

Climate change:
children's challenge



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Cover:

Boys use a large steel pot as a raft to cross flood water in their village in Sindh, southern Pakistan. More than 2.7 million children were affected by the floods in Pakistan in 2011. Floods the previous year affected more than 9 million children. In both crises, UNICEF worked with the Government of Pakistan, other UN agencies and partners to provide life-saving aid to children and families. UNICEF is also working long-term to prevent disasters having such a deadly and destructive effect on children's lives in Pakistan.

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Foreword

Despite the scepticism of some adults, the awareness among children of both the tenderness of our planet and the threats to it from climate change is undiminished. Visiting both primary and secondary schools, I am constantly struck by how aware and how fervently many children feel about what is happening to their world.

This important UNICEF report bears out the reality that young people around the world understand that the damage that is being done to the Earth by man-fuelled climate change is damage that their generation will have to suffer, pay for, and attempt to rectify. The quotes of children from Madagascar to the Philippines and from India to the UK, demonstrate powerfully how articulately they express their fears for the future. And the action they need us all to take now.

Whilst our fathers and grandfathers lived through World Wars and wars of liberation, the effects – whilst devastating for humankind – surprisingly left the Earth's ecosystem without long-term damage. We cannot plead ignorance ourselves as to what we are now doing to our ecosystem, with our grotesque abuse of our climate with fossil fuel usage and consequent unsustainable carbon emissions.

What this report tells us very clearly is that while we may have chosen to sit on our hands and do shockingly little to reduce our impact on climate, our children know and our children's children will come to know very well what is happening, and what we are not doing to combat it. This a brave and forthright account of the climate change the world's young people are going to inherit. Babies born today will be parenting their own children by the middle of this century. 2050 represents the very tipping point when temperature and sea level changes will be accelerating.

UNICEF has made a new call to arms and has set out where pressure needs to be brought to bear on the UK Government and others to play their full role. This report condenses both the evidence and the awareness of children as to its impact on their future lives in one of the best accounts I have ever read. Read this, and you will have most of the key facts at your fingertips. We owe it to those who come after us not only to read this report but to support UNICEF in the call for us all to come together and begin to achieve the changes in human behaviour that we know must happen. Without it, as this report makes clear, future generations of humanity will suffer in a world from which we, in our time, have extracted and despoiled so much.



*Jon Snow,
Journalist and broadcaster*

Executive summary

Climate change is real and happening now. And it is set to pose an even greater challenge in the future if appropriate action is not taken.

In developing countries today, children face the challenge of climate change, despite being least responsible for its causes. More severe and more frequent natural disasters, food crises and changing rainfall patterns are all threatening children's lives and their basic rights to education, health, clean water and the right food. The impact of climate change is projected to be more intense in the immediate and long-term future, suggesting that children of today and subsequent generations will bear the brunt of climate change. The cost of inaction will place a great economic burden on future generations. Children will bear the higher costs of not taking action today.

Developed and developing countries are affected by climate change, both directly and indirectly. While the impact of climate change-related events may be less severe in developed countries – largely because of greater economic resiliency – Hurricane Sandy (2012) showed that intense storms have the capacity to wreak havoc in even the most economically developed nations. Sandy claimed the lives of 73 people and caused US \$68 billion of damage in the United States.

Children and young people in developed countries are acutely aware of climate change, and are passionate and vocal about the need for action by governments to tackle the problem. UNICEF UK/ Ipsos MORI polling carried out in 2013 highlighted that 74 per cent of young people (age 11–16) in Britain agreed that they are worried about how climate change will affect their future and believe the world will have changed as a result of climate change by the time they are adults. More than seven out of 10 wanted the UK Government to do more to tackle climate change. Moreover, nearly two-thirds (63 per cent) were worried about how climate change will affect children and families in developing countries, demonstrating a high level of concern for children in other countries. Similar polling in the US showed that nearly three out of four young voters said they are less likely to vote

for someone who opposes President Obama's landmark plan on climate change.¹ The evidence is clear: children bear the brunt of the impact of climate change and want to see change on the issue.

Ahead of the UN Secretary General's High Level Meeting on Climate Change in 2014 and the signing of a new global deal in 2015, this report collates perspectives of young people from all over the world. Gathered from five years of UNICEF research at international, national and regional level, accompanied by key statistics and analysis of the current and expected impacts of climate change on children. It shows how children are experiencing the impacts of climate change right now and their fears for the future. The evidence in this report highlights that climate change is perhaps the greatest challenge facing children today.

Climate change has too often been discussed and debated in abstract terms, negating the human costs and placing little attention on its intergenerational impact. Figures on projected impacts of climate change give us a sense of the world in 2030, 2050 and beyond. While these projections are hugely important, they must be combined with a focus on those who will have to live with the reality of the state of the planet. A child born in 2012 will be 18 in 2030 and 38 in 2050. Climate change is not about a future we won't live to see. It is about now and about the future for our children.

Urgent action on climate change is needed to ensure that the state of our planet allows children to survive and flourish today and in the future. We need to listen to what children are saying, and take action to ensure we build the future they want to see.

1 <http://huff.to/1eYlvKh>

To have a climate fit for children, UNICEF UK calls for concrete action by the UK Government on climate change that will deliver for today's children and for future generations.

1. Involve children

Children should be involved in the development of the climate change policies that will affect their lives through inclusive consultation mechanisms.

2. A fair share

To ensure children everywhere can adapt to climate change, the UK Government should mobilise its fair share of the global commitment of US\$100 billion a year for new and additional climate finance, and encourage others to do the same.

3. Action plan

The UK Government should help put in place an international action plan for increasing climate finance by all countries in the run up to 2015 and beyond (including a timeline and milestones).

4. Adaptation programmes

The UK Government should pursue adequately resourced adaptation policies in vulnerable countries to help communities cope with the effects of climate change, particularly on those who are hardest to reach and most vulnerable.

5. Specific risks to children

The UK Government's adaptation work should recognise the specific risks faced by children and seek to adequately address these risks.

6. Low carbon development

The UK Government should continue to give support to emerging economies and developing countries to pursue sustainable, long-term low carbon development paths

7. Climate change treaty

The UK should champion a globally ambitious and legally binding treaty by 2015 that protects children and future generations from the challenges of climate change.

8. EU emissions target

The UK Government should continue to push the EU to move to a target of 30 per cent emissions reduction by 2020 and an EU 2030 roadmap to continued emissions reduction.



A boy carries supplies through waist-high floodwater in Manila, capital of the Philippines. Nearly half a million people were displaced by flooding caused by tropical storm Ketsana in September 2009.

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In 2008 heavy rains from Cyclone Ivan flooded homes and devastated crops across Madagascar.
© UNICEF/HQ28-0202/Rasoamanana

“Children in the world’s poorest communities are the most vulnerable. They are already seeing the impacts of climate change through malnutrition, disease, poverty, inequality and increasing risk of conflict – and ultimately an increase in child mortality rates.”

Lord Stern, 2008

ISSUES

Climate change: here and now

Countries everywhere are experiencing the growing impact of our changing climate – from droughts in the United States to changing rainy seasons in sub-Saharan Africa and an increasing number of cyclones in South East Asia. Recent research by the World Meteorological Organisation (WMO) highlighted that 94 per cent of countries had their warmest ever decade in 2001–10.² Climate change is a perceptible and immediate reality, not just a future challenge.

While no area is immune to the impacts of climate change, evidence suggests that developing countries are currently hit hardest by the impacts. It is the children of these countries who are suffering the most, despite being the least responsible for the causes of climate change. And the evidence also suggests that developing countries will be worst hit by future changes in rainfall patterns, more frequent and intense natural disasters, and an increase in droughts and floods.

Because of climate change, children in developing countries already face a greater risk of climate-linked diseases like malaria and cholera, increased risk of food and water shortages, and disruption to their education. It is estimated that more than 88 per cent of the existing global burden of disease due to climate change occurs in children under the age of five³. The last Intergovernmental Panel on Climate Change (IPCC) assessment reinforced this finding, stating that climate change and temperature fluctuations were affecting children's health⁴ and citing evidence that higher temperature was strongly associated with increased episodes of diarrhoea in adults and children in Peru. In addition, associations between monthly temperature and diarrhoea have also been reported in the Pacific Islands, Australia and Israel.

Climate change is already undermining existing gains in human development and exacerbating many of the key development challenges faced by children everywhere, making it more difficult for children to survive and flourish and reach their full potential. In 2011, one in five children living in rural Indonesia⁵ said that weather events like droughts and a failing harvest meant they had to leave school and find work to help

support their family. Children in Kenya⁶ have spoken about how accelerated extreme weather patterns (like prolonged droughts and intense flooding) linked to climate change were affecting their families' ability to put enough food on the table. Similarly, the recent High Level Panel⁷ report on the post-2015 development agenda highlighted that climate change is the major factor in determining whether or not we can deliver on development objectives.

The wider impact that climate change is having on countries' economic growth, infrastructure and development prospects is also having a profound effect on children's lives. The United Nations Office for Disaster Risk Reduction (UNISDR) estimates that in the last 10 years, climate-related disasters have led to global economic losses of US\$2 trillion.⁸ In addition, the WMO estimates that, between 2001 and 2010, there were 511 tropical cyclone-related events that killed nearly 170,000 people, affected more than 250 million, and caused estimated economic damages of US\$380 billion.⁹ This is having an impact on the economic context that children are growing up in now and will continue to burden future generations. It also highlights the urgent need to expand adaptation measures in developing countries to help the local population develop the skills and structures that are more resilient to a changing climate.

Climate change is one of the most significant challenges facing children today and children are already finding the circumstances of their lives have changed as a result.

Climate change and children now: some key statistics

- There are more **600 million children** living in the 10 countries most vulnerable to climate change. (*UNICEF, 2011*)
- **64%** of children and young people (age 11–26) in the UK are worried about how climate change will affect children in other countries. (*UNICEF/Ipsos MORI 2013*)¹⁰
- **88%** of the existing global burden of disease due to climate change occurs in children under the age of five. (*WHO, 2012*)

Children's vulnerability to climate change

Vulnerability rank	Country	Total population	Under 18 population	Under 18 population as % of total
1	Bangladesh	150,494,000	61,091,000	41%
2	India	1,241,194,000	447,401,000	36%
3	Madagascar	21,315,000	9,759,000	46%
4	Nepal	30,486,000	12,712,000	42%
5	Mozambique	23,930,000	11,561,000	48%
6	Philippines	94,852,000	37,033,000	39%
7	Haiti	10,124,000	4,316,000	43%
8	Afghanistan	32,358,000	14,897,00	46%
9	Zimbabwe	12,754,000	6,0001,000	47%
10	Myanmar	48,337,000	16,124,000	33%
138	UK	62,417,000	13,100,000	20%



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- WMO, Press Release No. 976, on publication of *A Decade of Extremes*, 2013.
- WHO, 2012, www.who.org/climatechange
- IPCC, Fourth Assessment Report, 2007. <http://bit.ly/17ONtml>
- UNICEF, Children's Vulnerability to Climate Change and Disaster Impacts in East Asia and the Pacific, 2011. <http://uni.cf/18FYvgS>
- UNICEF, Climate Change in Kenya: focus on children, 2010. <http://bit.ly/14qlrgP>
- UN, A New Global Partnership: Eradicate poverty and transform economies through sustainable development, 2013. <http://bit.ly/18l3Tdo>
- <http://www.unisdr.org/archive/27162>
- WMO 'A Decade of Extremes' http://www.wmo.int/pages/mediacentre/press_releases/pr_976_en.html
- <http://bit.ly/1bAUThq>

Climate change: a challenge for the future

The future impacts of climate change for the world, and in particular developing countries, have been well articulated over the years. Even if the world stops emitting greenhouse gases tomorrow, there will be a certain level of warming in the future due to historic emissions already in the atmosphere. While international discussions are looking for governments to agree to action that will limit warming to 2°C above pre-industrial levels, estimates vary on the level of warming we can expect in decades to come. It has been estimated that we are currently at 0.8°C of warming on pre-industrial levels, with 2°C 'locked' into the system already.¹¹ Recent World Bank figures suggest that we are on course for 4°C¹² warming, while the International Energy Agency (IEA) says we are on course to reach 5.7°C of warming by the end of the century.¹³

While the projected impacts of climate change have the greatest implications for the lives and opportunities of children as they grow up, little emphasis has been placed on the lived experiences of children. Yet, it is today's children and future generations who will inherit the outcomes of our lack of action on climate change. A child born in 2012 will be 38 in 2050, by which time some of the most extreme climate change impacts are expected to have occurred. The impacts of such levels of climate change will shape the future for children everywhere. Although developing countries will bear the brunt of these impacts and their costs, developed countries will also have to face climatic impacts and their economic consequences as well as the indirect impacts and costs of climate change on the South.

Action on climate change is fundamentally about the action we must take to protect children's futures and the legacy we want to leave for them. Greater emphasis on the impacts of climatic change for children can help highlight exactly why tackling it is of vital significance to us today, when today its effects may not be so keenly felt by some.

Impact on health

The future impacts of climate change will affect both today's children and future generations. The IPCC estimate that there will be 30 million more malnourished children as a result of climate change by 2050,¹⁴ while the 2012 Climate Vulnerability Monitor highlighted a range of health impacts that should be expected by 2030¹⁵. This will affect the children of today and the children of 2050, increasing disease, restricting access to education and life opportunities. The IPCC's Fourth Assessment report (2007) highlighted that children everywhere will be impacted: stressing "Within areas, even those with high incomes, some people (such as the poor, young children and the elderly) can be particularly at risk."¹⁶

Impact on economies

The future impacts of climate change are expected to have a considerable economic burden on the children of today and future generations. The Stern Review¹⁷ estimates that coping with the impacts of climate change could cost up to 0.7% of global GDP. Not only does this signify that climate change will affect prosperity in the future, it is also likely to lead to costs being passed down through the generations. Today's children could, for example, have to pay higher taxes as adults to cover the costs of climate change.

11 UNEP. The Emissions Gap, 2012. <http://bit.ly/17P0axD>

12 The World Bank, *Turn Down the Heat*, 2012. <http://bit.ly/1aa8cS2>

13 IEA, *Redrawing the Energy Climate Map*, 2013. <http://bit.ly/16equnV>

14 IPCC, 2007.

15 DARA, *Climate Vulnerability Monitor Second Edition*, 2012. <http://bit.ly/1bvNQqc>

16 IPCC, Fourth Assessment Report, 2007. Section 3.3.3. <http://bit.ly/17ONtml>

17 Cambridge University Press, *The Economics of Climate Change*, 2007.

Key statistics: future impacts of climate change

- Towards the end of the 21st century, the cost of climate adaptation could amount to at least **5 to 10 per cent** of Gross Domestic Product. (*IPCC, 2011*)
- With temperature increases of **2°C**, an additional **30 to 200 million** people will be placed at risk of hunger across the world, rising to as many as **550 million** with warming of **3°C**. Children are the most vulnerable in these situations. (*The Economics of Climate Change, 2007*)
- By 2015, the number of people affected by climate-related disasters each year is likely to rise by an estimated **50 per cent**: from **250 million** per year today to **375 million**. (*Oxfam, 2010*).



Intergenerational justice : children and climate change

Climate change is perhaps the most significant intergenerational challenge facing the world today. It requires us to think about the legacy we will leave for our children and future generations.

The geographical injustice and inequity of climate change is well established. Developing countries that are the least responsible for the activities that cause climate change will bear the brunt of its consequences. While this has received significant attention in climate debates, what has been overlooked is the inequity and injustice between generations. Put simply, climate change has been caused by today's adults and previous generations. Yet it is children – those least responsible for climate change – who will feel the worst impacts. Polling by UNICEF and Ipsos MORI exposes how aware children are of this: three out of four 11- to 16-year-olds in the UK say that they are worried about how climate change will affect their future¹⁸.

Furthermore, children will inherit the outcomes of today's climate change decisions. It have no voice in the process. Adults, who will not necessarily have to live with the implications of their decisions, are making climate change policies without consulting or listening to children.

That is not to say that adults are unconcerned about the intergenerational implications of climate change. In fact, UNICEF polling highlighted how parents in the UK are worried about how climate change will affect their children's futures and life chances: 56 per cent of parents and grandparents stated that they worry climate change will affect their children or grandchildren.

The intergenerational implications of climate change highlight why climate policy must be devised with children in mind, and why their views on climate change are so vitally important and must be heard and acted upon in the decision making process.

18 UNICEF UK/Ipsos MORI 2013

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ISSUES



“Climate change will have serious impacts within the lifetime of most of those alive today. Future generations will be even more strongly affected, yet they lack representation in present-day decisions.”

Lord Stern, 2007

“We already face the effects of climate change. Our communities are deprived of clean drinking water, denied access to education and vulnerable to disease every time it floods. Our plates are empty due to drought. Our future is at risk, and we demand that something be done. The youth in the world are ready to take action, and we request the same of governments worldwide.”

Youth delegates, UNICEF Children's Climate Forum, Copenhagen, 2009

Climate change: the importance of children's views

The evidence is clear. Climate change is already having an effect on children's lives and will have an even more profound effect on their futures. It is something that children have a view on – whether they are living in the countries most affected by climate change or in the industrialised countries that have the greatest historical responsibility for climate change.

More than 600 million children live in the 10 most climate-vulnerable countries and, as the chart on page 5 shows, the under-18 population in these countries is around 45 per cent. The views of children and young people are therefore critically important in understanding the impact that climate change is having on people's lives now and in the future. Young people can give unique perspectives on the risks they are facing and how climate change can be tackled. Their views can provide an insightful contribution to tackling climate change and give impetus to strong political action.

There is also an imperative to listen to young people's views on climate change. Article 12 of the UN Convention on the Rights of the Child – the most widely ratified of all international conventions – states that children have a right to have a say in decisions that will affect them. As climate change is affecting children's lives now and will undoubtedly continue to do so far into the future, it is only right that children's views are heard and taken onboard by those making the decisions today.

Young people everywhere demonstrate a strong desire for action to be taken on climate change. Nearly eight out of ten of children in the UK age 11–16 would like to see the government do more on climate change. Children can present innovative solutions to tackling climate change and give an insight into some of the challenges that it presents.



UNICEF PROGRAMME

Zambia: How youth views can help climate action

"The fight against climate change requires people to share information and learn from one another"

Luyando, Youth Climate Ambassador, Zambia

"If we know about climate change and we know how to preserve our environment, then as we grow, as we become the leaders of tomorrow, it will be much easier to find lasting solutions."

Tendai, Youth Climate Ambassador, Zambia

In Zambia, giving young people the space to advocate and articulate their views has facilitated action on climate change.

Unite4Climate Zambia is one of UNICEF's signature child-led advocacy programmes. It partners with young people in all of the country's nine provinces to combat climate change and is helping to empower and inspire thousands of children. Through media programmes, debates, and advocating for adaptation measures such as the construction of floating schools in flood-prone areas, Zambia's young Climate Ambassadors are agents of change. Reaching 200 climate ambassadors each year and equipping them with the skills needed to advocate for climate change action and educate children, Unite4Climate Zambia is working to ensure that children actively contribute to climate action.

Food

Every child has the right to enough nutritious food. One of the most significant effects of climate change is the impact on the global food system. Agricultural yields and food security will be greatly affected by changing rainfall patterns and increasing impacts of natural disasters.

Developing countries across Asia, Africa and Latin America are forecast to see reductions in agricultural productivity of between 9 and 21 per cent by the 2080s due to climate change¹⁹. In some places, the effects will be felt much sooner than that. By 2020, rising temperatures and variable precipitation are likely to reduce the production of staple foods by up to 50 per cent in some African countries, leading to declining yields and making it more difficult to put food on the table.²⁰ Some countries are already seeing such impacts, associations have been seen between climate change-related droughts in Chad and an increase in the prevalence of global acute malnutrition (GAM) within the drought-affected regions from 14.5 per cent in 2011 to 18 per cent in 2012.²¹

Understanding the links between climate change and food are essential in ensuring we take action to protect children from climate change. There will be direct effects such as increasing malnutrition and hunger: the IPCC states that "malnutrition linked to extreme-climatic events may be one of the most important consequences of climate change"²². There will also be indirect effects of changes in food security. For example, loss of family income in agricultural areas could lead to children being taken out of school and increased migration, putting children at greater risk of exploitation and placing barriers to their development²³.



Ten-month-old Ahmed Salim is weighed at the UNICEF-supported nutrition centre in southern Mauritania. Ahmed iweighs just 5.7 kilogrammes and is severely malnourished. The centre provides him with fortified milk and medical care.

© UNICEF/HQ12-0468/Brandt

19 Cambridge University Press, 2007.

20 Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX), IPCC, 2012.

21 UNICEF, *Humanitarian Action Report*, UNICEF 2013.

22 IPCC, 2007. 8.4.2.2

23 For more information see UNICEF UK's recent briefing on food and climate change <http://bit.ly/1dvQllc>



Youth views

"In the few years that I've been here, the climate has really changed. Temperatures have gone up. The rainfall has dropped. As time goes by, things are getting worse and worse ... It rains once in three months, that's not normal. This has led to shortage of food and water, which has led to the death of animals. People lose their livestock and other people die due to starvation and hunger."

Lourine, age 15, Lodwar, Kenya

"Because of the high rainfall, the fertility for the corn is not good, and it means that the plants get unhealthy to the point where they die. If the corn dies, it also means that the people will have a difficult economic situation."

Jeri, age 14, Nusa Tenggara Timur, Indonesia

"Farmers plant their crops but ... when the rain is expected to come, it does not. This causes hunger to most families, especially those that depend on farming. My friends and classmates ... will be eating less food day by day. They can't afford new clothes and have to wear small clothes."

Naomi, age 13, Kericho, Kenya

"Recently the harvest has reduced ... I know some children who have dropped out of school. They say they cannot concentrate in class because they are hungry. We have just one or two meals per day because food is expensive. A kilo of maize flour increased from 35 to 70 shillings, and my mother said it will get worse"

Justus, age 14, Budalangi, Kenya

"I have lived here for seven years. Before there was rain, but now the rain is reducing and reducing ... There weren't so many street boys before but now there are a lot of street boys because there isn't enough food."

Jack Waigwa, age 15, Nakuru, Kenya



Key statistics

- In Indonesia, **one in five** rural children interviewed in 2011 stated that, due to weather events, they had to leave school because there was not enough money for them to continue. **Six in ten** children also noted that food became more expensive after too much or too little rain. *(UNICEF, 2011)*
- **200,000 people** will die and **200 million people** will suffer from food insecurity as a result of climate change in lower income countries – half of these deaths are projected to be children from lower income countries. *(Climate Vulnerability Monitor, 2012)*
- In sub-Saharan Africa with warming of **1.2–1.9°C** (between 2030 – 2050), undernourishment levels are expected to be in the range of **15–65 per cent**, due to declines in crop yields and nutritional quality of crops. *(World Bank, 2013)*
- In sub-Saharan Africa warming of **1.2–1.9°C** is expected to cause severe stunting at a rate of **12–20 per cent**, compared to a **40 per cent** decrease in stunting levels without climate change. *(World Bank 2013)*



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UNICEF PROGRAMME

Coping with the impact of climate change on food prices

Lesotho is highly vulnerable to the impacts of climate change, and children are already suffering some of the worst impacts. The high incidence of HIV in the country has left thousands of children as heads of their households and caring for their younger or more vulnerable siblings, and now climate change is making things worse. In recent years, the country has suffered climatic changes such as severe reductions in rainfall levels. These have contributed to a reduction in crop yields around the country. Without enough means to make a living or grow their own food, many families cannot afford the cost of food. As a result, four in every ten children in Lesotho suffer from chronic malnutrition.

To ensure that future changes in rainfall and impacts on agricultural yields do not have such devastating impacts, UNICEF is providing households at risk with the seeds and tools needed to be self-sufficient. This means that children and families have a potential source of food even if food prices rise.

Water

Every child has the right to clean water. One of the most significant current and future impacts of climate change is the effect on the availability and supply of fresh water at a local, national and international level. Changing rainfall patterns and the increasing severity and frequency of natural disasters all threaten the availability of clean and safe water that in turn could lead to an increase in food shortages, diarrhoea and waterborne diseases as well as compromise water and sanitation systems and increase the likelihood of conflict over scarce water resources.

Every minute of every day, a child dies because of unsafe water and lack of basic sanitation.²⁵ Diarrhoea is the second biggest killer of children (after pneumonia).

Climate change will lead to some areas receiving greatly increased rainfall while others will face drought conditions. The effect of climate change on water scarcity is already estimated to cost countries US\$45 million a year, and by 2030 affected countries will incur US\$200 billion in yearly losses²⁶ – representing a substantial risk to child survival and a considerable economic burden.

Youth views

"This drowning nation now faces a further disaster: The floods are threatening to decimate Pakistan's youth. One of the biggest threats is the outbreak of waterborne diseases such as cholera and diarrhoea."

Syed, age 16, Pakistan

"In my country, we have been affected by drought and famine so there is shortage of food in my country"

Laurine, age 15, Kenya

"Water availability has reduced because the water sources are drying up"

Nkhata, age 15, Zambia



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Key statistics

- Between 1950 and 1999, there was an almost **20 per cent** decline in summer rainfall in southern Africa. (UNICEF, 2008)
- Currently, **1.6 billion people** live in countries and regions with absolute water scarcity and the number is expected to rise to **2.8 billion people** by 2025. (World Bank, 2013)
- Declines of **20 per cent** in water availability are projected for many regions under a **2°C** warming scenario and of **50 per cent** for some regions under a **4°C** warming scenario. Limiting warming to **2°C** would reduce the global population exposed to declining water availability to **20 per cent**. (World Bank, 2013)

25 UNICEF, Committing to child survival: a promise renewed, 2012, p.18. [2,000 children a day die of diarrhoea. 88% of all diarrhoea related diseases are because of poor water, hygiene and sanitation.]

26 Climate Vulnerability Monitor, 2012.

In December 2011, Tropical Storm Washi devastated the city of Cagayan de Oro in northern Mindanao, Philippines. An estimated 80 per cent of the city was left without safe drinking water.

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VIEWS

Every child has the right to survive and develop and to receive the best possible standard of health care. The impacts of climate change on health, are already significant and are likely to intensify. It is estimated that more than 88 per cent of the existing global burden of disease due to climate change occurs in children under the age of five.²⁷

Sickness and disease affects child development as well as children's ability to lead full and healthy lives. Climate change has direct impacts on health, such as the increased prevalence of malaria or waterborne diseases. And climate change can also indirectly affect child health. For example, changing rainfall patterns are already diminishing crop production in sub-Saharan Africa, which in turn is leading to increased rates of child malnutrition. Malnutrition has a range of subsequent and lasting effects on health, causing stunted growth and weakened immune systems. Impaired mental development linked to malnutrition can affect attainment at school and restrict later job prospects. It is estimated that by 2050, 25 million more children will be malnourished due to climate change.²⁸

UNICEF research in East Asia highlighted that the changing climate is leading to increased rates of communicable and non-communicable diseases in children, including waterborne diseases and diarrhoea. The role of climate change in increasing the frequency and intensity of natural hazards such as cyclones and extreme flooding can also increase the spread of waterborne diseases, and health risks such as contaminated food and water supplies. In Mongolia 14 per cent of deaths of children younger than five years were caused by diarrhoeal disease, and the highest rates of incidence of dysentery and salmonella in recent years occurred between 2001 and 2003²⁹ coinciding with a severe drought, connected to climate change, in which springs and small rivers dried up

Youth views

"Water is also scarce because of lack of rain. Those living far from the lakes walk so far in search of water. The water is dirty and contaminated and people get bilharzia."

Justus, 14, Kenya

"The region that I live in was flooded for three months. I worried about the children. They didn't have food and they were leaving their homes. I worried about the health of the children because they become ill. It affected me a lot."

Darwin, 17, Bolivia

"A rise in malaria, cholera and all those things negatively impacts society as a whole"

Child interviewed in South Africa



Key statistics

- **88 per cent** of the existing global burden of disease due to climate change occurs in children under the age of five. (WHO, 2012)
- Rainfall changes can have a significant effect on child health. A study in Bangladesh found that the number of non-cholera diarrhoea cases per week increased by **5.1 per cent** for every 10mm increase above the threshold of 52mm of average rainfall. The number of cases also increased by **3.9 per cent** for every 10mm decrease below the same threshold of rainfall. (UNICEF, 2010)

27 WHO, 2012. www.who.org/climatechange

28 Cambridge University Press, 2007.

29 UNICEF, Children and climate change in Mongolia, 2011. <http://uni.cf/15cu0sT>

Disasters

The increasing risk of natural hazards is one of the most significant impacts of climate change. Scientific analysis suggests that climate change is already leading to increasing intensity and frequency of natural hazards such as cyclones, heavy rain and flooding, and this will continue into the future.

Developing countries are at highest risk of the impacts, both due to geographic location and perhaps most significantly (unlike developed countries) due to the low resilience of their economies and infrastructure to such impacts. Put simply, hazards only become disasters when a population or society's capacity to cope within existing resources is overwhelmed. In such a situation, children, especially the hardest to reach, are always the most vulnerable. Disasters put children at greater risk of death, exposure to disease and trauma, and disruption to their education and social development.

As the numbers of disasters escalate with increasing climate change, there must be an expansion of adaptation and resilience programmes in vulnerable countries to protect children from risk. Furthermore, the Climate Vulnerability Monitor estimates that by 2030, the economic losses from floods, storms and landslides will reach US\$195 billion a year – such losses will have a significant impact on the GDP of countries and intensify the economic challenges facing children as they grow up.³⁰

Youth views

"Being a student, I believe that children play a vital role in Disaster Risk Reduction. In our municipality, the youth don't just sit back and wait for what adults will say, instead we really do something for the environment and we participate actively in issues affecting young people and our community, especially in reducing damages inflicted by disasters."

Andre, 16, Philippines

"DRR education should be taught in schools especially in the Philippines, where I come from, since it is situated in a location prone to natural calamities and disasters. We are most vulnerable to disasters like tropical cyclones, flash floods, tidal waves, drought, volcanic eruptions that strike – and then classes have to be suspended, some children end up starving, some are left homeless and some even die."

Trisha, 14, Philippines

"Climate change is affecting Africa. One day, 2 weeks ago, there were floods. I couldn't go to school and I was writing exams. I couldn't go to school because there were floods everywhere. My school mates couldn't go to school and my house was full of water."

Bridgette, 16, South Africa

³⁰ Climate Vulnerability Monitor, 2012.



Key statistics

- Losses from weather-related disasters alone are **doubling** globally **every 12 years**; and climate change impacts are predicted to increase the numbers of children affected by disasters from an estimated **66.5 million** per year in the late 1990s, to as many as **175 million** per year in the coming decade. (*UNICEF, 2012*)
- Women and children are **14 times** more likely to die in a disaster than men. (*un.org, 2013*)
- Children from the poorest families are up to **10 times** more likely to bear the brunt of environmental disasters linked to climate change. For example in the last **five years**, **67%** of the poorest children in Ethiopia were hit by an environmental shock, compared to **6.5%** of children from better off families. (*Save the Children, 2010*)
- By 2015, the number of people affected by climate-related disasters each year is estimated to rise by **50 per cent**, from **250 million** per year today to **375 million**. (*Oxfam, 2010*)
- By 2050, there will be **150–200 million** forced migrants due to climate change events. (*Oxfam, 2010*)

Widespread flooding affected over 120,000 in Benin in 2010. In September, the country experienced twice its average rainfall.

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UNICEF PROGRAMME

Building resilience to increasing disasters in India

Every year, natural hazards such as floods, droughts, cyclones and earthquakes devastate millions of lives in the developing world. In a country with a population as large as India, millions of children and families are affected by natural hazards every year. As storms, floods and droughts become more frequent and severe as a consequence of climate change, the situation is worsening.

The poorest children are particularly vulnerable to the impact of climate change. They often live in poorly constructed homes located in high-risk areas that are more likely to be affected by weather-related shocks, such as floodplains, riverbanks or densely populated slums. When extreme weather events strike, they destroy homes and schools, causing the loss of possessions and threatening livelihoods. Natural hazards increase the risk of childhood disease and malnutrition and often lead to massive displacement.

Since 2001, UNICEF has been working with local communities in areas susceptible to flooding in West Bengal to help establish action plans to better prepare for future incidences of flooding. Through initiatives such as the Community-Based Disaster Preparedness project, villagers identify the different threats to high-risk areas and organise themselves into groups in order to coordinate early warning systems as well as rescue and evacuation activities. Such projects ensure that communities are prepared for and more resilient to the impacts of climate change. They help save children's lives, reduce malnutrition and disease, and exercise some control over the scale of the impact.

Education

Every child has the right to education. Yet many children, particularly in developing countries, have to drop out of school either because the quality of the education they receive is poor or because of economic and social challenges that make it difficult for them to attend and participate in school. These challenges include deepening poverty, gender discrimination, emergencies and conflict situations, HIV and AIDS and disabilities. Climate change is increasingly exacerbating these challenges and impacting the ability of children to gain an education.

A UNESCO report in 2010 highlighted climate change as an increasing challenge to education, and that girls are often the first to feel the impacts of climate change. It cites the examples of Pakistan and Uganda, where climate-related shocks have resulted in more girls being taken out of school than boys.³² With the impending increased impacts of climate change, such trends are likely to become more pronounced, particularly in developing countries.

The role of education in tackling climate change and empowering children

While climate change has the potential to cause serious disruption to children's schooling, education is also a vital tool in tackling climate change. Climate change education is an important adaptation measure, particularly in vulnerable developing countries, teaching children the skills they need to cope with a changing climate; for example, how to deal with the increasing onset of natural hazards such as floods and cyclones

Climate change education in developed countries such as the UK can also act as a means to mitigation: teaching children and young people about resource conservation and low carbon solutions that can help reduce emissions and tackle climate change.

Youth views

"In 2008, four hurricanes hit Haiti in a period of just two months. All the schools in the country were closed for one month, so I couldn't go to school. I was hurting for other kids like those living in Gonaïves City because they also couldn't study because of the flooding and many of the schools were ruined."

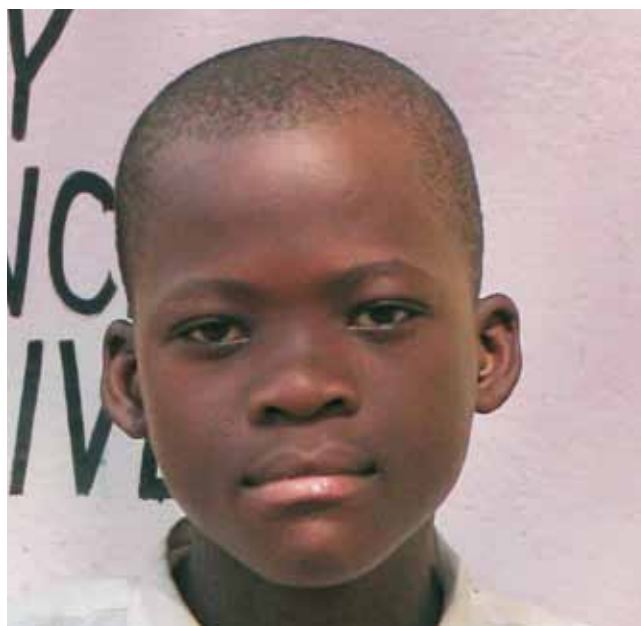
Marie, 15, Haiti

"Recently the harvest has reduced ... I know some children who have dropped out of school. They say they cannot concentrate in class because they are hungry. We have just one or two meals per day because food is expensive. A kilo of maize flour increased from 35 to 70 shillings, and my mother said it will get worse"

Justus (below), age 14, Kenya

"Climate change is affecting us and, in the future if we are not involved, we will live in a desert. The rivers have dried up and sand mining has increased, this has caused many children to drop out of school to work loading vehicles for mines."

Samuel, age 14, Kenya



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³² UNESCO, *Reaching the marginalised*, EFA Global Monitoring Report 2010. <http://bit.ly/16v0H5c>

Ensuring education in a changing climate

An estimated one million children are out of school in Madagascar, and many schools have extremely low retention and completion rates, with only two in five children completing more than five years of schooling. School enrolment is low because there are so many communities without schools. Children living in remote areas have to walk as far as 10 kilometres to the nearest school, sometimes crossing fast-flowing rivers and navigating other hazards. Others have never set foot in school. Most schools are not equipped with water or sanitation facilities, leading to further dropouts particularly among girls.

Climate change is exacerbating these problems. Due to its location in the middle of two different climatic zones, every year Madagascar is hit by an average of three or four cyclones that damage or destroy thousands of schools and threatens children's safety. Climate change is making Madagascar more vulnerable to cyclones by increasing their frequency and intensity in the region.

UNICEF is working in Madagascar to rebuild and replace damaged schools with cyclone-resistant structures, as well as installing water and sanitation facilities. By equipping these schools with a safe structure, gender-sensitive amenities and by building more schools in remote areas, more children will be able to go to school and more children will complete their primary education.

Nadia, 7, and her big sister Lanee, 11, walk home from school in Madagascar.
© UNICEF/HQ05-0898/Crowe



Emissions reduction and low carbon development

An important aspect of tackling climate change is the move to lower carbon economies, with reduced carbon emissions and more sustainable development. This includes pursuing sustainable energy (such as solar, wind and hydropower) and reducing carbon emissions in other activities.

Moving to low carbon energy and development paths is important for both developing and developed countries. Developed countries need to move away from reliance on fossil fuels and emission-heavy activities, and developing countries have the opportunity to 'leapfrog' heavy carbon modes of development to more sustainable modes of development. The move to low carbon economies can have potential long-term economic benefits for children, providing a sustainable long-term energy pathway without the costly transition from fossil fuels.

Reducing carbon emissions can also have positive benefits for the health and well-being of children. In fact, evidence is beginning to highlight how continued heavy-emission activities can negatively affect child health and development. Heavy pollution can cause higher rates of asthma (as well as other respiratory diseases) among children, particularly in urban areas. Research by the University of Southern California has indicated that children living in heavily polluted areas can see an 80 per cent decrease in their lung capacity.³³ This suggests that a transition to a low carbon economy and further action on emission reduction could also deliver health and well-being benefits for children.

There is a strong impetus from children all over the world on the need to take action to reduce carbon emissions to limit climate change. Children would like to see governments take action to reduce carbon emissions so they can grow up in a clean, healthy environment.

Youth views

"As adolescents, we face a common opponent: greenhouse gases. In order to prevail, we must come together to help others, employ alternative energy sources and create laws to protect our planet and its people."

Syned, age 16, Pakistan

"Unless we take action, I fear that by the time I reach thirty, the problems we are faced with now will seem minute in comparison to those we will be facing."

Eshita 14, UK

UNICEF PROGRAMME

Low carbon development in action: Solar schools

Mauritania is one of the poorest countries in the world. Its people face challenges in lack of health care infrastructure, inadequate water and sanitation facilities, and low participation in primary and secondary education. Widespread poverty and underfunding for the school system have dealt a blow to the educational attainment of poor children, restricting Mauritania's chances for development and achievement of the Millennium Development Goals (MDGs)

UNICEF's Education for All initiative works with the Government of Mauritania to make sure that more children from poorer backgrounds complete basic education. UNICEF is helping to improve schools by providing and installing solar power in rural schools. Solar systems provide light and electricity for schools from a clean and cheap source of energy. This means that children can have a full school day and learn in early mornings and evenings when it is cooler. Solar systems provide long-term sustainable energy.

UNICEF aims to have solar systems in all 429 UNICEF schools projects in Mauritania and works in partnership with the local communities so they are empowered to lead and sustain the projects.

33 USC, Children's Health Study, 2004. <http://bit.ly/15cAyrB>



VIEWS

Participation

Climate change presents a current and future challenge for children everywhere. Climate change decision-making now will determine the lives of children far into the future, so it is right that children should have the opportunity to contribute. So far there has been no systematic way to include young people in climate change decision-making. There are opportunities at the international level through the United Nations Framework Convention on Climate Change (UNFCCC), yet more needs to be done at the national government level, including the UK Government, to ensure children and young people can regularly participate in and be consulted on climate change policy.

Young people can also provide innovative solutions, help identify specific risks posed by climate change, and give evidence to help tailor and improve responses to help protect children. For example, consulting with children in flood-prone areas provides knowledge about the risks they face travelling to school in heavy rains and can help to put in place appropriate measures to protect them.



MORI poll

In recent UNICEF UK/Ipsos MORI polling, children across Britain highlighted their concerns about climate change, and desire for action:

- **89%** know about climate change.
- **74%** are worried about how climate change will affect the future of the planet and believe the world will have changed as a result of climate change by the time they are adults.
- **73%** want the Government to do more to tackle climate change.
- **64%** are worried about how climate change will affect children and families in developing countries.

Youth views

"We all know climate change disproportionately affects the most vulnerable members of global society. We all know time is running out. We all know that climate change knows no boundaries. But whilst young people may be the most vulnerable to climate change, we have the innovation, creativity, dynamism and zeal for life that gives us the capacity to make change a reality."

Cressida, 18, UK

"Just because we are not living in a developing country does not mean these issues are not ours to be aware of, be educated on and contribute to the solution."

UK youth, *The world we want to live in*

"I want governments to establish an agreement between the rich and the poor, to make adaptation better in African countries. You need to listen to the voice of the children!"

Khadidiatou, 17, Senegal

"The inclusion of youth perspectives in high-level decision-making is essential, especially with regards to issues like climate change"

Luke, 20, UK

"It is important to recognise that the decisions made today will impact future generations, and also to value the role that young people can have in shaping that future."

Katie, 18, UK



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Policy solutions: climate-proof children

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This report highlights children's views on climate change and the action that needs to be taken to ensure that they and future generations are able to survive and thrive.

Children stress the urgent need for climate action, the pressing reality of climate change in many of their lives, and the need for them to be included and listened to in decision-making that affect their lives.

To ensure that climate change action matches the ambition that children want to see, UNICEF UK believes that there are concrete steps that the UK Government must take over the next two years. 2015 is an important juncture in international climate change action. It is when a new climate change treaty will be signed, a new global framework on disaster risk reduction agreed, and a successor to the Millennium Development Goals (MDGs) determined. The next few years will be crucial in establishing measures to protect and empower children in the face of a changing climate.

UNICEF UK recommends action by the UK Government in the following areas to ensure children everywhere can participate in the development of a brighter future, in spite of the challenges presented by climate change.

1) Tackling emissions and further climate change

Climate change is the result of historic greenhouse gas emissions by developed countries. Considering that the IPCC already predicts a warming of about 0.2 degrees per decade for the next two decades for a range of emission scenarios with existing climate change, it is vital that we prevent even worse and extreme impacts.

Continued carbon loading of the atmosphere will carry on undermining the health, well-being and life chances of children in affected countries.

Ambitious, strong and legally binding emissions reduction targets in developed countries are essential to help prevent this. To this end, the UK should continue to push the EU to move to a target of reducing carbon emissions by 30 per cent or more by 2020, and commit to an ambitious 2030 roadmap for all EU countries.

Similarly, the UK should continue to give support to emerging economies and developing countries to pursue sustainable low carbon development paths.

- The UK Government should continue to push the EU to move to a target of 30 per cent emissions reduction by 2020 and an EU 2030 roadmap to continued emissions reduction
- The UK Government should continue to give support to emerging economies and developing countries to pursue sustainable long-term low carbon development paths

ACTION

2) Adaptation and equipping communities

Even if the world stopped emitting all greenhouse gases tomorrow, we would still see significant climate change as a result of historic emissions from developing countries – the lag time effect on Earth’s atmosphere of greenhouse gas emission. For children to be able to cope in such a changing climate, there is an urgent need to expand measures to equip them and their communities with the skills and resources to deal with the climatic changes – a measure known as adaptation.

Adaptation and disaster risk reduction can help families cope with the impacts of a changing climate on health, water, education, food and livelihoods. This can include measures such as building better schools that can withstand natural hazards such as cyclones and flooding, teaching children what to do when a disaster hits, and establishing a sustainable supply of fresh water.

As children have identified in this publication, they face specific risks in a changing climate – for example, disruption to education or vulnerability to disease. These risks must be central to adaptation programming, and children must be consulted and included when decisions are being made that could affect their lives.

The UK Government has a progressive record in supporting climate change programmes through its international aid activity. As part of this support, it is important that they prioritise adaptation that helps communities prevent or cope with the worst impacts of climate change. Moreover, it is vital that they make sure such adaptation strategies address the specific risks faced by children, and children realise the benefits of adaptation.

- The UK Government should pursue adaptation policies at scale in vulnerable countries to help communities cope with the effects of climate change, particularly the hardest to reach and most vulnerable.
- The UK Government’s adaptation work in these contexts should recognise the specific risks faced by children in the context of climate change and seek to adequately address these risks.

3) Financing of climate strategies

New and additional financial resources are essential in order to deliver effective adaptation and support the low carbon development needed to tackle the impacts of climate change.

Climate change poses challenges additional to those that Official Development Assistance (ODA) is meant to address. It is therefore essential that new financial resources are found for climate change – known as ‘climate finance’.

In 2009, governments agreed to mobilise US\$100 billion dollars per year by 2020 for climate change adaptation and mitigation in developing countries. This is based on the projected need from 2020 onwards and they stated that it must be “new and additional” resources; that is, not part of the existing international aid budget. This sum is roughly equivalent to the total current global flows of ODA. Long-term climate finance (additional to ODA) is essential to protect those children most vulnerable to climate change.

Mobilisation of long-term climate finance is essential if we are to protect children from malnutrition and other consequences of a changing climate. The UK Government has shown significant international leadership on climate finance – committing £2.8 billion of ODA to climate change between 2010 and 2014, and almost £1 billion for 2015–16. However, the effects of climate change will continue to intensify and new sources of finance will be needed. The UK Government must therefore fulfil its commitment to provide new and additional long-term climate finance to address the impact of climate change on children.

- The UK Government should mobilise its fair share of the global commitment of US\$100 billion of new and additional climate finance a year, and encourage others to do the same.
- The UK Government should help put in place an international action plan for increasing climate finance by all countries in the run up to 2015 and beyond (including a timeline and milestones).

“My parents talk about the beautiful country that we live in. Now I only see small pieces of it, which is enough to make me happy, but because the climate is changing I won’t have anything to show my children.”

Mohammed, age 15, Maldives

4) Participation of children and young people in climate change policy

This report highlights that climate change is a matter of intergenerational concern and children regard climate change as a key issue for their lives now and in the future. Consulting and including children in climate change policymaking helps ensure that they can contribute to decisions that will shape their future and the world they will grow up in. Consistent and inclusive participation of children by the UK Government can help ensure that the UK's international climate policy is future proof.

- Children should be consulted and included in climate change decisions that will affect their lives.
- The UK Government should develop systematic ways to consult children and young people on the development of climate change policy.

5) Agreement of a new global climate change treaty

Governments are currently negotiating a new climate treaty through the UNFCCC to limit emissions in all countries from 2020 onwards. It is expected that the treaty will be agreed and ratified in 2015. That agreement will be essential in ensuring there is a legally binding treaty in place to protect all children from the impacts of climate change. It is important that the new treaty recognises the risks faced by children and sets ambitious emission reduction targets to ensure we limit climate change so that children have a greater opportunity to survive and flourish

children and future generations from the growing challenges of climate change.

6) Importance of climate change action in post-2015 processes

By 2015 we are expecting a successor to the Millennium Development Goals (MDGs). Climate change is already recognised as a significant issue that must be included in whatever succeeds the current MDGs, particularly as much of the progress towards the MDGs could be undone if climate change is not adequately addressed. It is therefore essential that action on climate change is rigorous enough to include the risks faced by children. Targets should be included in the new post-2015 agenda that strengthen the resilience of children, families and communities to shocks and stresses relating to disasters and climate change.

- The UK Government should advocate for targets in the new post-2015 agenda that strengthen the resilience of children, families and communities to shocks and stresses relating to disasters and climate change.

Children and young people have offered their views and highlighted their calls for action. It is now time for us to rise to their challenge and build a climate fit for children. Action now to protect children from climate change will help secure a brighter future for all.

You can help persuade the UK Government to act for a climate fit for children. Please go to: www.unicef.org.uk/climatefit



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Report credits

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