



CLIMATE

One WORLD



Climate change and vulnerability: *Pushing people over the edge*

“Warming and associated extreme weather will reach unprecedented levels in our children’s lifetimes and 40% of the world’s poor, who have a minimal role in generating global pollution, are likely to suffer the most.”

The Pontifical Academy of Social Sciences¹

“If we don’t confront climate change, we won’t end poverty.”

Jim Kim, World Bank President²

CAFOD
Just one world

- ¹ The Pontifical Academy of Social Sciences (PASS), *Statement of the Joint PAS/PASS Workshop on Sustainable Humanity, Sustainable Nature: Our Responsibility*, 2014, <http://www.pass.va/content/scienze-sociali/en/events/2014-18/sustainable/statement.html>
- ² The World Bank, *Op-Ed: Ending Poverty Includes Tackling Climate Change*, 2013, <http://www.worldbank.org/en/news/opinion/2013/07/10/op-ed-ending-poverty-includes-tackling-climate-change>

EXECUTIVE SUMMARY

Climate change and poverty

Both the World Bank and the Intergovernmental Panel on Climate Change – the world’s leading authority on the issue – have highlighted the devastating effect that climate change is already having on the world’s poorest people, and emphasised its potential to stop millions of people escaping poverty.

The impact of climate change on efforts to reduce poverty is hugely significant to CAFOD, which works with partner organisations in over 40 countries worldwide – in many of these, millions of people live in extreme poverty, defined by the World Bank as surviving on \$1.25 a day or less.

In every country, in every community, we hear the same thing: increasingly unpredictable and extreme weather is making life harder, and increasing environmental stress is adding to existing social, political and economic inequalities. Climate change is contributing to this, and if polluting greenhouse gases continue to be emitted into the atmosphere, it is likely the situation will get increasingly worse. This means life will be harder for poor people who are often already desperately vulnerable, and have no financial or social safety net in place to support them when climate related events or disasters put their ability to cope under even further strain.

In fact, the situation on the ground is so serious that many now see climate change as **the number one threat to reducing poverty that exists today**. In 2012 a High Level Panel of Eminent Persons, convened to discuss the Sustainable Development Goals – of which UK Prime Minister, David Cameron, was the co-chair – declared that **“Without tackling climate change, we will not succeed in eradicating extreme poverty.”**³

Making the link between climate and poverty

This briefing examines the link between poverty and climate change by quantifying how many of those most vulnerable to the impacts of climate change are already struggling with extreme poverty.

To do so, this briefing considers people’s vulnerability to climate change, which takes into account how

poor they may be but also considers whether the societal and governance structures where they live can help them to mitigate the impacts of climate change. Using data from the World Risk Report⁴ on environmental degradation and disasters to give a picture of vulnerability, and cross-referencing this with World Bank figures on population and people living in extreme poverty, this briefing builds a picture of the threat climate change poses to the world’s poorest people. In this briefing vulnerability is defined by how susceptible people are to harm, the coping capacities available to them and the adaptive measures that are in place to help them deal with climate-related events.

The briefing’s key findings show:

- Of the 30 countries most vulnerable to changes in weather patterns and hazards including climate change, 26 are among the world’s poorest – that is, ‘least developed’ countries.⁵
- Four in ten (44%) of the people most vulnerable to a changing climate are already surviving at the edge of subsistence.
- In total, **423 million people** – more than the populations of the USA and the UK put together – who are most vulnerable to the impacts of a changing climate are already living in extreme poverty, surviving on \$1.25 a day.

The figures show us that climate change is likely to make life considerably worse for these people, unless action is taken to tackle its root causes of climate change and to support people in adapting to its effects. The lack of resources in least-developed countries to withstand and recover from extreme climate-related events, or adapt to changing weather patterns, means that the ability of the world’s poorest people to climb out of poverty will be further undermined by climate change.

CAFOD and climate change

At CAFOD, we believe this isn’t fair.

A commitment to social justice is at the heart of our Catholic faith, which calls us to stand in solidarity and dignity with the world’s poor, and ensure their voices are heard. And that means we cannot ignore climate change when we believe it is disproportionately harming those least able to cope.

Beyond natural hazards, changing weather patterns

3 A NEW GLOBAL PARTNERSHIP: ERADICATE POVERTY AND TRANSFORM ECONOMIES THROUGH SUSTAINABLE DEVELOPMENT: Report of the High Level Panel (HLP) of Eminent Persons on the Post-2015 Development Agenda, 2013, http://www.un.org/sg/management/pdf/HLP_P2015_Report.pdf

4 World Risk Report 2012: Environmental Degradation and Disasters, <https://www.ehs.unu.edu/file/get/10487.pdf>
The World Risk Report is put together by The Alliance Development Works, an alliance of German development which includes CAFOD’s German sister Catholic agency, MISEREOR.

5 UN list of Least Developed Countries: http://www.un.org/en/development/desa/policy/cdp/ldc/ldc_list.pdf

and extreme weather events, climate change has implications for a range of development areas, for example potentially impacting on the advances made in healthcare and education. And for those already living in poverty, climate change has the potential to make things much worse. This means CAFOD can only succeed in its mission of helping to eradicate poverty if decisive action is taken against climate change.

In recognition of that, CAFOD is launching a major new campaign on climate change and sustainable energy. Countries which contributed most to atmospheric pollution – including the UK – should lead on cutting emissions, but all countries who are heavy polluters must play their part. Developed countries like the UK must also provide finance and other support so extremely vulnerable people are not pushed further into poverty by climate change.

The evidence also underlines the need to consider economic, social, political and cultural inequalities when supporting a country or a population to build resilience to climate-related extreme and slow-onset events, so that vulnerability due to poverty or other forms of marginalisation can be accounted for and addressed. Opportunities include the UK supporting a global agreement through the UNFCCC process and ensuring climate change is addressed in the new Sustainable Development Goals for 2015–30.

Governments must also address the causes of climate change, primarily by cutting the use of polluting fossil fuels – the main source of greenhouse gases – and switching to sustainable energy systems. This shift should also benefit the billions of people who do not currently have access to modern energy.

That means our political leaders must:

- 1** Lead the way with other countries and secure an ambitious international deal to cut greenhouse gas emissions.
- 2** Support the transition from polluting fossil fuels to sustainable energy access for all. For people living in poverty, access to energy services in most cases requires investing in off-grid, mainly renewable energy. This should also be affordable, reliable and safe for communities.

Climate change is a huge and complex issue. But together, we can tackle it.

- 6** The World Bank, *Turn Down the Heat: Why a 4°C Warmer World must be Avoided*, 2013, <http://www.worldbank.org/en/topic/climatechange/publication/turn-down-the-heat-climate-extremes-regional-impacts-resilience>.
- 7** The World Bank, *Op-Ed: Ending Poverty Includes Tackling Climate Change*, 2013, <http://www.worldbank.org/en/news/opinion/2013/07/10/op-ed-ending-poverty-includes-tackling-climate-change>.
- 8** The IPCC Fifth Assessment Report (AR5) provides a clear and up to date view of the current state of scientific knowledge relevant to climate change. It consists of three Working Group (WG) reports and a Synthesis Report (SYR) which integrates and synthesises material in the WG reports for policymakers.
- 9** IPCC, *WORKING GROUP II Climate Change 2014: Impacts, Adaptation, and Vulnerability, Chapter 13, Livelihoods and Poverty*, 2014, <http://ipcc-wg2.gov/AR5/>
- 10** CAFOD, Christian Aid et al, *The right climate for development: why the SDGs must act on climate change*, 2014.

INTRODUCTION

Climate change, poverty and sustainable development

In 2012 the World Bank released a significant report entitled ‘Turn Down the Heat’. It described bleakly a world in which the global temperature has reached 4°C. This future would consist of “unprecedented heat waves, severe drought, and major floods in many regions, with serious impacts on human systems, ecosystems, and associated services”.⁶

Along with this message came a warning that climate change would hit the poorest hardest, preventing millions from escaping poverty and forcing some back into it. This led the President of the World Bank, Jim Kim, to give a stark warning: “If we don’t confront climate change, we won’t end poverty.”⁷

The latest report from the Intergovernmental Panel on Climate Change (IPCC), released in 2014,⁸ confirms that climate change is already having serious impacts on those already living in poverty. The report states that “climate variability, climate change, and extreme weather events constitute an additional burden to rural and urban people living in poverty. These climate-related hazards act as a ‘threat multiplier’, often with negative outcomes for livelihoods.”⁹

People have always had to adapt to a variable climate, but the projected impacts of climate change could push communities beyond their ability to adapt. Climate change is projected to have numerous effects, including on crops – increasing weeds and changing the ranges of pests and diseases. Along with decimating crop yields, drought also threatens to reduce livestock in Africa, where extensive rangelands in the north and south are becoming drier. Vector-borne livestock diseases may expand with rising temperatures. Poor pastoralists are already being affected by such impacts, losing livestock and facing increased poverty.”¹⁰ Whilst communities are adapting to climate change, it is clear the severity of the climate risk faced will need greater resources and capacity building.

This theme is echoed in the latest findings by the Pontifical Academy of Sciences (PAS) and the Pontifical

VULNERABILITY AND CLIMATE CHANGE

Academy of Social Sciences (PASS). They highlighted that “warming and associated extreme weather will reach unprecedented levels in our children’s life times and 40% of the world’s poor, who have a minimal role in generating global pollution, are likely to suffer the most.”¹¹

CAFOD has been supporting the world’s poorest communities, working through local partner organisations in over 30 countries, for over 50 years. We have first-hand evidence from the ground on the impact that a changing climate is having on communities. Our partners in developing countries¹² report that environmental stresses are increasingly threatening the livelihoods of poor communities, undermining years of progress by pushing people further into poverty. For some of those affected, the concept of climate change may be not a familiar one, yet the issues and challenges they describe can be clearly linked to changes in weather patterns and more extreme events. Their voices tell us that climate change is making poverty worse and making the task of helping people out of poverty even harder.

This briefing aims to explore and quantify the link between climate change, those vulnerable to its effects and people already struggling with extreme poverty. As an international development agency whose primary focus is and will remain poverty eradication, to be successful in our mission we must act on climate change.

What is vulnerability?

The Intergovernmental Panel on Climate Change (IPCC) defines vulnerability in the context of climate change as the “propensity or predisposition to be adversely affected.”¹³

Climate change impacts are often framed through the lens of exposure to natural hazards, ie how likely a country or community is to experience extreme events such as hurricanes and floods. However, high exposure does not automatically mean high vulnerability. For example, in relation to climate impacts, the Netherlands’ low-lying geographical position means it has a high exposure to sea level rises. Yet its level of vulnerability is greatly reduced because the Netherlands has the necessary technical resources and the financial, social, and political structures in place to implement the essential measures needed to prevent disasters relating to changes in sea level.

This is in stark contrast to other countries vulnerable to changes in sea level, who do not have access to the financial means to invest in large-scale technical solutions. For example, in 2014 Kiribati purchased 6,000 acres of land from neighbouring island Fiji to “ensure food security as the sea encroaches on arable land.”¹⁴ A heightened level of vulnerability also brings an increased risk of mortality. It is worth noting that the majority of deaths from natural disasters occur in the developing world. During the period from 1970 to 2008, over 95% of deaths from natural disasters occurred in developing countries.¹⁵

To better understand vulnerability to changing weather patterns and hazards, CAFOD has used the Alliance Development Work’s *World Risk Index*¹⁶ report on environmental degradation and disaster to get a clear picture of who is affected. Specifically,

11 The Pontifical Academy of Social Sciences, *Statement of the Joint PAS/PASS Workshop on Sustainable Humanity, Sustainable Nature: Our Responsibility*, 2014, <http://www.pass.va/content/scienze-sociali/en/events/2014-18/sustainable/statement.html>

12 See our two recent reports: ‘What Have We Done?’ and ‘COMPASS 2015: Voices from the ground.’

13 IPCC, WORKING GROUP II Climate Change 2014: Impacts, Adaptation, and Vulnerability, Summary for Policy Makers, 2014, <http://ipcc-wg2.gov/AR5/>

14 The Fijian Government, Address at State Dinner Hosted by the President & First Lady of Kiribati, 2014, <http://www.fiji.gov.fj/Media-Center/Speeches/HIS-EXCELLENCY--ADDRESS-AT-STATE-DINNER-HOSTED-BY-.aspx>

15 IPCC, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, 2012, http://www.ipcc-wg2.gov/SREX/images/uploads/SREX-All_FINAL.pdf

16 World Risk Report 2012.

CAFOD has used the ‘vulnerability index’¹⁷ element of the report, (a full breakdown of these indicators and sub indicators can be found in Annex 1) which is the sum of three indicators:

- **Susceptibility**

This is a country’s likelihood of harm, loss and disruption in an extreme event triggered by a natural hazard. Susceptibility describes structural characteristics and the “framework conditions” of society.

- **Coping capacities**

This refers to a country’s ability to minimize the negative impacts of natural hazards and climate change through direct action and resource availability.

- **Adaptive capacities**

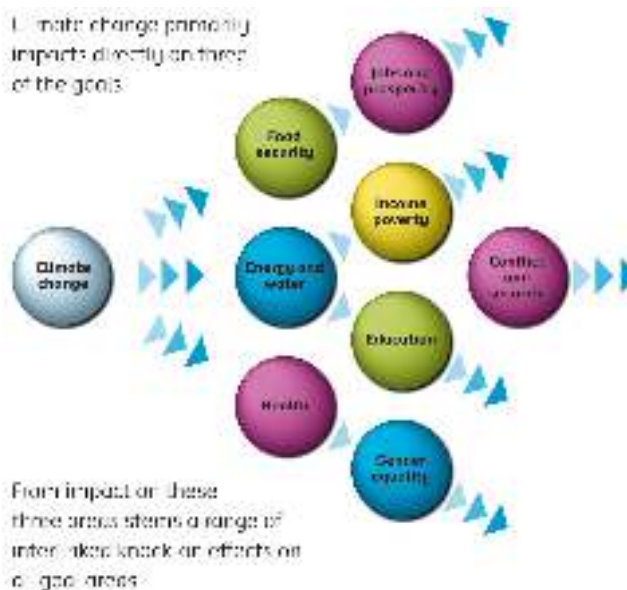
This refers to the extent to which countries have put in place measures to address the negative impacts of natural hazards and climate change in the future.

Thus vulnerability to climate change impacts are shaped by – and in turn impact on – the specific sociocultural, economic and political context of a country or community: its assets, resources, governance structures; how much it is able to prepare for or adapt. As the IPCC puts it: “climate change interacts with non-climatic stressors and entrenched structural inequalities to shape vulnerabilities.”¹⁸

This is important because it sets climate change out as a “threat multiplier” for the poorest, in the sense that the impacts of climate change compound other drivers of poverty. The IPCC notes that poverty is “a complex social and political problem, intertwined with processes of socioeconomic, cultural, institutional, and political marginalization, inequality, and deprivation, in low-, middle-, and even high-income countries.”¹⁹

The Overseas Development Institute’s (ODI) ‘Billiard Ball Model’²⁰ (See Figure 1) aims to capture the range and kind of impacts that climate change will have on development areas by considering both its direct and indirect impacts, which together contribute to vulnerability.

Figure 1 The Billiard Ball Model



Direct impacts can be seen in the areas of food security, water and health, where changes in climate have direct influences on rainfall and temperature, that affect factors such as crops and water availability.

These will in turn create other, indirect, changes: social issues such as gender equality, education and human rights, are indirectly affected if drought, extreme weather and shorter growing seasons affect livelihoods.²¹ The Billiard Ball Model captures a range of effects that climate change will have on development areas. However, it is important to note that this diagram does not outline the relationship between sectors and the way in which each issue is expected to impact upon one another. Increased conflict and insecurity can impact in varied ways and to varying degrees on access to health and education.

Such a chain of events risks leading to something the IPCC calls ‘double losers’, where vulnerable people experience “simultaneous exposure to climatic change and other stressors such as the spread of infectious diseases, rapid urbanization, and economic globalization, where climate change acts as a threat multiplier, further marginalizing vulnerable groups.”²²

17 We avoided the World Risk Index Report’s **exposure** metric as this includes earthquakes, ie non climate events. It would be inappropriate to consider this when defining vulnerability to climate change.

18 IPCC, WORKING GROUP II Climate Change 2014: Impacts, Adaptation, and Vulnerability, Summary for Policy Makers, 2014, <http://ipcc-wg2.gov/AR5/>

19 IPCC, WORKING GROUP II Climate Change 2014: Impacts, Adaptation, and Vulnerability, Summary for Policy Makers, 2014, <http://ipcc-wg2.gov/AR5/>

20 ODI, Zero poverty... think again Impact of climate change on development efforts, 2014, <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8863.pdf>

21 ODI, Zero poverty... think again Impact of climate change on development efforts, 2014, <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8863.pdf>

22 IPCC, WORKING GROUP II Climate Change 2014: Impacts, Adaptation, and Vulnerability, Summary for Policy Makers, 2014, <http://ipcc-wg2.gov/AR5/>

Who is most vulnerable?

Overall, the IPCC finds that poverty and marginalisation are the most important factors in causing climate change vulnerability:

“People who are socially, economically, culturally, politically, institutionally, or otherwise marginalised are especially vulnerable to climate change and also to some adaptation and mitigation responses. This heightened vulnerability is rarely due to a single cause. Rather, it is the product of intersecting social processes that result in inequalities in socioeconomic status and income, as well as in exposure.”²³

How many poor people are at risk and where do they live?

To better quantify the number of people living in extreme poverty who are also ‘most vulnerable’ to changing weather patterns and hazards, we correlated the *World Risk Index*²⁴ report’s vulnerability data²⁵ with population and poverty data from the World Bank. Extreme poverty – as defined by the World Bank – is characterised as those living on below \$1.25 per day²⁶ and it is estimated there are currently some 1.2 billion people living in extreme poverty.

No-one can say with certainty who is likely to be hit next by extreme or unusual climate events. For this reason we have chosen not to focus on exposure data but instead focus on the vulnerability data within the *World Risk Index* report. The vulnerability index is made up using a number of different indicators and sub indicators, the details of which can be found in Annex 1. Exploring which countries are seen as most vulnerable will give us a good sense of how many people living in extreme poverty are vulnerable to a changing climate, and where they are located around the world.

According to the *World Risk Index*, the vast majority of the 30 countries most vulnerable to the impacts of a changing climate are located in Africa, with only four, Haiti, Yemen, Pakistan and Bangladesh, bucking this trend. Table 1 sets out in detail the top 30 most vulnerable countries. It also includes the number of people living in extreme poverty in each.

Table 1: Top 30 vulnerable countries including number of people living below \$1.25 a day

Rank	Country ^{27 28}	Vulnerability rating	% Population living <\$1.25 a day ²⁹	No. people living <\$1.25 a day ³⁰
1	Niger	75.17	43.6	6,425,722
2	Chad	74.74	61.9	5,763,654
3	Haiti	73.54	61.7	5,380,392
4	Sierra Leone	72.2	51.7	3,032,459
5	Liberia	71.74	83.8	2,951,682
6	Mozambique	71.37	59.6	13,566,465
7	Guinea	71.05	43.3	4,350,337
8	Central African Republic	70.69	62.8	2,628,247
9	Ethiopia	70.21	30.7	27,443,670
10	Mali	69.76	50.4	7,048,924
11	Burundi	69.32	81.3	6,538,617
12	Nigeria	68.7	68	108,601,290
13	Togo	68.39	28.2	1,825,190
14	Madagascar	68.37	81.3	17,137,660
15	Burkina Faso	68	44.6	6,732,355
16	Comoros	67.91	46.1	269,864
17	Guinea-Bissau	67.88	48.9	650,785
18	Mauritania	67.55	23.4	800,959
19	Tanzania	67.52	67.9	27,920,272
20	Benin	66.93	47.3	3,625,867
21	Sudan*	66.45	19.8	6,900,929
22	Uganda	66.43	38	12,488,445
23	Malawi	66.25	61.6	9,248,436
24	Yemen	66.13	17.5	3,524,441
25	Côte d’Ivoire	65.84	23.8	4,345,890
26	Zambia	65.46	74.5	9,846,654
27	Kenya	65.09	43.4	15,531,002
28	Angola	64.45	43.4	8,214,166
29	Pakistan	63.86	21	35,071,697
30	Bangladesh	63.78	43.3	65,437,331
Total				423,303,401

To summarise, what Table 1 shows us is:

- 26 of the 30 countries most vulnerable to the impacts of a changing climate are also least developed countries (LDCS).
- This means 44% of the people most vulnerable to climate change – a total number of 423 million people, more than the combined population of the USA and UK – are already living in extreme poverty.

²³ IPCC, WORKING GROUP II Climate Change 2014: Impacts, Adaptation, and Vulnerability, Summary for Policy Makers, 2014, <http://ipcc-wg2.gov/AR5/> [Emphasis added]

²⁴ The Alliance Development Works, World Risk Report 2012: Environmental Degradation and Disasters, 2012, <https://www.ehs.unu.edu/file/get/10487.pdf>

²⁵ Please note we only use vulnerability data.

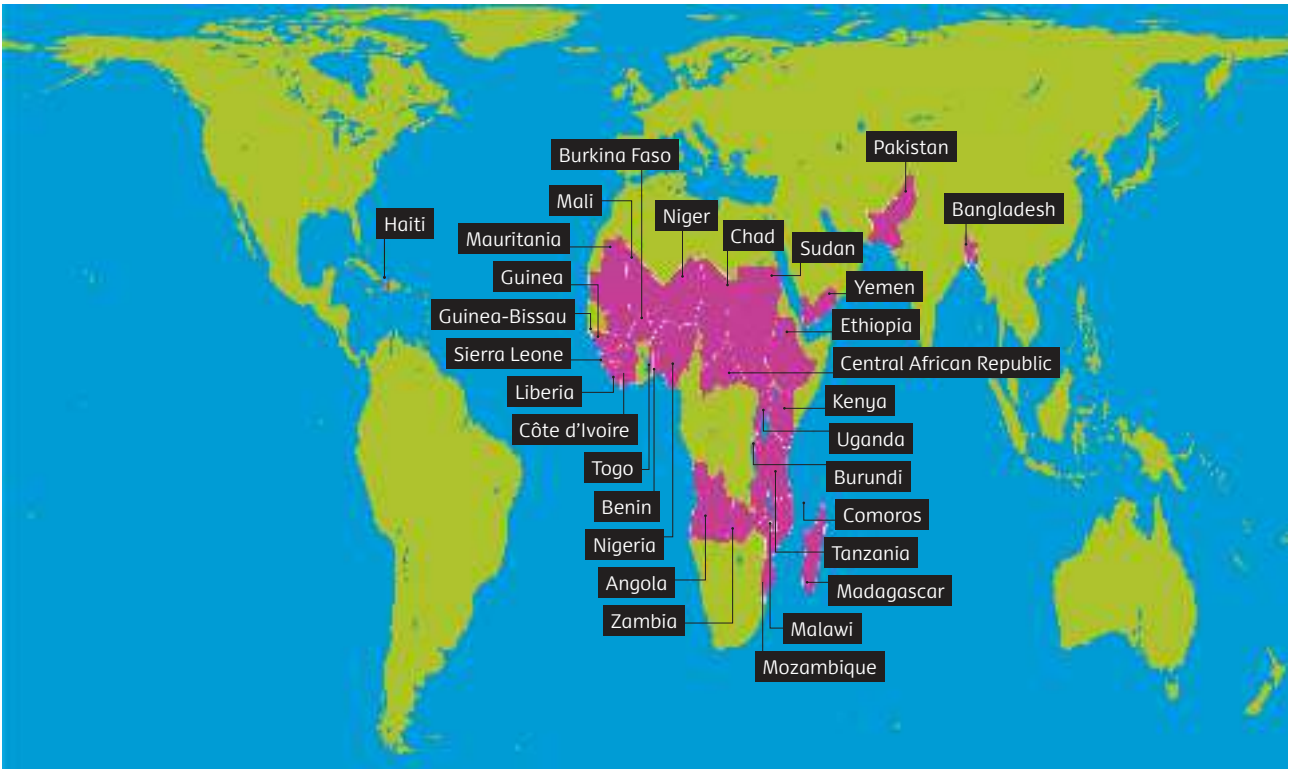
²⁶ The World Bank, Poverty Overview, <http://www.worldbank.org/en/topic/poverty/overview>

²⁷ Eritrea, Afghanistan, Timor-Leste, Zimbabwe have been omitted from the Top 30 due to a lack of data.

²⁸ Least Developed Countries are highlighted in bold.

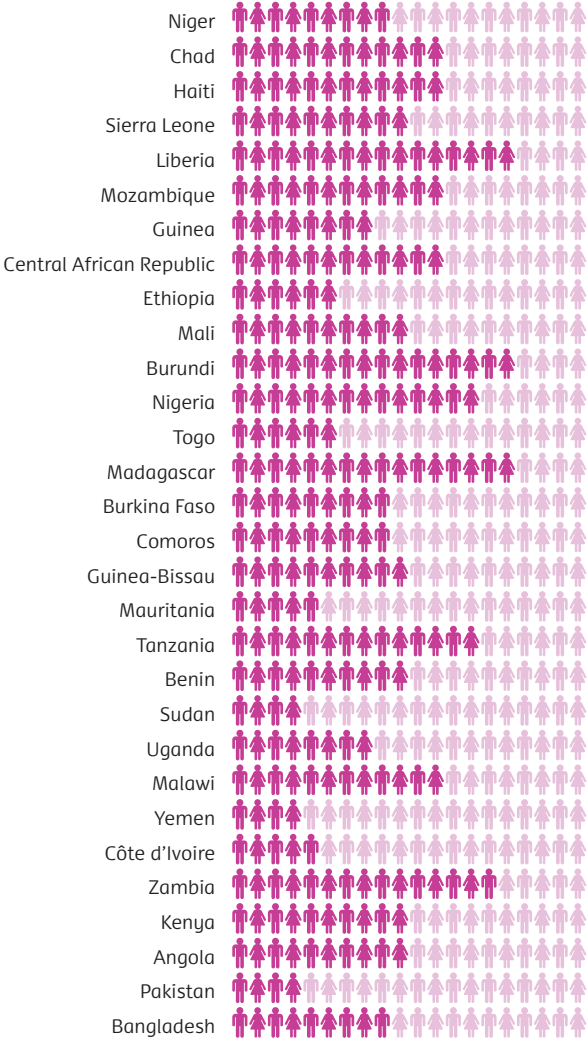
²⁹ World Bank, Poverty rates at international poverty lines, 2014, Taken from <http://wdi.worldbank.org/table/2.8>

³⁰ Population based on year of poverty survey.



The top 30 countries in the world most vulnerable to the impacts of a changing climate

% of people within each of the most vulnerable countries already surviving on less than \$1.25 a day



What do the figures tell us?

The figures in this paper are a reflection of what, based on current data, we know now about the most vulnerable people to a changing climate around the world. It is important to note that vulnerability is not a permanent condition; rather it is dynamic and liable to vary as conditions within a country change.

From the available data, it is highly likely climate change will put additional pressures on millions of people who already have minimal capacities, access to resources and support to adapt to changes, and to recover from a changing climate. For those people already living in extreme poverty, this analysis shows us that climate change is likely to make things a lot worse. These people are already struggling with chronic poverty, thus increasing their vulnerability to climate risk – as the voices of our partners and the communities where they work testify.

This can only have negative consequences for efforts to lift more people out of poverty and represents a huge challenge for humanitarian and development work. It also underlines the need to consider economic, social, political and cultural inequalities when supporting a country or a population to build resilience to climate-related events, so that vulnerability due to poverty or other forms of marginalisation can be identified and addressed.

VIEWS FROM OUR PARTNERS ON THE CHALLENGES PRESENTED BY A CHANGING CLIMATE

Soil moisture loss is another challenge as a result of temperature increase at the lower atmosphere, leading to crop death and stunting.

Sierra Leone

Oscillating periods of droughts and floods, affecting sustainable crop production.

Brazil

Changing weather patterns and increase in extreme climatic events such as flooding, cyclones (the last one was in 2013) and water logging, related to poor drainage and cyclical flooding. In 2013 over 72 lives were lost due to hypothermia as a result of cold waves, which also damaged crops and reduced yields.

Bangladesh

Unstable seasonal variation, affecting farmers' clear understanding of the seasonal farming calendar.

Sierra Leone

Unpredictable rain patterns: right now in the Pacific coast there is a big drought, while on the contrary in the Caribbean coast there is a mass of heavy rain and flooding. Yet according to the forecast about El Niño, it should not be raining at all in the region. So, in some parts of the region there will be famine and others will have enough food!! This is a typical multi-hazard risk.

Nicaragua

CONCLUSION

Climate change is not solely about bigger or more extreme weather hazards. It is also about far-reaching impacts on crop production, water availability, food prices, coping mechanisms and the types and levels of conflict, which could arise from fighting over increasingly scarce natural resources. People who are living in extreme poverty who are already struggling the most to survive every-day hazards will be hit hardest by additional environmental hazards arising from or due to a changing climate.

The figures in this briefing make it clear that if we want to eradicate extreme poverty, then we cannot afford to ignore climate change. If we want to ensure that hard-won development gains are not wasted, we have to take decisive action on climate change. The UK, along with other countries, is currently discussing the new Sustainable Development Goals (SDGs) for 2015-30. Climate change must be addressed in the lifetime of the SDGs, if their aim of eradicating extreme poverty and building sustainable development is to succeed. The UK is also – alongside likeminded countries – working towards reaching a global agreement on climate change in Paris at the meeting of the UNFCCC. This agreement is crucial to ensure the world is put on track to avoid the most dangerous effects of climate change.

In September, CAFOD will launch a major new campaign on climate change and sustainable energy. We are calling on governments to agree an ambitious global deal on cutting greenhouse gas emissions, encouraging our supporters to make changes in their own lives, and calling for a shift from polluting fossil fuels to reliable, sustainable energy sources to help lift the world's poorest people out of poverty.

We know that our supporters from the Catholic community across England and Wales, and beyond, care deeply about ending poverty, which is now inextricably linked to tackling climate change. Climate change can feel an insurmountable issue. But in joining together to tackle it, we have the power to save lives and help even more people lift themselves out of poverty.

Vulnerability is determined by ...

How susceptible are people to loss or harm if an extreme event was triggered by a natural hazard?

- ▶ Without **good sanitation**, people are more susceptible to water-borne diseases eg if flooding occurs – as seen with the cholera outbreak after the Haiti earthquake.
- ▶ Without **clean water** people's health suffers, which risks making people less likely to be able to prepare for weather events, or earn an income and save for harder times.
- ▶ **Malnutrition** also makes people more vulnerable to harm if an extreme event happens, weakening peoples' capacity to bounce back.
- ▶ People who are **under 15 or over 65** may be more susceptible as they could be dependent on others for support or could be housebound.
- ▶ How much **wealth** people have, and how that is distributed among people, also affects their vulnerability.

What coping capacities, including resources, do people have available to immediately tackle the impact when a natural hazard hits?

- ▶ **Good governance** and the ability of a society to tackle corruption is essential to making sure there are systems in place to help cope with a major event.
- ▶ A **sufficient number of doctors and hospital beds** are essential both before a natural hazard – to ensure people are in good health – and after, to treat those affected.
- ▶ **Insurance** helps people deal with the impact of disaster; whether it's large-scale industrial insurance, to small household savings schemes.

What adaptive measures are in place to help people deal with the impact of future events?

- ▶ **Education** is vital for everything from ensuring people aren't forced to live and work in dangerous areas, to making sure people can read and understand warnings and information. Women must also be represented in national parliaments so their specific needs can be protected.
- ▶ **Clean water** and effective water resource management is essential to prevent conflict, epidemics and widespread drought and floods.
- ▶ **Environmental protection** and effective and sustainable forest and agricultural management can protect against landslides, soil erosion, sea surges and cyclones, and will help minimise the impact of future events.
- ▶ **Healthcare expenditure** also has an impact on how prepared people are for future hazards and the capacity of responding to increasing climate-induced health threats.

How poverty exacerbates and contributes to vulnerability

To illustrate how poverty can exacerbate and contribute to people's vulnerability, the 'chain of events' example below draws on a real-life event. It outlines the knock-on impacts for poor people and demonstrates how these side-effects then increase their vulnerability to further shocks or traumas.

- Between July 2011 and mid 2012 a natural disaster hit, when the entire East Africa region was affected by a severe drought.



- The agricultural impact of this drought saw vastly reduced maize crop yields.



- The scarcity of crop yields meant food prices shot up. In Kenya, the price of grain in affected areas rose by 30 to 80% more than the five-year average. In Ethiopia, the Consumer Price Index for food increased by almost 45% year on year when comparing June 2011 to May 2010.



- Existing socioeconomic factors exacerbated the situation, including high levels of unemployment and high exposure to fluctuations in international markets. For example, Kenya imported 90% of its food at the time.



- People being unable to afford this food led to high levels of malnutrition.



- The hunger drove many people to flee to neighbouring countries, creating refugee situations that already weak social structures and exacerbating local conflicts were unable to cope with.



- This chain of events left these people even more vulnerable to further climate-related shocks.

Source: The UN report Humanitarian Requirements for the Horn of Africa Drought 2011, http://reliefweb.int/sites/reliefweb.int/files/resources/Full_report_216.pdf

CAFOD is the official aid agency of the Catholic Church in England and Wales, and part of Caritas International.

Across the world we bring hope and compassion to poor communities, standing side by side with them to end poverty and injustice.

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