unpaid work than men, and due to lockdown the amount of time spent in domestic chores has only increased.

6. Ensure availability and sustainable management of **water and sanitation** for all: The proportion of the global population using safely managed drinking water services increased from 61 per cent in 2000 to 71 per cent in 2017. Despite progress, 2.2 billion people around the world still lack safely managed drinking water, including 785 million without basic drinking water.

7. Ensure access to affordable, reliable, sustainable and modern **energy** for all: There has been progress regarding energy efficiency and the amount of people with access to energy has increased by 6% from 2010 to 2018. However, there is a concentrated deficit in Sub-Saharan Africa and at the current rate of progress, it is estimated that 620 million people would still lack access to electricity in 2030.

8. Promote sustained, inclusive and sustainable **economic growth**, full and productive employment and **decent work** for all: Despite disparities between regions, labor productivity and unemployment rates have increased across the world with a profound impact during COVID-19 on women and women-dominated job sectors, like education, and on those working within informal markets (UN, 2020). Emerging data on the impact of COVID-19 on world economies estimate that the pandemic will instigate the biggest increase in unemployment since World War II. Nevertheless, since before the pandemic the LDCs were falling short from the 7% real GDP growth per year target.

9. Build resilient **infrastructure**, promote inclusive and sustainable **industrialization** and foster **innovation**: Investment in research and development (R&D) globally, and financing for economic infrastructure in developing countries has increased. At the same time, the intensity of global CO2 emissions has been declining. However, the growth of manufacturing has decelerated (partly due to the pandemic economic lockdown) which is key to poverty reduction in developing countries.

10. Reduce **inequality** between and among countries: there is lower income inequality in some countries, but levels remain globally high: Most of the countries during the period 2012 to 2017, experienced real income growth, still, in all countries, the bottom 40% of the population received less than 25% of the overall income, while the richest 10% received at least 20% of total income. The COVID-19 crisis is making it worse by hitting the most vulnerable and often marginalized groups the hardest, whom are often already experiencing social and structural forms of discrimination.

11. Make **cities** and human settlements inclusive, safe, resilient and sustainable: The pandemic is highlighting the vulnerability of slum dwellers and those living in informal settlements, given the lack of access to water, sanitation and waste management they were already dealing with. Even before COVID-19, 4 billion people in the world's cities faced worsening air pollution, inadequate infrastructure and services, and unplanned urban sprawl due to rapid urbanization.

12. Ensure sustainable **consumption and production** patterns: The global material footprint is increasing faster than population growth and economic output and a high proportion of food is lost along the supply chain. And waste, including additional medical waste generated during the pandemic, is mounting. The amount of primary materials required to meet basic needs for food, clothing, water, shelter, infrastructure and other aspects of life, the material footprint, had a 17.4% increase from 2017

to 2020. The amount of electronic waste generated globally is also growing and many governments are still subsidizing fossil fuels at a time where public resources could be better allocated on COVID-19 relief and recovery financing.

13. Take urgent action to combat **climate change** and its impacts: Global climate-related financial flows have increased due to high levels of new private investment in renewable energy, but investments in climate activities across sectors continue to be surpassed by those related to fossil fuels in the energy sector. Climate change mitigation remains the predominant focus for financing, while adaptation and cross-cutting issues receive around a fourth or less in comparison.

14. Conserve and sustainably use the **oceans, seas and marine resources** for sustainable development: The ocean absorbs around 23% of annual CO2 emissions generated by human activity. However, the absorbed CO2 has caused seawater to become more acidic which endangers species that are the base of the marine food chain and lowers its capacity to absorb CO2 from the atmosphere and to moderate climate change. But marine protected areas are expanding and there has been good progress in carrying out measures to combat illegal, unreported and unregulated fishing.

15. Protect, restore and promote sustainable use of **terrestrial ecosystems**, sustainably manage **forests**, combat **desertification**, and halt and reverse **land degradation** and halt **biodiversity loss**: Conservation of terrestrial ecosystems is not trending towards sustainability, forest areas continue to decline, protected areas cover less than half of key biodiversity areas, and species remain threatened with extinction. One fifth of the Earth's land area is degraded, but by early 2020, 123 countries had committed to setting voluntary targets to achieve "land degradation neutrality".

16. Promote **peaceful** and inclusive societies for sustainable development, provide access to **justice** for all and build effective, accountable and inclusive **institutions** at all levels: In 2019, the number of people fleeing war, persecution and conflict exceeded 79.5 million, the highest level recorded since these statistics have been collected. One in four children continues to be deprived of legal identity through lack of birth registration, often limiting their ability to exercise rights in other areas. 31% of prisoners worldwide are being held in detention without being sentenced for a crime (this level has not declined since 2005). On the other hand, the global rate of intentional homicides has declined slowly and 2019 constituted the year with the lowest number of killings of journalists per year in over a decade.

17. Strengthen the means of implementation and revitalize the **Global Partnership** for Sustainable Development: Support for implementing COVID-19 lockdowns, many people are forced to rely on the Internet for daily activities, which highlights the enormous digital divide. At the end of 2019, 53.6% of people were using the Internet, with wide regional disparities in rural and lower-socio-economic contexts. In 2019, remittances overtook foreign direct investment flows to low- and middle-income countries, but its growth slowed in 2019 compared with the previous year. Global foreign direct investment (FDI) to developing economies remained stable in 2018. It rose by 2% to \$706 billion, but with significant differences among regions.

THE PARIS AGREEMENT ON CLIMATE CHANGE

The global temperatures are on track to rise as much as 3.2°C by the end of the century, however, the maximum target called for by the Paris Agreement is 1.5°C or even 2°C. Hence, the greenhouse gas emissions must begin falling by 7.6 per cent each year starting in 2020 to achieve net zero emissions by 2050. At first it was thought that the massive reduction in human activity due to COVID-19 could accelerate this desired emissions reduction, but in 2020 the drop was only 6%.

Global greenhouse gas emissions of developed countries and economies in transition have declined by 6.5% over the period 2000–2018. Meanwhile, the emissions of developing countries are up by 43.2% from 2000 to 2013. The rise is largely attributable to increased industrialization and enhanced economic output measured in terms of GDP.

By 2020, parties were expected to update existing nationally determined contributions or communicate new ones, with a view to substantially advance the mandates of proposed climate action, which was one of the main conclusions from COP25 (Chile/Madrid Climate Change Conference 2019). Due to the COVID-19 pandemic, the COP26 has not taken place. This provides an opportunity for countries to 1) focus on advancing the proposed items during slowed economic activity, and 2) rebuild country economies to be greener and more resilient to climate change.

So, the secretariat decided to issue the NDC synthesis report in two editions: an initial version by 28 February 2021 and the final version in advance of COP 26. The initial version synthesizes information from 48 new or updated NDCs, representing 75 Parties, submitted as at 31 December 2020. These represent about 40% of Parties to the Paris Agreement and account for about 30% global GHG emissions.

Besides agreeing on the need of more demanding targets, few decisions were adopted at the COP25 and several issues were left unresolved, including common time frames, long-term finance and transparency issues of the Paris Agreement. Some of the main points of the meetings, however, pointed at: making progress in incentivizing the private sector and supporting collective action, mobilizing support for adaptation activities in developing countries, improving the representation of women in party delegations and constituted bodies, among many others.



IV. MAIN CONTRIBUTIONS OF KEY INTERNATIONAL ACTORS

It is necessary to do a quick review on how key stakeholders (donors, agencies, NGOs, etc.) engaged in the environment and climate change agenda from the humanitarian perspective. A better understanding of global progress in addressing and mitigating challenges of climate change, will be better understood by exploring geographic coverage, target groups, areas of expertise, availability of resources, and the level of publications on climate change of each stakeholder. This will also develop understanding of how the frameworks explored in previous chapters have been supported.

FAO - FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

TARGET GROUP: Marginalized people, undernourished people, children affected by malnutrition, and food insecure people.

EXPERTISE: FAO's strategy focuses on adaptation and mitigation in the agriculture sectors and advocates for better management of synergies and trade-offs between the two. FAO supports its member countries in these efforts offering technical guidance, data and tools for improved decision making and the implementation of adaptive measures. FAO has also embedded these tools and approaches in broader frameworks such as climate-smart agriculture and in the promotion of Disaster Risk Reduction policy and action.

In summary:

- FAO works with governments, food producers and other stakeholders to build climate-resilient food production systems and reduce their impacts on climate and environment.

- FAO provides technical assistance, data for evidence-based policy-making, and capacity development to support Member States in developing their national climate plans and identifying climate change adaptation and mitigation options in the crop, livestock, forestry and fishery sectors.

- FAO promotes concepts, including agroecology, to guide change in food producers' practices and help them thrive in a changing climate while reducing GHG emissions and enhancing carbon sequestration in agroecosystems.

It is relevant to mention they have developed a knowledge hub online: <http://www.fao.org/climate-change/knowledge-hub/en/>

RESOURCES: FAO's overall programme of work is funded by assessed and voluntary contributions. The total FAO Budget planned for 2018-19 is USD 2.6 billion. Of this amount, 39 percent comes from

assessed contributions paid by member countries, while 61 percent will be mobilized through voluntary contributions from Members and other partners. Member countries' assessed contributions comprise the regular budget, set at the biennial FAO Conference. The FAO regular budget for the 2018-19 biennium is USD 1,005.6 million.

PUBLICATIONS: In a report called "FAO'S work on Climate Change - United Nations Climate Change Conference 2019", it states that 24 publications were done on Climate Change in 2019.

WFP - UNITED NATIONS WORLD FOOD PROGRAMME

TARGET GROUP: Food insecure people. In 2018/2019, WFP had 86.7 million beneficiaries. It has supported over 13 million people since 2009 with climate and energy solutions.

In the last decade, almost half of the World Food Programme (WFP)'s emergency and recovery operations have been in response to climate-related disasters, at a cost of US\$23 billion.

EXPERTISE: To support vulnerable countries and communities, WFP provides analysis highlighting the links between food security and climate risks, as well as the present and future impact of climate change on food security and nutrition. This helps identify which communities are most at risk and informs national policy and planning, including the development of food assistance programmes that build resilience and reduce hunger.

WFP encourages the integration of a variety of technologies, services and tools to better equip communities to adapt to the impacts of climate change. This can include diversifying livelihoods; protecting assets, incomes and crops with insu-

rance and access to financial services; improving access to markets; and rehabilitating land. It also means working with governments to ensure these initiatives can be incorporated into national systems, including early warning, social protection and financial/insurance mechanisms.

The Food Insecurity and Climate Change Vulnerability map, developed by WFP and the UK Met Office, highlights the importance of urgent action to scale up climate change adaptation and mitigation efforts for the most food insecure people.

The Food Security Climate Resilience Facility and R4 Rural Resilience (enables the poorest farmers to access crop insurance by participating in risk reduction activities).

RESOURCES: US\$7.2 billion raised in 2018 through 100% voluntary funding from governments, corporations and individuals.

PUBLICATIONS: When searching under the topic "climate action" 24 publications appear for the year 2020.

INTERNATIONAL FEDERATION OF THE RED CROSS/CRESCENT - SPECIFICALLY THE RED CROSS RED CRESCENT CLIMATE CENTRE

TARGET GROUP: People vulnerable to the impacts of climate change and extreme-weather events, which IFRC has reported, must include participants at the community-level and marginalized groups - women, youth, indigenous people, and those at high-risk.

EXPERTISE: The activities of the centre are based on 4 principles:

- Awareness: Implementing information and education activities about climate change and extreme weather events within the Red Cross/Red Crescent Movement and among the general public.
- Action: Supporting the development of concrete climate adaptation activities, within the existing context of disaster risk reduction programs.
- Advocacy: Bringing concerns about the impacts of climate change on vulnerable people and experience with climate adaptation and disaster risk reduction programs to the places of policy development, both within the International Federation, as in other relevant international forums.
- Analyses: Analysing the climate change risk reduction issues at stake in the context of the Red

Cross and Red Crescent and the first experiences. These analyses should lead to a stronger vision and positioning of the Red Cross / Red Crescent Climate Centre on climate change risk reduction approaches.

Some very specific areas they work on are: Forecast-based financing and action, science research collaborations, conflict-climate nexus, promotion of youth activities (regarding CC), resilience and capacity building activities.

RESOURCES: Annual climate centre budget: 3 million euro. Influenced projects with a total value of nearly 250 million euro. In 2019 most of the Climate Centre's income came from the Netherlands Ministry of Foreign Affairs, the UK Department for International Development, the German Federal Foreign Office and Ministry for Economic Cooperation and Development, and the IKEA Foundation. Were also supported by the ICRC and the IFRC secretariat and these National Societies.

PUBLICATIONS: According to the 2019 annual report, the climate center made 40+ publications (scientific journal articles, working papers or book chapters).

SAVE THE CHILDREN

TARGET GROUP: Their work focuses on children facing challenges of changing climate, conflict and disasters. Directly reached 38.7 million children through programming, advocacy and campaigns, in 2019.

EXPERTISE: They do CCA and DRR work (preparedness, early warning, disaster mitigation, disaster resilience and adaptation activities) and have five areas of focus, including advocacy and policy, institution strengthening, and community. They respond to climate related crises and build resilience to achieve the following goals:

- To ensure the international community and states acknowledge the global climate crisis is a child rights crisis that needs to be addressed with children as agents of change.
- To minimise the impact that climate shocks have on the most marginalised children and ensure their programmes support climate adaptive development pathways.
- To reduce their greenhouse gas emissions and environmental impacts.

Save the Children has pioneered Child-centred DRR. This means recognising specific vulnerabilities that are uniquely faced by children during disasters and ensuring children are appropriately planned for and their needs addressed in DRR programs and policies. It integrates risk reduction and resilience building into sector-based programming "full spectrum"; meaning that Child-centered DRR is considered in both development and humanitarian contexts.

RESOURCES: In 2019, Save the Children International's income declined by 6% from \$1,244 million to \$1,169 million. Similar to previous years, 98% of income is received directly from Save the Children member organisations and the remaining 2% is largely from direct grants and donations in its prospect members. Total expenditure in 2019 was \$1,173 million.

PUBLICATIONS: When searching in their publications portal, only one publication in 2020 has as main theme climate change. But 20 publications mention "climate change".

OXFAM

TARGET GROUP: Does not explicitly highlight any particular focus but does prioritize targeting the unique differences in need for participants across groups. This often looks at participant demographics based on gender, age, ability, migrant status, and vulnerable or marginalized groups. In 2018 -19 Oxfam worked directly with 19.5 million people in their programs worldwide, 52% of whom were women and girls.

EXPERTISE: Adaptation and disaster risk reduction actions that also address the causes of vulnerability: inequality, gender injustice and poverty. Its campaigns focus on bringing the voices of communities affected by climate change into international negotiations and discussions, ensuring global temperature increases are kept below 1.5C and that people living in developing countries are supported to adapt.

Works with local communities to build resilience (helping adapt to climate change) through innovations like drought-resistant seeds, reinforced homes, and training on how to grow new crops. It also responds to climate related emergencies around the globe.

A fairer and sustainable global food system: Advancing the right of people living in poverty to adequate and sustainable livelihoods is a cornerstone of Oxfam's work.

They work towards enabling millions of women and communities to become more resilient and productive, and to secure access to the land and natural resources on which they depend.

They have also given emphasis to climate fueled disasters as a driver of internal displacement and carbon inequality.

RESOURCES: Total funds available 2018/19: 1,018 million euros (around \$1225 million). Over 80% of funding came from Institutional and Public fundraising. Total expenditure 2018/19: 998 million euros (around \$1201 million).

PUBLICATIONS: When searching for 2020 publications that mention "climate change", 15 publications come up. But only around 7 of those publications have climate change as the main topic.

CARE

TARGET GROUP: People who are marginalized and of low socio-economic status, particularly women and girls. The organization is using gender-responsive and gender transformative methodology by targeting the unique differences in need across groups. In 2016, CARE reached 2.7 million people directly (78 per cent women), and indirectly benefited another 14.3 million through 385 economic empowerment projects and initiatives that were replicated and taken to scale.

EXPERTISE: CARE's approach to adaptation is focused on targeted community-based adaptation projects and integrating climate change adaptation into their work in climate-sensitive sectors.

In its food and nutrition security work, CARE aims to strengthen climate-resilient small-scale agriculture systems to improve food and nutrition security for producers, workers and consumers.

Advocacy efforts focus on both adapting to and dealing with climate impacts after their occurrence,

as well as limiting global warming to 1.5°C by quickly reducing emissions.

To support the integration of the increasing resilience approach, CARE developed a Resilience Marker: a self-assessment tool to evaluate how well resilience has been integrated into their programs. It also has a Climate and Resilience Academy, which is a platform to expand and deepen knowledge and understanding of climate change, and its causes and consequences.

RESOURCES: Hundreds of thousands of individuals and dozens of U.S. corporations, foundations and other organizations support CARE each year. Also obtains funding and commodities from governmental agencies, the European Union and the United Nations. CARE USA's program expenses in 2019 totaled more than \$550 million.

PUBLICATIONS: When searching in the publications portal the key word "climate change", only 2 publications show up for the year 2020.

WORLD VISION

TARGET GROUP: Most vulnerable children (but also farmers and caregivers). World Vision has impacted the lives of over 200 million vulnerable children by tackling the root causes of poverty with precedent setting efforts to advance minimum standards for mainstreaming gender equality, which is believed to be intimately linked to sustainable development within these humanitarian contexts.

EXPERTISE: Partners with Grassroots communities to build their resilience, to become climate- change and disaster-ready, and to respond to crises when they happen. Tackling climate change by: Farmland restoration, development projects (improving irrigation, training farmers on rainwater preservation and soil improvement techniques, microfinance and business skills training), response to disaster landscape,

emergency food assistance, disaster readiness, children empowerment (climate change learning).

Some other relevant points are that it supports the idea of working with "faith leaders", sees climate change as a justice issue and climate justice as an approach that should place children at the centre of the climate crisis.

RESOURCES: Income 2019: \$2.90 billion. Expenditure 2019: around \$2.96 billion.

PUBLICATIONS: When searching under the topic "Natural Environment and Climate Issues" in the publications portal, 12 publications show up for the year 2020.

NRC (NORWEGIAN REFUGEE COUNCIL)

TARGET GROUP: Displaced communities. It assisted 9,109,053 people in need in 2019.

EXPERTISE: Climate and disaster. Their work on the ground falls within three pillars:

1. Short- and long-term environmental impact assessments.
2. Design and use of programmes that reduce negative environmental impact created by displaced populations and humanitarian aid.
3. Community guidance on assessing environmental risks, adapting coping strategies and developing sustainable environmental practices.

The NRC protects displaced people during and after disasters, prevents displacement by building resilience in countries at risk, deploys experts to strengthen the capacity of UN, regional and national partners who work on reducing disaster risks and adapting to climate change, expands and shares knowledge through research and analysis, and achieves long-term policy solutions through advocacy.

It also has a mobile phone application, the NRC En-

vironmental Assessment Tool – NEAT. NEAT allows teams on the ground to quickly assess the environmental risks of a project, and offers advice on how to reduce these risks. Develops effective and practical methods for reducing impact and strengthening resilience. In 2020 the UNEP/OCHA Joint Environment Unit (JEU) launched NEAT+, an upgraded version of NRC's original tool.

RESOURCES: The total income in 2019 was NOK 4.65 billion (Around \$549 million). Top donors in 2019: The Norwegian Ministry of Foreign Affairs (NMFA), the European Civil Protection and Humanitarian Aid Operations (ECHO), the United Nations High Commissioner for Refugees (UNHCR) donated 10% of total income, the Swedish International Development Cooperation Agency (SIDA) donated 8% of total income, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) donated 6% of total income. Also receives regular and one-off donations and pro bono support from private individuals and corporate partners.

PUBLICATIONS: When searching under the topic "Climate Change" in the publications portal, 6 publications show up for the year 2020.

MERCY CORPS

TARGET GROUP: Vulnerable communities, with 37 million people worldwide who were reached in 2020. Regarding climate change, 632k people were provided with disaster or climate information in 2017. Mercy Corps acknowledges the importance of gender mainstreaming in resilience programming to mitigate the impact of restrictive gender norms, but has limited programming within climate & disaster resilience efforts to integrate gender mainstreaming (Mercy Corps 2018; Mercy Corps 2019).

EXPERTISE: Helps people around the world survive and thrive after conflict, crisis and natural disaster through different approaches:

- Climate & Disaster Resilience: Advanced Weather Information Systems, Innovations in Disaster Insurance, Scalable Sub-National Adaptation Planning, River Basin Scale Flood Risk Management, Harnessing Digital Technology for Climate Resilient Agriculture, Economically Sustainable Disaster Risk Planning, Decreasing Conflict Through Better Land Management, Strengthening Ecosystem Services for Conflict Reduction, Scalable Structures for Public Climate Finance and Innovative Flood Resilience Financing.

- Energy Access: Capacity building, The productive use of electricity (PUE) to diversify livelihood options, Strengthening governance at the

community level, Last mile distribution and market systems development, Displacement settings, Pay-as-you-go (PAYGo), Build-Operate-Lease-Transfer of Ownership (BOLTO), Results Based Financing, Revolving fund mechanism.

- Water Security & Productivity: Utility-Scale Water Supply, Rural Water Access, Market Systems Development, Groundwater Governance, Integrating Earth Observation with Community Knowledge, Water Tenure, Corporate Water Stewardship, Financial Inclusion, Watershed Management, Flood Resilience Financing.

- Climate Finance: Harnessing the power of market systems and good governance to scale solutions that enable communities to access and apply the knowledge and tools they need to transform in the face of acute disasters and the climate crisis.

RESOURCES: In FY 2020, overall MCE income, like-for-like (excluding foreign exchange gains and losses) increased by 9% on the previous financial year to £124.3m.

PUBLICATIONS: When searching under the topic "Climate, environment and energy" in the publications portal, 7 publications show up for the year 2020.

ACTED (AGENCY FOR TECHNICAL COOPERATION AND DEVELOPMENT)

TARGET GROUP: Vulnerable or at-risk communities. Communities affected by humanitarian and development crises. In 2019 supported 20.7 million people with programmes worldwide, of which 10.1 million are female. Active programming targets children, women, elderly, people with disabilities, and marginalized groups who face the outcomes of natural disasters and low socio-economic status; yet, there is limited to no gender mainstreaming efforts to address unique differences in outcomes based on gender and gender norms.

EXPERTISE: ACTED programmes areas related to climate change are:

- Collaborative and resilient ecosystem management: ACTED aims to ensure that ecosystems and natural resources are regenerated, consumed and protected in a more sustainable manner so that local populations can responsibly benefit from them to meet their needs while conserving the ecosystems for future generations.

- Citizen-Driven climate action: "Greening personal lives" by promoting "lifestyle changes" and building momentum for systemic change to mitigate climate change.

- Sustainable infrastructure: Construction, rehabilitation or retrofitting of infrastructure (beyond household level) for production of green energy or for more efficient resource use and consumption. Such infrastructure can improve environmental conditions and therefore people's health and quality of life. It also supports a green economy, creates job opportunities and enhances biodiversity.

- ACTED tackles food insecurity and climate change in the Sahel. It works to support the most vulnerable against food insecurity and severe climatic shocks with focus on the Tri-border area and on the Lake Chad region.

RESOURCES: 2019: 419 projects in 37 countries with a budget of 316 million euros. 13% of the projects implemented in 2019 were dedicated to inclusive and sustainable growth (Employment, Income & Financial Inclusion and Climate-Smart Agriculture).

PUBLICATIONS: When searching for the word "Climate change" in the publications portal, around 15 publications show up for the year 2020.









V. ADDED VALUE OF ACTION AGAINST HUNGER

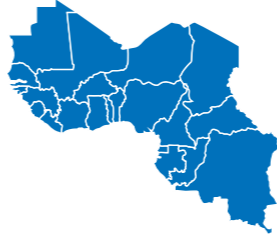


It explores the main thematic pillars, the financial level, the stakeholders, the application level and the main takeaways of each mission and their respective programs by analyzing the responses to a questionnaire sent to ten missions (Central America, Colombia, Kenya, Niger, Mali, Philippines, ROWCA, Somalia, South Sudan and Sudan).

THEMATIC PILLARS

The information provided by the missions on their programs and financial volume can be better seen in the following table:

COUNTRIES	PILLARS	THEMES & SUB THEMES	VOLUME
CENTRAL AMERICA 	Preparedness	<ul style="list-style-type: none"> Community food security sentinel sites. Regional monitoring of food security. Flood early warning systems. Drought preparedness in rural communities. Organization and disaster preparedness of tourist destinations. Promotion of public-private alliances for risk management. 	Approximately 700,000 Euros per year in actions directly related to preparedness/adaptation of climate change. Out of this 400,000 Euros are used in Flood and Food Security Early Warning Systems (EWS).
	Adaptation	Development projects implemented in Nicaragua to strengthen agri- food cooperatives and promote climate-smart agriculture.	
COLOMBIA 	Preparedness	<ul style="list-style-type: none"> Pastoralist Early Warning System: helps herders and their organisations to adapt to lack of natural resources (pasture and water). Scientific knowledge: Advocacy papers on agriculture and CC, promotion of key agro-pastoral sectors for adaptation to CC. 	OFDA-USAID: \$2,228,560.00 dollars (€1,921,910 euros approx.) DIPECHO: €700,000.0 euros SDC: €200,000 euros Total: €2,891,910 euros approximately.
	Adaptation	Punctual activities in the DRR technical sector included in some agreements with donors	

 KENYA	Mitigation	Solarisation of water points: water pumps.	Solarization of Water points (Mitigation): USD 375,000
	Adaptation	<ul style="list-style-type: none"> Integrated emergency and recovery response to support vulnerable communities affected by drought. Resilience building for flood affected communities. Building resilient communities against climate change 	SMART Agricultural Programs (Adaptation): USD 103,437
 MALI	Preparedness	<ul style="list-style-type: none"> Pastoral surveillance. Biomass monitoring Dissemination of newsletters 	ASDI: F7AH (8M €) GIZ: FDAA (€ 1.2M), FDAC (€ 1.075M), FDAD (€ 1.77M), FDAH (€ 1.05M), FDAJ (€ 1.2M) OFDA: B2AH (\$ 0.7M), B2AK (\$ 1.8M), B2AL (\$ 3.15M), B3AN (€ 2.5M)
	Adaptation	<ul style="list-style-type: none"> Integrated programs focused on resilience-development activities for better adaptation of production systems. Research adaptation measures and strategies for future agro-pastoral production. Land restoration. Promotion of agroecological practices. Capacity building. 	
 NIGER	Preparedness	<ul style="list-style-type: none"> Early warning. Pastoral supervision. 	N.A
	Adaptation	<ul style="list-style-type: none"> Agroecology: promotion of agroecological practices Soil water conservation. Soil defense and restoration: Land reclamation and fertility improvement Holistic Management. Integrated programs to strengthen the livelihoods and resilience of pastoral and agro-pastoral communities. 	
 PHILIPPINES	Preparedness	<ul style="list-style-type: none"> DRR programs with particular focus on DRRMP. Contingency plans and local climate action planning. Early warning systems and anticipatory action. 	N.A
	Adaptation	Climate resilient Field schools (CRFS). <ul style="list-style-type: none"> Resilient livelihoods through MPCT for Covid 19 response. 	

 ROWCA	Preparedness	<ul style="list-style-type: none"> Pastoralist Early Warning System: helps herders and their organisations to adapt to lack of natural resources (pasture and water). Scientific knowledge: Advocacy papers on agriculture and CC, promotion of key agro-pastoral sectors for adaptation to CC. 	N.A
	Adaptation	<ul style="list-style-type: none"> Holistic Management and Agroecology. Regional fora for food crises prevention (from tool and methodology for analysis to high level advocacy events). 	
 SOMALIA	Preparedness	Community based early warning early action systems: Support risk informed planning and timely response to emergencies through crisis modifier – pathway to sustain resilience.	Approximately \$20 million.
	Adaptation	<ul style="list-style-type: none"> Nutritional sensitive resilience building. Focus on: <ul style="list-style-type: none"> Adaptive management Safety nets Crisis modifier Livelihoods: Enhancing sustainable livelihoods opportunities (VSLAs and business support, support livelihoods value chain). Regenerative Agriculture: Addressing food insecurity in Somaliland 	
 SOUTH SUDAN	Mitigation	<ul style="list-style-type: none"> Dyke construction Water way construction 	N.A
	Adaptation	<ul style="list-style-type: none"> Cash for Asset for people affected by floods Climate resilient crop planting. Piloting planting of flood resilient crops like rice Construction of water points with elevated stair platforms including drainages. Construction of raised latrines which are more flood resilient. 	

A few programs regarding Mitigation were mentioned by the Colombia, South Sudan and Kenya missions. As well Rehabilitation and Reconstruction programs were mentioned by the ROWCA and South Sudan missions. Nevertheless, the focus will be on the main thematic pillars of the programs executed by Action Against Hunger missions, according to the questionnaire: Preparedness and Adaptation. In fact, eight out of the ten missions interviewed mentioned having preparedness programs, while all the missions mentioned having adaptation programs.

When exploring the preparedness pillar, the missions have a set of programs. Regarding early warning systems, Central America has set them in place early warning-early action related to floods, droughts and to do food security monitoring, while ROWCA, Mali and Niger is specialized on the same approach but related to environmental impact on natural resources. Somalia has community based early warning-early action systems and the Philippines has contingency plans and local climate action planning. There are also in place preparedness programs directly targeted to providing or transforming knowledge, like ROWCA with the production of advocacy papers on agriculture and Climate Change and promotion of key agro-pastoral sectors for adaptation to CC, and Colombia with its initiatives to foster preparedness at community level.

When it comes to the adaptation pillar, there are programs focused in Resilient Livelihoods, Agroecology and Water & Sanitation Hygiene. Regarding resilient livelihoods, missions like the Philippines, Central America, Niger, Somalia and South Sudan have put in place different programs like climate resilient field schools, safety nets, cash for asset, agri-food cooperatives strengthening and infrastructure adaptation. Agroecology, on the other hand, is promoted in ROWCA, Niger, Mali, Somalia and South Sudan through different programs like planting climate resilient crops, promoting agro ecological practices, and programs focused on fertility improvement and soil water conservation. In the matter of WASH, South Sudan has programs focused on building water points with elevated stair platforms including drainages and raised latrines which are more flood resilient.

Regarding the financial volume of these programs, we only have information for five missions: Central America, Colombia, Mali, Somalia and Kenya. According to the questionnaire Mali presents the highest financial volume with €21.7M and Kenya the lowest with €426,737 (numbers are approximates).



STAKEHOLDERS

According to the interviews, the main stakeholders for the missions are the communities ACH works on, research institutions, government agencies (donors), public institutions, NGOs, international organizations and climate change related networks.

COMMUNITIES

Communities which are in a situation of high vulnerability, are highly exposed to hazards and/or have low response capacity to these hazards. As every preparedness, adaptation and/or mitigation program is focused on communities with these characteristics, these communities represent a stakeholder for all the missions.

RESEARCH INSTITUTIONS

Three out of the ten interviewed missions mentioned having alliances with research institutions. The specific institutions are the following:

1. Central America mission with:

- CIGEO UNAM (National Autonomous University of Nicaragua).
- USAC (University of San Carlos, Guatemala).
- Granada U/GIS4Tech - Central America mission.

2. Mali mission with:

- ICRAF (International Center of Research on AgroForestry).

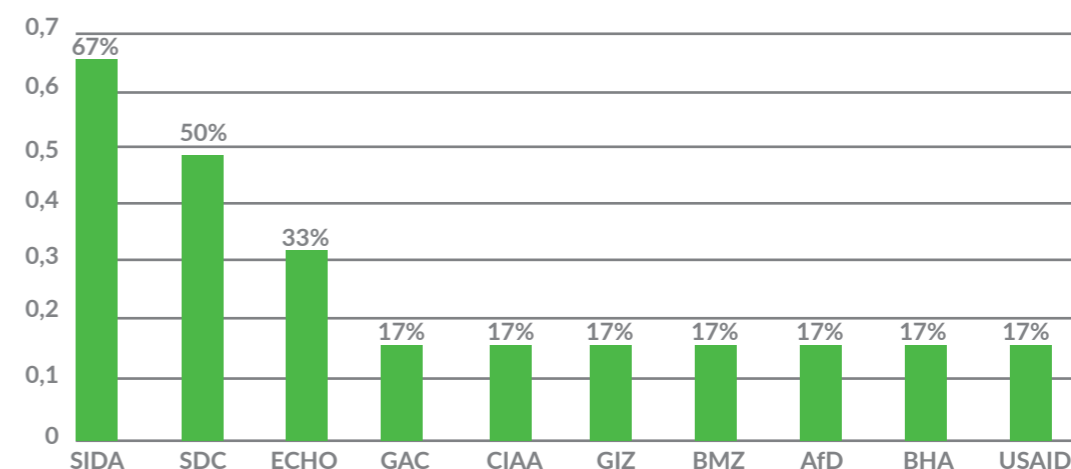
3. Sudan mission with:

- AHFAD University

GOVERNMENT AGENCIES

Six out of ten missions (Central America, Colombia, Niger, Mali, Sudan and Somalia) gave information on the government agencies that donate to their preparedness, adaptation and/or mitigation programs.

In this graph we can see the percentage of missions (out of the six which gave information on donors) to which each agency gives financing:



This means that SIDA (Swedish International Development Cooperation Agency), the SDC (Swiss Agency for Development and Cooperation) and ECHO (European Civil Protection and Humanitarian Aid Operations) were mentioned as donors by 6 missions, 3 missions and 2 missions respectively. While the others were mentioned by one mission each. The specific agencies per country can be summarized as following:

1. Central America: highly conditioned by ECHO (European Civil Protection and Humanitarian Aid Operations) financing.

2. Colombia donors:

- USAID (United States Agency for International Development).
- SDC (Swiss Agency for Development and Cooperation).
- DIPECHO (Disaster Preparedness ECHO).

3. Niger donors:

- SIDA (Swedish International Development Cooperation Agency).
- BMZ (Federal Ministry for Economic Cooperation and Development of Germany).
- SDC (Swiss Agency for Development and Cooperation).
- AfD (French Agency for Development).
- BHA (USAID Bureau for Humanitarian Assistance).
- DIPECHO (Disaster Preparedness ECHO).

4. Mali main donors:

- SIDA (Swedish International Development Cooperation Agency).
- GIZ (German Agency for International Cooperation).

5. Sudan main donors:

- SIDA (Swedish International Development Cooperation Agency).
- GAC (Global Affairs Canada).
- CIAA (France's Interministerial Food Aid Committee).

6. Somalia main donors:

- SIDA (Swedish International Development Cooperation Agency).
- SDC (Swiss Agency for Development and Cooperation).

LOCAL/REGIONAL PUBLIC INSTITUTIONS

Only two missions mentioned having partnerships or alliances with public institutions:

1. The Philippines mission with:

- The National Climate Change Commission.
- The National Disaster Risk Reduction Management Council.
- Anticipatory Action Department of Foreign Affairs.
- Department of Social Welfare and Development in the Philippines.
- Department of Interior and Local Government in the Philippines.
- Weather Forecasting Agency - Department of Science and Technology of the Philippines.

2. The Central America mission with:

- CONRED (National Coordinator for Disaster Reduction) in Guatemala.
- SINAPRED (National System for the Prevention, Mitigation and Attention of Disasters) in Nicaragua.

NGOS

Five out of the ten missions interviewed mentioned alliances with NGOs: Philippines with CARE, Central America with Oxfam, Niger with COOPI and Concern, Somalia with ACTED and World Vision, and finally Sudan with Plan International and NRC.

INTERNATIONAL ORGANIZATIONS

The ROWCA mission has a direct alliance with UN specific agencies (e.g FAO, IFAD). But according to the questionnaire responses, all missions are indirectly connected to the UN as the countries they work on are signatories of the the Paris Agreement, the Sustainable Development Goals and/or the Sendai Framework.

Furthermore, the Central American mission described having alliances with the European Union and CEPREDENAC (El Centro de Coordinación para la Prevención de los Desastres en América Central y República Dominicana). As well, Colombia mentioned working with the Red Cross and the European Union in climate related programs.

NETWORKS

Two missions out of ten described being part of networks which discuss or touch upon climate change issues:

1. ROWCA's main alliance in which it participates is 3AO (alliance for agroecology in western Africa). The main participants of this alliance are:

- CIRAD (Center for International Cooperation in Agronomic Research for Development, France).
- IPS FOOD (Industrial Project Services).
- AFSA (Alliance for Food Sovereignty in Africa).
- ROPPA (Network of Peasant Organizations and Agricultural Producers in West Africa).

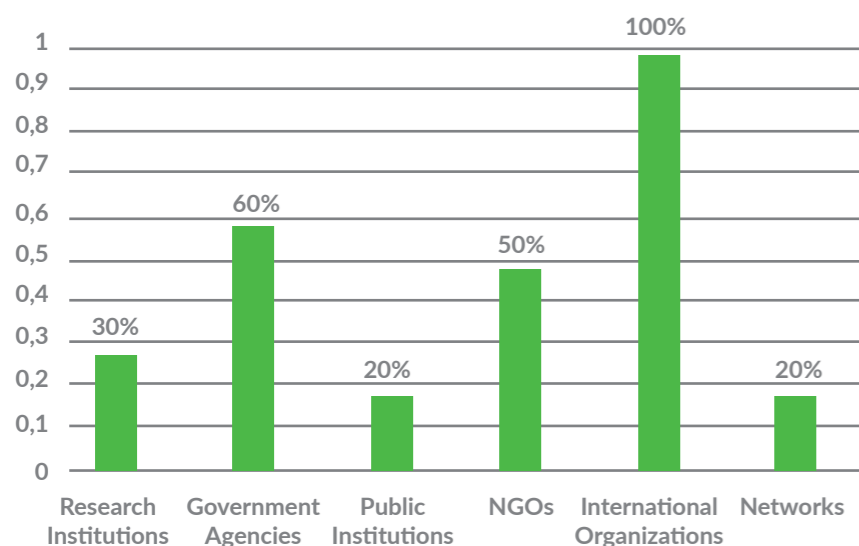
- ENDA Pronat (Environment Development Action for the Natural Protection of Terroirs).
- ECOWAS (Economic Community of West African States).

2. The South Sudan mission is a member of:

- The SUN Movement.
- The Alert Fund Network.
- The Right To Grow Alliance.
- The FSL cluster.
- The Nutrition Information Working Group (NIWG).
- The WASH Cluster Technical Working Group.

OVERALL

STAKEHOLDERS



This graph shows that as previously discussed, International Organizations and Communities should be interpreted as stakeholders for all missions. On the other hand, alliances with Government Agencies are mentioned only by six missions, with NGOs by five and Research Institutions by three missions. Finally, Public Institutions and Networks that discuss climate issues seem to be the categories least mentioned as stakeholders with two missions each.

GOVERNMENT

COUNTRY	ENGAGEMENT			COMMITMENT
	PARIS AGREEMENT	SDG	SENDAL FRAMEWORK	
Philippines	✓	✓	✓	The government has submitted the approved Nationally Determined contribution (NDC) which outlines the country's commitment to curve emission by 2030 by 75% categorized as conditional (72,6%) and unconditional (2,4%). The Philippines has used the Sendai framework as the base of the National Disaster Risk Reduction and Management Plan (NDRRMP).
Central America	Guatemala	✓	✓	The budget allocation framed in these international agreements is minimal. Instead of stable and long-tem public policies, there are disconnected programs supported by different international cooperation agencies. There are insufficient policy/programme engagements.
	Honduras	✓	✓	
	Nicaragua	✓	✓	
Colombia	✓	✓	✓	Paris Agreement: created a National climate change institutional system, driven by an intersectoral Commission on Climate Change as a coordination instance for dynamizing the state action to face climate change. In this framework, there is a Climate Change Policy & action plan; a policy paper and a national climate change adaptation plan, which sets the strategy for climate change adaptation, and a monitoring & financial plan. Sustainable Development Goals (SDGs): Colombia has a governmental commission to follow up the achievement of this commitment. Colombia has presented three Voluntary National Reports which present the progress of the SDGs implementation.
ROWCA	Burkina Faso	✓	✓	N.A.
	Chad	✓	✓	
	Mauritania	✓	✓	
	Senegal	✓	✓	
Niger	✓	✓	✓	Climate action plan for the 2015 Paris agreement Development of a National Policy on Climate Change Implementation of National Strategy for CC adaptation.
Mali	✓	✓	✓	Development of a National Policy on Climate Change. Establishment of a National CC Adaptation Strategy.
Sudan	N.A.	N.A.	N.A.	N.A.
Somalia	✓	✓	✗	Development of a National Policy on Climate Change Establishment of a National CC Adaption Strategy. 2013 - National Adaption Programme of Action (NAPA) was Somalia's first step towards a nationwide climate adaptation strategy. 2015 - The country registered its intended Nationally Determined Contribution (NDC). Adaptation is front-and-center in the NDC. Committed to reducing its net greenhouse gas emissions by 5 to 10 per-cent by 2030 using its own resources.
South Sudan	✓	✗	✓	The Government established the Ministry of Environment in February 2021. This ministry is leading policing development, implementation and monitoring. The Ministry of environment in February 2021 announced an Environmental Audit on Oil fields.
Kenya	✗	✗	✗	N.A.

CONTRIBUTION LEVEL

The application level is mostly tactical (Philippines, C.A and ROWCA). Even if the missions participate in initiatives led by others, some of them present lack of visibility. Except, for the Central America mission which is seen as a reference organization regarding Risk Management and Food Security. It is also worth noticing that while the Philippines mission lacks research capacity to provide evidence and back stronger propositions, the ROWCA mission seems to have a stronger research foundation.

On the other hand, the Colombian application level seems to be occasional as it doesn't have programs related to CC, but punctual activities in the DRR technical sector only.

Finally the Niger mission is believed to be highly strategic as it promotes and/or leads initiatives regarding CC adaptation and influences the state and other actors on CC-related decision making or information gathering.



VI. CONCLUSIONS

In general terms there is a relevant room for Action Against Hunger to contribute from our fields of expertise and experiences which up to now are essentially axed on preparedness and adaptation with special reputation and legitimacy on early warning-early action mechanisms, DRR policy advising and programmes as well as resilient livelihoods, agroecology and water & sanitation and hygiene programmes.

The main competitive advantage identified in most of our missions is the highly technical approach especially in setting up information management mechanisms capable to translate into specific early action and resilience building interventions for us and a wide range of stakeholders both at local, national and global level, being the first an already strong asset, the second a work in progress that needs to be supported with clear guidelines and framework, research and outreach capacity, and the third still out of out range as the network still lacks a solid climate change and hunger related strategy, evidence and analysis ready to use by key global stakeholders and consistent presence in the key forae.

According to the surveyed missions, Action Against Hunger is very strong in DRR at local levels, but not always very visible at national levels, and it seems to be behind other NGOs regarding adaptation and advocacy programmes.

Many of our missions present difficulties when including Climate Change in their strategies and those doing so consider that their objectives and approaches are not transformative enough in order to properly meet the climate crises challenges and also present problems on mainstreaming this approach into programmes or strategies do capture project objectives in the environmental field but without sufficient transformative ambition. It has been clearly ointed by the missions the need of a Climate Change and hunger strategy to guide and harmonise missions' strategies and programmes as well as climate change into technical sectorial strategies.

It is observed that to enable the missions to have more visibility and outreach, they should be involved in dialogues and forae of higher profile, impact and relevance in order to properly engage with key stakeholders and mobilize more resources. As well, they should produce more research on Climate Change and its relation to food security and livelihoods, and the evidence generated should be better systematized.

The financial volume mobilized through programmes around Climate Change is limited so far (45M€ accounted from those missions that were able to report this information) but we have already engaged with very relevant and pertinent donors and stakeholders in the countries at national level, our approach is valued by them and has a high potential to scale up.

Finally, the missions have expressed the clear need of investment in expertise and dedicated resources to provide specialized support to integrate the topics already engaged both in strategies and programmes systematically and even explore new ones to enrich our approach to this key driver of hunger.

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