

## **Briefing note**

### **El Niño's impact on children – A wake-up call**

Some of the world's poorest countries are bracing for more floods, droughts and typhoons, as an El Niño that is already among the strongest on record continues strengthening, threatening lives and livelihoods along its track. Millions of children are at risk, and the consequences could ripple through generations if the threat is not properly managed.

The phenomenon, which is expected to continue into the first quarter of 2016, is already causing millions of people to go hungry, and leaving children malnourished and at risk of deadly diseases in Africa, Asia, Latin America and the Pacific.

In Eastern and Southern Africa alone, as many as 11 million children are at risk from hunger, disease and lack of water as a result of El Niño.

El Niños – caused by Pacific Ocean warming – occur every two to seven years. Scientists believe they have been around for millennia, but that the droughts and floods they trigger may be becoming more intense as a result of climate change. Forecasters say this year's event could become even more powerful than the 1997-98 El Niño – the strongest on record – which was blamed for an estimated 23,000 deaths and \$35-45 billion in damages.

“Children and their communities need our help to recover from the impact of El Niño and to prepare for the further damage it could unleash,” said UNICEF Executive Director Anthony Lake. “At the same time, its intensity and potential destructiveness should be a wake-up call as world leaders gather in Paris. As they debate an agreement on limiting global warming, they should recall that the future of today's children and of the planet they will inherit is at stake.”

The 21<sup>st</sup> United Nations climate conference, also known as COP21 – held from November 30 to December 11 – will seek to achieve a universal, binding agreement aimed at limiting global warming by cutting greenhouse emissions.

Many of the countries that face the gravest threat from climate change are the same ones now bracing for the brunt of El Niño, and in many cases already feeling the impact of both climate change and El Niño. Many of them are heavily reliant on agriculture or fishing, which are highly sensitive to ocean warming and changes in weather patterns. And they generally lack the capacity to tackle the impacts of climatic shocks on health, nutrition, infrastructure and livelihoods.

### **The impact on children's physical health**

Children are disproportionately affected by natural disasters of the type triggered by El Niño. Beside the immediate threats posed by extreme weather, including death, injury or the loss of parents, they are also at high risk from increases in the climate-sensitive diseases and malnutrition that can follow.

Changes in temperature, humidity and rainfall can promote diseases such as malaria, dengue fever, diarrhoea and cholera, which are major killers of children. In Kenya and Tanzania, for example, heavy rains associated with the 1997-98 El Niño created stagnant pools where mosquito larvae multiplied, increasing the incidence of malaria. The rains also damaged roads, making treatment and anti-malaria drugs difficult to access. In Peru, a study showed that admissions for diarrhoea at Lima's largest children's hospital were 200 per cent above the seasonal norm following heavy rains and flooding caused by the 1997-98 El Niño.<sup>1</sup>

Researchers have also found that a severe El Niño can lead to low height for age – known as stunting – which reflects undernutrition and can lead to greater risk of illness, delayed mental development or premature death, and can be passed on to the next generation. Children born in northern Peru during and just after the 1997-98 El Niño were found to have a higher propensity for stunting than others.<sup>2</sup> Severe rainfall and flooding had caused extensive damage to crops and livestock, and left some rural areas isolated for weeks, and in some cases months. Food, clean water and healthcare were largely inaccessible.

Young children are also particularly vulnerable to extreme heat – such as the heatwaves that killed several thousand people in India and Pakistan this year. Infants and small children are more likely than adults to die or suffer heatstroke, because they find it difficult to regulate their body heat, cannot yet express themselves clearly when they become overheated and thirsty, and can easily get diarrhoea from drinking contaminated water, further aggravating dehydration.

### **The impact on children's education and mental health**

Extreme weather events can have a significant impact on education. Floods can severely damage or destroy schools as well as roads and bridges children use to reach school and return home. School buildings are often used as evacuation centres for people displaced by floods. Droughts often cause children to drop out of school so they can work or beg. This was the case during the 2011 drought in East Africa, when thousands of children dropped out of school so they could help their families survive.

Children's exposure to trauma and stress – common in extreme weather events – can affect their brain development and mental health. In Mexico, the floods triggered by the 1997-98 El Niño and the subsequent economic hardships they caused, were found to profoundly impact the development of young children. A study showed that four to five years after the event, those children scored 11 to 21 per cent lower than other children of similar ages in cognitive development tests.<sup>3</sup>

### **The impact on children's safety**

In extreme weather events fuelled by El Niño, such as floods and typhoons, children may lose their parents, becoming more vulnerable not only to the elements but potentially also

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<sup>1</sup> The Lancet Volume 355, Issue 9202, 5 February 2000 <http://www.sciencedirect.com/science/article/pii/S0140673600820103>

<sup>2</sup> *El Niño* adversely affected childhood stature and lean mass in northern Peru  
<http://climatechangeresponses.biomedcentral.com/articles/10.1186/s40665-014-0007-z>

<sup>3</sup> El Niño and Mexican children: Medium-term effects of early-life weather shocks on cognitive and health outcomes  
[http://www.aguilaresteva.com/wp-content/uploads/2012/09/El\\_Nino\\_Effects\\_Child\\_Dev\\_v17Nov11.pdf](http://www.aguilaresteva.com/wp-content/uploads/2012/09/El_Nino_Effects_Child_Dev_v17Nov11.pdf)

to abuse and exploitation. They are also more vulnerable when they leave school to work or beg. During droughts, many children – often girls – have to walk further to fetch water and collect firewood, exposing them to the risk of violence and abuse.

### **Some of the countries affected:**

#### **Africa**

UNICEF estimates that as many as 11 million children are at risk from hunger, disease and lack of water in parts of Eastern and Southern Africa as El Niño strengthens, threatening to undo gains in nutrition, health and education. This comes after a series of climatic shocks in 2014 and 2015 ruined harvests, leaving many children and their families dependent on food aid to survive in several countries in the region.

The effects of El Niño could be particularly harsh for Somalia, which is already in a severe humanitarian situation following decades of conflict and erratic rainfall this year. More than 3 million people are in need of support as the effects of El Niño are already being felt. Severe flooding is anticipated along the Shebelle and Juba rivers, where access is constrained by armed violence, attacks and threats against aid workers.

Ethiopia is experiencing its worst drought in 30 years, leaving 8.2 million people food-insecure and an estimated 350,000 children in need of treatment for severe acute malnutrition. To make matters worse, the weather phenomenon may also bring flooding to some areas of the country in the coming months. Unless measures are taken now, some 15 million Ethiopians will need food assistance by early 2016, according to the Ethiopian Humanitarian Country Team.

In Kenya, the Government estimates that 2.5 million children may be affected by floods, landslides, mudslides and diseases linked to the El Niño rains. Drought, food insecurity and potential floods will also put further strain on food and health supplies for displaced people and host communities, including 1.3 million refugees in Ethiopia and Kenya and 1.1 million internally displaced people in Somalia.

In Zimbabwe, the number of food-insecure people is expected to reach 1.5 million by the time the January-March “lean season” sets in.

In Malawi, where almost half the children are already undernourished, UNICEF fears the worst drought in almost a decade could cause a further increase in severe acute malnutrition.

#### **Asia-Pacific**

Drought conditions and poor crop prospects in several countries in the region are likely to worsen in the coming months. In Indonesia, El Niño has exacerbated the impact of peat and forest fires. In August and September, 272,000 people suffered from acute respiratory infections – which particularly affect children – according to the Government.

El Niño is having a severe impact on Pacific nations where it threatens more than 4 million people. Parts of Vanuatu, the world's most disaster-prone country<sup>4</sup>, have been affected by severe drought at a time when the country is still recovering from the devastation wrought by Cyclone Pam in March 2015. Entire communities are subsisting on 'rope root', a barely digestible root that provides some relief from hunger but very limited nutritional value. In Papua New Guinea, drought and frost have affected about 2.4 million people, according to the Government. Lack of access to clean water has caused school closures. In Fiji, some 67,000 people are affected by drought, which is causing crop losses and drying out water supplies.

El Niños are also associated with more active typhoon, cyclone and hurricane seasons in the Pacific, and fewer Atlantic hurricanes.

### **Latin America**

El Niño is blamed for the most severe drought on record in Central America. Some 3.5 million people have been affected in Guatemala, Honduras and El Salvador, including more than 2 million who need immediate food assistance, health care and nutritional support. In South America, areas along the Pacific coast are bracing for potentially catastrophic rainfall and flooding. In Peru, an estimated 1.1 million people, including 400,000 children and adolescents could be affected and in Ecuador, authorities believe 1.5 million people are at risk, about half of them children. In the 1997-98 El Niño event, the two countries experienced rainfall 10 times the normal level, leading to floods, extensive erosion and mudslides with loss of lives, destruction of homes and damage to infrastructure.

### **What needs to be done**

Efforts to protect populations from the impact of El Niño need to be stepped up and sustained, with particular attention paid to the most vulnerable children. Acting now will help reduce the risk of major humanitarian emergencies in the coming months and years. The longer we wait, the costlier the response will be.

Better planning and investments in preparedness and risk reduction are critical for the millions of people threatened by disasters of the type triggered by El Niño. Children must be a first priority. Risk-reduction initiatives should be designed to educate families and children about simple and practical actions that can protect life and property in the event of natural disaster. Effective awareness programmes in schools, homes and communities can create a culture of prevention. Key elements in planning should include school safety and provisions for continued access to social services such as healthcare, nutrition support and safe water and sanitation.

While El Niños have occurred throughout human history, there is increasing evidence that they are becoming more powerful, as other extreme weather events are becoming more frequent. That makes it all the more critical to address the root causes of climate change, and protect children and future generations who will face its impact. A solid agreement at COP 21 would be a big step in the right direction.

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<sup>4</sup> <http://i.unu.edu/media/ehs.unu.edu/news/4070/11895.pdf>

## How UNICEF is helping

UNICEF is active in the countries affected and threatened by El Niño, providing support with a focus on the most vulnerable children in the areas of health; nutrition; water, sanitation and hygiene; education; and child protection.

UNICEF is working with governments and partners to make sure that:

- Children receive the emergency therapeutic food and milk they need to survive. In Somalia, for example, UNICEF has prepositioned 20,000 tonnes of Ready-to-Use Therapeutic Food for the treatment of severe acute malnutrition
- Basic health supplies, including vaccines, reach children even in the most remote areas. In Malawi, for example, UNICEF has delivered 15,000 doses of measles vaccine
- Children have safe water to drink
- The most vulnerable households receive food or cash transfers to prevent children from engaging in risky activities such as child labour
- Children can continue with their schooling in drought or flood affected areas. In Ethiopia, for example, UNICEF has delivered 35,000 tonnes of school supplies

UNICEF is also:

- Assessing food security and nutrition conditions in areas at risk
- Prepositioning supplies to meet immediate and probable consequences of El Niño
- Conducting awareness-raising about preparedness
- Adapting water and sanitation systems to withstand extreme weather
- Training village health workers for early detection and treatment of malnutrition and diseases
- Reviewing governments' preparedness status
- Developing and implementing contingency plans