

# WHO CARES ABOUT THE IMPACT OF CLIMATE CHANGE ON HUNGER AND MALNUTRITION?

A plea to the international community to ensure food and nutrition security for the most vulnerable in a changing climate

As the climate changes, ensuring long-term access to sufficient and nutritious food for all becomes an even greater challenge faced by humanity. Even in the most optimistic global warming scenario, the effects of climate change on undernutrition would be devastating, and would undermine current efforts to reduce hunger and ensure good nutrition. Despite the obvious critical situation and strong interconnection, food and nutrition security is still markedly absent in climate change negotiations. While strengthening further efforts on mitigation, it is time for climate negotiators, governments and donors to focus their attention on the consequences of climate change on undernutrition, and commit urgently to help the most vulnerable to adapt to an increasingly unpredictable climate and world. If not, irreversible consequences can be expected.

## Adverse effects of climate change

**are a reality:** the number of climate-related disasters (drought, floods, cyclones, etc.) in the previous decade has more than doubled relative to the nineties<sup>1</sup>. It is proved that they are main drivers affecting food insecurity both in the aftermath of a disaster and in the long-term<sup>2</sup>. Climate-related events, disturbances in seasonal patterns, and gradual climate and temperature changes increase the overall risk of hunger by jeopardizing all the determinants of undernutrition. This is particularly alarming as there are still **842 million people suffering from hunger and more than 180 million children affected by undernutrition**<sup>3</sup>. The situation is very likely to get worse considering the various predicted impacts of climate change. **With a +2°C global average temperature increase, the most optimistic projected warming scenario is that the rate of undernourishment in the Sub-Saharan African population will increase by 25-90% by 2050 relative to today**<sup>4</sup>. The intolerable paradox is that most of the human suffering and economic damages that are and will be caused by climate change will affect the world's poorest households, whom have insignificantly contributed to greenhouse gas emissions. **Furthermore, the most affected are those who have the least capacity to adapt to climate change related impacts.** That said, there is a threefold challenge for the international community:

- Increase broad efforts on climate change mitigation so as to prevent the worst scenarios taking place
- Support adaptive measures to climate change effects in the most at-risk countries to guarantee food and nutrition security for all;
- Initiate effective and early responses to humanitarian emergencies caused by the impacts of climate change

**ACF calls upon the international community to adopt urgent measures to ensure that the most vulnerable people, already suffering the highest rates of undernutrition, improve their capacities and means to adapt to the negative effects of a changing climate, while enhancing their resilience to food and nutrition insecurity.**

« Every year, climate change is responsible for 400,000 annual deaths, mostly, “due to hunger that affect above all children in developing countries »

*(DARA, 2012, Climate vulnerability monitor 2<sup>nd</sup> edition; a guide to a cold calculus of a hot planet)*



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# CLIMATE CHANGE AMPLIFIES THE THREATS FOR ALL UNDERLYING CAUSES OF UNDERNUTRITION

Climate change effects, some of which are already being experienced (higher temperatures, rising sea levels, variation in precipitations, ecosystems at risk, and more frequent, intense and unpredictable extreme climate events) impact undernutrition through multiple pathways, **including food security, water and sanitation, and care practices**<sup>5</sup> (Figure 1).

Undernutrition is defined as the outcome of insufficient food intake and repeated infectious diseases and poor care practices, often due to economic political and socio-cultural factors. It includes being underweight for one's age, too short for one's age (stunted – Chronic undernutrition), dangerously thin for one's height (wasted – acute undernutrition) and deficient in vitamins and minerals (micronutrient malnutrition).  
(ACF glossary of terminology).

## FOOD SECURITY AT RISK

**Climate change amplifies threats to livelihoods and food security through its direct impacts on food availability, access, quality and utilization.** Global crop production is expected to decline due to the projected decrease of staple food yield<sup>6</sup>, leading to negative impacts on availability of food, and farmers' incomes. Consequently, the structural rise and volatility of staple food prices<sup>7</sup> will highly constrain food access for the poorest.

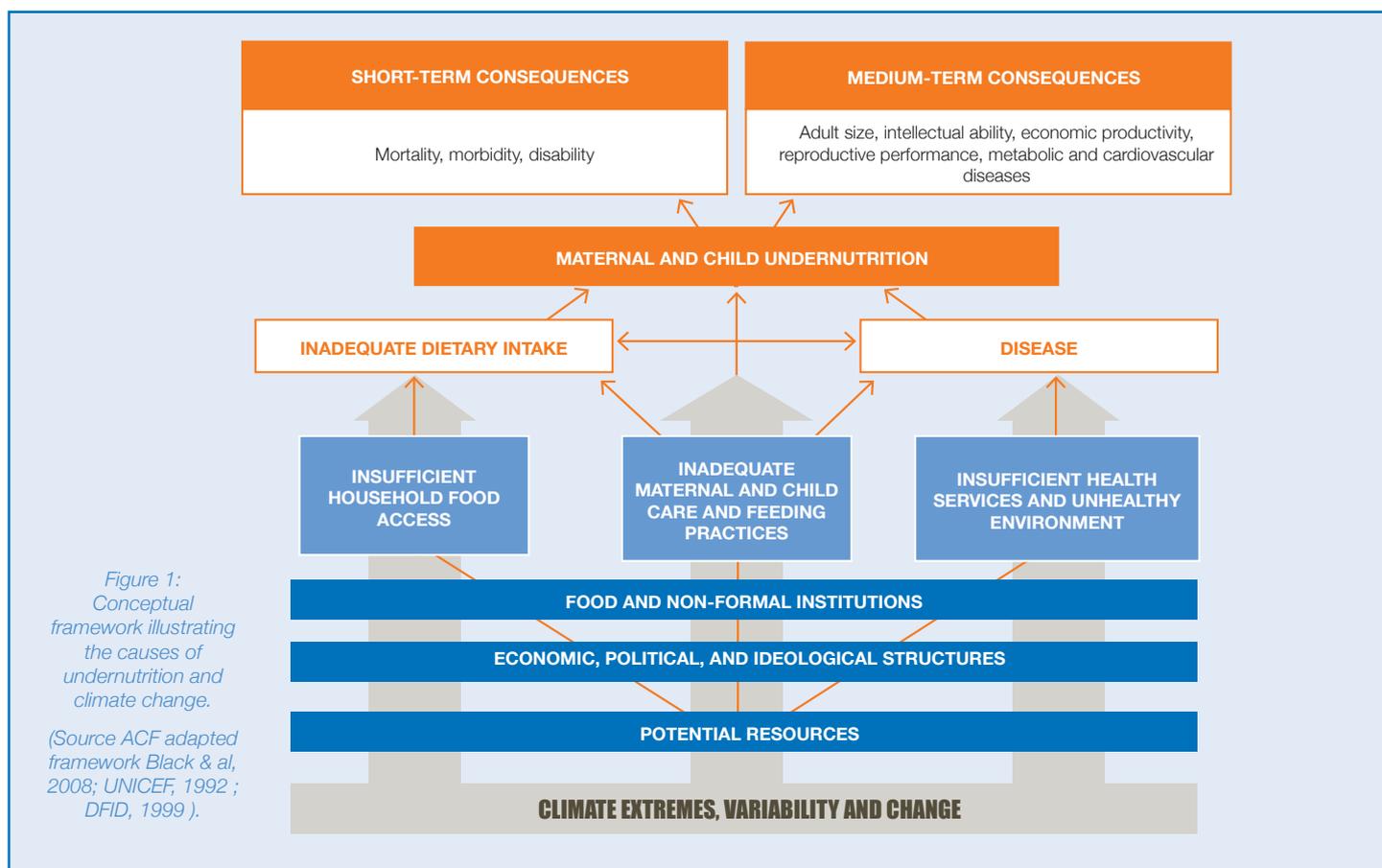
## WATER STRESS

**The quantity and quality of water resources will also be negatively affected.** Climate-related disasters will threaten water infrastructure systems influencing water sanitation and access for all, especially in urban areas. Major variations of temperatures, precipitation patterns and humidity will have a strong effect on vector-borne diseases<sup>8</sup> and will contribute to undernutrition. Competition over increasingly scarce resources will increase **the risk of conflicts and migration patterns**, which in turn will again increase the risk of food insecurity<sup>9</sup>.

Water resources are predicted to be strongly impacted by climate change, with wide-ranging consequences for human societies, geopolitics, and ecosystems<sup>10</sup>.

## HEALTH AND CARE PRACTICES IMPACTED

Climate change also negatively affects nutrition through its impacts on health. According to the Lancet series on maternal and child undernutrition of 2008<sup>11</sup>, **climate change is the biggest global health threat of the 21<sup>st</sup> century**, and is already contributing to the global burden of disease and premature death. Climate change will also put further strain on the already heavy workload of women, negatively impacting their ability to provide proper care to infants and young children, heightening the risk of undernutrition.



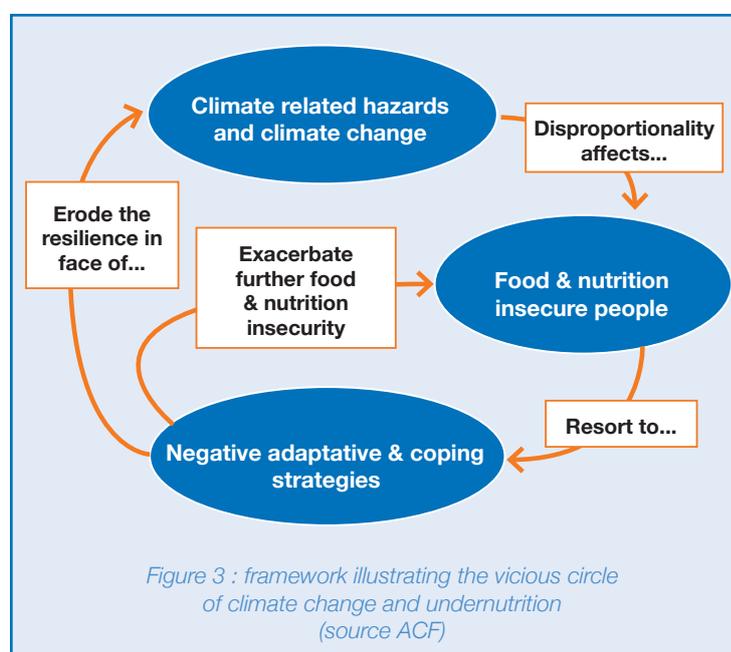
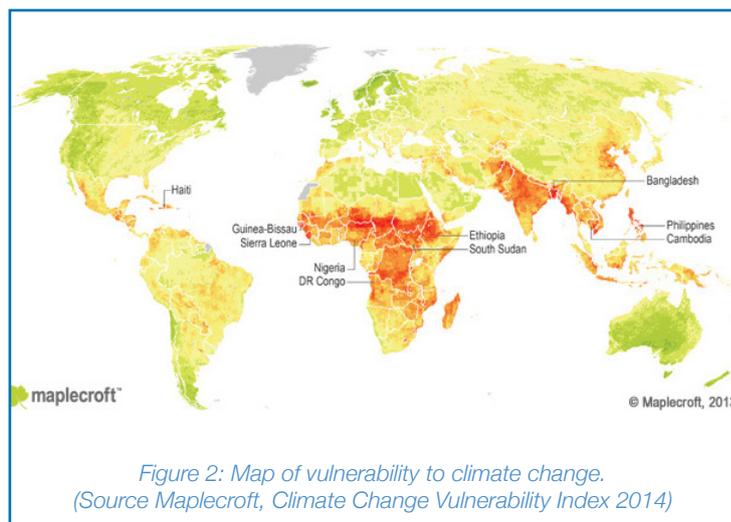
## THE WORLD'S POOREST ARE PAYING THE HIGHEST PRICE

Recent data<sup>12</sup> showed that **the poorest people already suffering from the highest rates of undernutrition will be the most vulnerable to climate change** (figure 2). Vulnerability will increase with climate change: exposure to climate change-related effects and dependence on climate-sensitive resources will rise, as adaptive capacity<sup>13</sup> decreases.

They rely on small-scale rain-fed farming systems and agricultural labour as their main source of food and income, making them highly dependent on climate-sensitive natural resources. Climate change is increasingly and simultaneously eroding **their livelihoods assets and access to natural resources and services**, while at the same time eroding their capacity to cope with climate-related crises, and adopt sustainable solutions to climate change. The hungry poor, **especially women and children**, are already the main victims of the changing climate<sup>14</sup>. They live in areas that are prone to weather- and climate-related disasters.

Indeed, when facing a disaster, people have no choice but to resort to **negative coping strategies** (reduction of food intake, sale of productive assets etc.) **that hinder their resilience, increase their vulnerability to climate threats**, and exacerbate their food and nutritional security (figure3). **Undernutrition undermines the ability and capacity of vulnerable populations to implement resilient climate coping strategies**. Food insecure people are the hardest hit by climate change: they require increased attention.

**Effects of climate change have already irreversibly affected many populations and their livelihoods. This is why the international community needs to dramatically invest resources in creating adaptive strategies for the poorest, specifically to guarantee sustainable access to sufficient and nutritious food, drinking water, and natural resources in order to thrive.**



## TOO LITTLE HAS BEEN DONE BY DONORS, AND DECISION AND POLICY MAKERS, TO ADDRESS THE PROBLEM OF UNDERNUTRITION IN A CHANGING GLOBAL CLIMATE

Every day, **more than 8000 children die of undernutrition<sup>15</sup>, especially in the poorest countries like sub-saharian Africa and south-east Asia. Climate change effectively undermines previous efforts made to reduce hunger.** There is an urgent, immediate need to apply resources to fight against undernutrition and help the most vulnerable build their resilience to the changing environment. **However, between 2005 and 2009, investments in nutrition interventions by major donors accounted for only 1% of the need<sup>16</sup> identified in the countries with the highest burden of undernutrition.** Increased

funding for nutrition-specific and nutrition-sensitive programs is more urgent than ever.

Climate change mitigation should remain a high priority. We cannot yet figure out what the consequences of a +4°C world would be. Even if major mitigation efforts are made, **the most at-risk populations will suffer from the climate change impacts and will have no choice but adapting.** But adaptation to climate change is costly. According to the World Bank, the costs necessary to implement adaptive measures could reach USD 100 billion a year through 2020 for developing countries<sup>17</sup>.



This figure is likely to rise steeply as global temperatures have been projected to likely exceed the threshold of 2°C above pre-industrial levels. However, climate change adaptation still remains dramatically underfunded<sup>18</sup>. The decisions, frameworks, and objectives developed prior to the 2015 global agreement on climate change in Paris are of the utmost importance. **Governments and donors should urgently increase their financial and technical support toward adaptation in least developed countries, as currently, financial contributions<sup>19</sup> remain insufficient to meet adaptation needs. The further the delay, the higher the price will be: economically, environmentally, and socially.** Immediate additional public funding is required in order to support the adaptive strategies of the world's poorest to climate change.

**Better nutritional health can improve the resilience of a population to climate-related shocks and stresses.** Therefore, governments and donors should **support nutrition focused adaptation and Disaster Risk Management strategies<sup>20</sup> and target women and children most at risk for undernutrition as a priority.** Guaranteeing food and nutritional security should be a priority for donors that finance adaptation measures, and UNFCCC parties involved in developing and evaluating these adaptive measures.

Last but not least, **there will be times and places when climate related events overwhelm local capacity, threatening the lives and livelihoods of billions of individuals.** The humanitarian community must be prepared to prevent and respond to the increased intensity and frequency of disasters. **Securing the emergency funds to prepare and respond to more humanitarian crises will be part of the humanitarian community's role to support the most at risk populations.**

## RECOMMENDATIONS

**ACF calls on government and international actors to take bold action to address the causes of climate change and asks the international community to fully recognize the adverse consequences of climate change on hunger and undernutrition when sealing a crucial international agreement.**

### ACF RECOMMENDS:

- 1. To governments, donors, and policy makers,** to increase financial support for nutrition specific and sensitive interventions that successfully address the expected rise of undernutrition as a consequence of climate change.
- 2. To UNFCCC parties,** to increase funding devoted to adaptation by providing additional public funds for climate change adaptation in the most at-risk countries, prioritizing actions for the most vulnerable groups, households and individuals.
- 3. To bilateral, multilateral donors, and countries,** to prioritize adaptation programs that include well-defined food and nutrition security objectives. Developing multi-sectoral programming to manage risks and enhance resilience through a nutrition lens will be necessary, while predominately focusing on the most vulnerable to undernutrition, mothers and children.
- 4. To the humanitarian community and donors,** to make sure that funding will be secured to prepare and respond to the humanitarian consequences of major climate related disasters.

ACF technical papers on climate change can be download here:

<http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/changements-climatiques-et-malnut.pdf>

[http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/acf\\_2012.\\_enhancing\\_climate\\_resilience.pdf](http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/acf_2012._enhancing_climate_resilience.pdf)

1 - Oxfam (2009) What happened to the seasons?

2 - IPCC, 2007, Fourth Assessment Report : climate change 2007

3 - FAO, 2013, The State of Food Insecurity in the World 2013

4 - Lloyd, S. J., Kovats, R. S., & Chalabi, Z. (2011). Climate Change, Crop Yields, and Undernutrition: Development of a Model to Quantify the Impact of Climate Scenarios on Child Undernutrition. Environmental Health Perspectives, 119

5 - M.C Tirado et al, 2013, Climate change and nutrition: creating a climate for nutrition security. Food and Nutrition bulletin, vol.34, no.4.

6 - World Bank. 2013. Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience. A report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics. Washington, DC:World Bank

7 - D. Willenbockel (2011) « Exploring Food Price Scenarios Towards 2030 with a Global Multi-Region Model », rapport de recherche d'Oxfam.

8 - World Bank.2012. Turn Down the Heat: why a +4°C warmer world must be avoided. A Report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics. Washington, DC:World Bank

9 - Hsiang et al.,2011

10 - Bates et al. (eds.) (2008) Climate change and water. Technical paper of the Intergovernmental Panel on Climate Change

11 - Costello et al. (2009) Managing the health effects of climate change. The Lancet 373: 1693–733

12 - Maplecroft, Climate Change Vulnerability Index 2013

13 - Parry, M.L., Canziani, O.F., Palutikof, J.P., van der Linden, P.J. & Hanson, C.E., eds. Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, UK, Cambridge University Press

14 - Women and children are 14 times more likely to die than men during natural disasters (Sorooptimist International of the Americas. (2008). "Reaching Out to Women When Disaster Strikes." White Paper: Disaster Relief. Philadelphia, PA)

15 - Lancet, 2013, Maternal and child nutrition series

16 - Horton S, Shekar M, McDonald C, Mahal A and Brooks JK (2010) scaling up Nutrition: what will it cost? World Bank

17 - World Bank. 2010. Economics of adaptation to climate change - Synthesis report. Washington, DC: World Bank.

18 - Climate Funds Update data suggest that developed countries have pledged USD 2.17 billion since 2003 to multilateral adaptation funds (November 2013).

19 - France pledged 5 Million Euros for the Adaptation Fund during COP 19 in Warsaw

20 - [http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/acf\\_2012.\\_enhancing\\_climate\\_resilience.pdf](http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/acf_2012._enhancing_climate_resilience.pdf)