

Hope on the horizon:  
feeding the world in a  
changing climate



**tearfund**

**‘When the weather is good, I have produce to sell. But this year the harvest wasn’t good because of the flash floods. The weather is less predictable and the drought means that we have a lot less food.’**

**Silas Ndayisaba, a farmer in Rwanda**

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## **Climate change is making people hungry**

Climate change is already costing the global economy US\$ 1.2 trillion annually and is responsible for 400,000 deaths each year.<sup>1</sup> About 350 million people were affected by drought and other natural disasters in 2010–11.<sup>2</sup> These figures are very likely to rise and the impact will be disproportionate on the world’s poorest regions.

Estimates suggest that climate change is increasing the number of undernourished people by between 40 and 170 million people,<sup>3</sup> and 500 million people who depend on fisheries for their livelihood will also be affected.

It is estimated that by 2030 there will be additional costs of about US\$ 11.3 billion to US\$ 12.6 billion per year if developing countries are to adapt their agriculture, forestry and fisheries successfully.<sup>4</sup>

Dealing with the issue of climate change is vital. We need to reduce emissions to ensure we have a stable climate and enough food for everyone in the future. And we must invest in climate change adaptation to help smallholder farmers and herders in developing countries deal with the impacts already being felt.

## **It doesn’t have to be this way**

In a harsh economic environment, we know that it will be difficult for richer countries to meet their existing commitment to deliver US\$ 100 billion to help developing countries tackle and adapt to the effects of climate change.<sup>5</sup> That’s why we want the UK government to take a lead on raising ‘climate finance’ from new, innovative sources. Long-term climate finance should not be taken from aid budgets.

Tearfund thinks that there’s a real opportunity to work globally to start raising money from a levy on shipping fuels, which are currently untaxed. A levy on international shipping could raise about US\$ 25 billion, of which at least US\$ 10 billion a year could be committed annually to the Green Climate Fund (GCF) as a contribution for adaptation to climate change.<sup>6</sup>

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<sup>1</sup> <http://daraint.org/climate-vulnerability-monitor/climate-vulnerability-monitor-2012/>

<sup>2</sup> <http://www.fao.org/docrep/015/i2490e/i2490e02a.pdf> *FAO Statistical Yearbook 2012*

<sup>3</sup> *The IPCC Fourth Assessment Report, 2007*

<sup>4</sup> UNFCCC (2007) *Investment and financial flows to address climate change*

<sup>5</sup> Commitment made in Copenhagen Accord at COP 15 in 2009 and reconfirmed by governments at COP 16 in 2010

<sup>6</sup> <http://www.oxfam.org/sites/www.oxfam.org/files/bn-out-of-the-bunker-050911-en.pdf>

## What do we want the UK government to do?

- Show bold leadership within the international community to ensure that the innovative sources outlined by the UN High-Level Advisory Group on Climate Change Financing (AGF) and the G20 report on climate finance do in fact become a reality. Additional finance is urgently needed so that the UK can meet its climate commitments, alongside development priorities such as education and health.
- Work collaboratively across Whitehall to ensure that the UK is injecting a much-needed sense of urgency into ongoing processes within the G20, EU, UNFCCC, International Maritime Organisation (IMO) and other relevant bodies to find innovative sources. These could include the delivery of an effective and fair international shipping levy to raise additional climate finance.
- Recognise and promote that 50 per cent of global public climate finance will be allocated to helping communities adapt to a changing climate, prioritising delivery through the Green Climate Fund on whose Board the UK has a seat.
- Ensure that there is more and better investment in sustainable small-scale agriculture, as the UK delivers on its commitment to spend 0.7 per cent of national income on overseas development aid from 2013.
- Take the positive lessons learnt from its bilateral climate funding to ensure that multilateral climate funds are more effective in supporting smallholder farmers.<sup>7</sup>

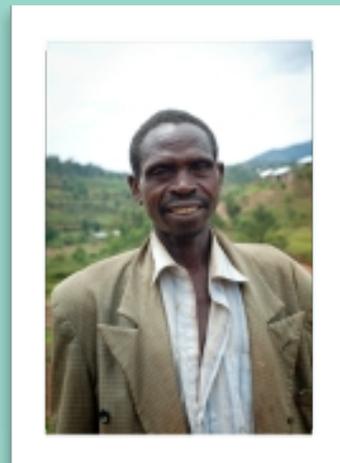
### Silas' Story

Fifty-two-year-old Silas Ndayisaba lives in Rukiri village in the east of Rwanda. He has been a farmer since he was 16. He's seen a lot of change in that time.

'When the weather is good, I have produce to sell. But this year the harvest wasn't good because of the flash floods,' he says. 'The weather is less predictable and the drought means that we have a lot less food.'

'Things have changed in the last 20 years. Thirty years ago, we had good harvests and could predict the weather patterns. In those days, beans cost 40 RWF (4p) but now they cost 450 RWF (47p).' This represents a more than tenfold increase in a country where the average income is about £320 per year.

'Twenty years ago, we could plan,' says Silas. 'Today we can't. Prices have gone up. I buy less and I only eat twice a day.'

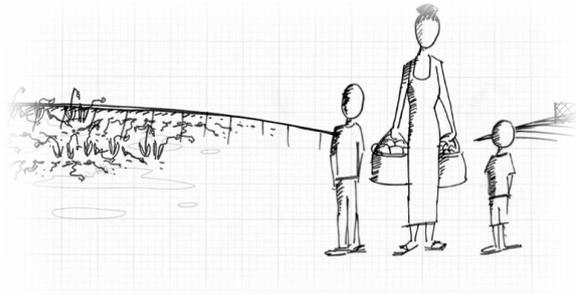


<sup>7</sup> Tearfund and Cafod (2012) *Quick off the blocks? UK adaptation finance and integrated planning* [http://tilz.tearfund.org/webdocs/Tilz/Research/Quick\\_off\\_the\\_blocks\\_D5.pdf](http://tilz.tearfund.org/webdocs/Tilz/Research/Quick_off_the_blocks_D5.pdf)

## Smallholders, big impacts

Climate change is a key driver of hunger and food crises in the Sahel region and Horn of Africa. Climate change means that smallholder farmers can't grow the same crops as they used to, and they can't predict rainy seasons with any accuracy and so can't harvest their crops in time. It means that droughts and floods, which ruin crops and kill precious livestock, are more frequent and more severe.

So, climate change means that millions of people go hungry. It makes the situation much worse for smallholder farmers already living below the poverty line and battling with the problems of not having enough land, water and agricultural advice to grow their crops successfully. Already, one in eight of us is hungry and malnourished,<sup>8</sup> and this number will rise as climate change increases, especially as many of those living in poverty rely on agriculture for survival. They are particularly vulnerable to droughts and flooding, and often do not have incomes, savings or access to healthcare and insurance.



These farmers are trying to adapt and are becoming more resilient to climatic shocks such as droughts and floods. Tearfund has seen this firsthand in its work through partners and operational programmes that support smallholder farmers on a daily basis, tackling hunger, food crises and climate change in 35 priority countries. Farmers are adapting their agricultural practices to cope with more frequent and intense droughts and floods, as well as new temperature and water stresses, in an attempt to secure both food for the family and their livelihood. Climate change, low investment in agriculture and competition for land and water make it difficult for smallholder farmers to grow their own food, keep livestock and have enough food to sell at market.

Droughts in the US, Russia and Australia are also a driver of the third spike in food prices in four years, and are bad news for smallholder farmers in developing countries, who struggle to cope even with small increases in prices. Some smallholder farmers are being forced off their land, and the search for alternative energies to reduce carbon emissions through biofuels means that some crops are being grown to feed cars, not people.

## How much does it cost to adapt?

In 2009, developed countries agreed to raise US\$ 100 billion a year by 2020 to help developing countries adapt to climate change and develop sustainably. The cost of adapting to the impacts of climate change alone is estimated to be at least US\$ 100 billion a year for developing countries.<sup>9</sup> If we fail to reduce our carbon dioxide emissions, this figure will increase as more and more developing countries need to adapt to increasingly volatile weather patterns. The consequences could be a further one billion people suffering increased water stress, up to five times more people being at risk of coastal flooding and some 20–30 per cent of plant and animal species being at greater risk of extinction, impacting the ecosystems on which we rely.<sup>10</sup> Unfortunately, it will be the world's poorest people who are worst affected, people who have least access to the resources they need to be able to adapt.

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<sup>8</sup> On 10 October 2012, the UN Food and Agriculture Organisation revised its figures for the number of hungry people globally from 1 billion to about 870 million, making it one in eight people. At the time of our producing the animation, the statistic of one in seven people going hungry was widely understood to be correct.

<sup>9</sup> World Bank (2010) and Martin Parry *et al* (2009) [http://mlparry.com/docs/Adaptationcosts\\_Environment\\_final\\_12Nov09.pdf](http://mlparry.com/docs/Adaptationcosts_Environment_final_12Nov09.pdf)

<sup>10</sup> Table that draws on IPCC AR4 in Shaw (2009), p7. The next IPCC report (AR5) will be published in 2013–2014 and may well show higher risks to ecosystems at lower levels of temperature rise than previously predicted.

## What has the UK committed so far?

The UK has shown admirable leadership in being quick 'off of the starting blocks'<sup>11</sup> by providing adaptation funding, predominantly to least developed countries, and by committing finance beyond the Fast Start Finance period which ends this year.

£2.9 billion has been pledged by the UK for climate action generally for 2010–2015, with the UK committed to spending 50 per cent of its International Climate Fund (ICF) on adaptation. This compares very favourably with the global position, where just 19 per cent of climate finance has been spent or pledged on adaptation.<sup>12</sup> The UK has said that it will make a 'substantial contribution' to help establish the new Green Climate Fund (GCF) which was set up at the end of 2011 and is destined to become the main vehicle for climate finance delivery globally.

The UK should use both its position on the GCF board and its track record on climate finance to promote the support the GCF as the primary international channel for climate finance. It should also provide contributions to this fund in order to get it up and running as soon as possible.

The UK has also shown much welcome leadership in committing to provide 0.7 per cent of GNI in aid by 2013. So far, all of the UK's climate finance has come from this aid allocation, as has funding from most other donors. However, climate change is an additional burden on developing countries. As our climate finance commitments increase, we cannot continue to raid aid budgets, which are declining globally. In 2011, OECD members provided US\$ 133 billion in aid,<sup>13</sup> a three per cent drop in real terms from 2010. (Already, 15 per cent of aid worldwide is being spent as climate finance, although we recognise it is less than this in the UK.) We need to explore fully other possible sources of finance for climate change adaptation.

## Is there anywhere else the money could come from?

A number of options for new, innovative sources of climate finance have been proposed over the last few years and a number of significant international reports have been published testing their feasibility and appropriateness. However, there is no one way of solving the climate finance conundrum. Options include:

- international shipping
- redirecting fossil fuel subsidies
- introducing a Financial Transaction Tax
- Emissions Trading Schemes, including EU ETS.



Any or all of these could be part of the solution by raising some of the funding needed to help vulnerable communities adapt to climate change and develop sustainably. In many cases, a 'coalition of the willing', those who agree to implement one or more options, would have a significant impact.

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<sup>11</sup> Tearfund and Cafod (2012) *Quick off the blocks? UK adaptation finance and integrated planning* [http://tilz.tearfund.org/webdocs/Tilz/Research/Quick\\_off\\_the\\_blocks\\_D5.pdf](http://tilz.tearfund.org/webdocs/Tilz/Research/Quick_off_the_blocks_D5.pdf)

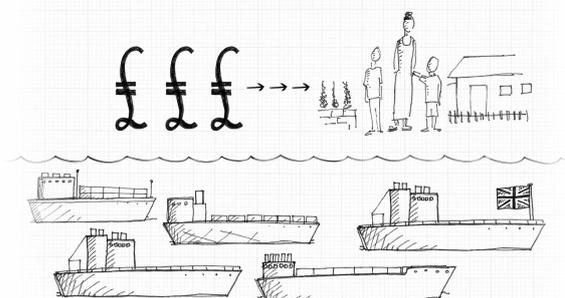
<sup>12</sup> IIED (November 2011)

<sup>13</sup> OECD DAC (2011)

## Going full steam ahead on a shipping levy

The fuels used by international shipping are currently untaxed, even though the industry is responsible for about three per cent of greenhouse gas emissions worldwide. An effective, fair and market-based mechanism would curb shipping emissions while also raising finance to meet global commitments on climate change. It has been estimated this could raise about US\$ 25 billion annually, based on a carbon price of US\$ 25 per tonne of CO<sub>2</sub>.

However, in line with UN principles, there is also a need to ensure that developing countries do not end up paying extra costs. For this reason, any mechanism would need to end up being cost-neutral for developing countries and one option on the table at the IMO is a rebate mechanism. Once the rebate is taken into account, at least US\$ 10 billion a year could be committed annually to the GCF as a contribution to global climate finance.



There is already considerable technical evidence which demonstrates why a carbon price on international shipping makes sense and why it has industry support. This includes:

- (i) In 2010, the High-level Advisory Group on Climate Change Financing (AGF), on which Gordon Brown and then Chris Huhne served as members, identified this as one of the most promising of the potential new sources of finance to support climate action in developing countries.<sup>14</sup>
- (ii) In 2011, a report by Bill Gates for the G20 on innovative financing highlighted several ways of raising additional public funds and again identified a carbon price on international shipping as one of the most promising sources to support action in developing countries. This is also true of a report for the G20 on climate finance by the World Bank, IMF, OECD and the various Regional Development Banks, *Mobilizing climate finance*.<sup>15</sup> The G20 has also established a new Climate Finance ‘Study Group’ which will report to finance ministers in November 2012.
- (iii) Even shipping industry bodies and advisory groups have expressed support for a global agreement to raise money to fund adaptation and to further improve efficiency in the sector.<sup>16</sup>

The international nature of the mechanism would require all members of the international community to participate, therefore ensuring that all OECD members contribute to the Copenhagen commitment made in 2009. And the UK’s contribution to the finance raised would help us meet our ‘fair share’ of the US\$ 100 billion.

## Funding the farm

Wherever the money comes from, it is essential that UK bilateral and multilateral finance for adaptation reaches smallholder farmers and herders so that they can adapt successfully. Funding channelled through multilateral funds should be aligned with countries’ national climate change adaptation plans rather than

<sup>14</sup> <http://www.un.org/wcm/content/site/climatechange/pages/financeadvisorygroup>

<sup>15</sup> WB-IMF-OECD-RDBs (2011) *Mobilizing climate finance*. See: <http://www.imf.org/external/np/g20/pdf/110411c.pdf>

<sup>16</sup> Joint statement by the International Chamber of Shipping (ICS), WWF and Oxfam at COP 17, 2011 [http://www.panda.org/wwf\\_news/?202577/Oxfam-and-WWF-join-with-shipowners-to-urge-agreement-on-way-forward-for-tackling-greenhouse-gas-emissions-from-ships](http://www.panda.org/wwf_news/?202577/Oxfam-and-WWF-join-with-shipowners-to-urge-agreement-on-way-forward-for-tackling-greenhouse-gas-emissions-from-ships)

reproducing them.<sup>17</sup> Funding should also respond appropriately to countries' medium- and longer-term adaptation needs, as well as to immediate needs. It needs to include processes which allow for learning to be shared and for genuine participation of civil society, including smallholder farmers. Programmes should not be driven by donors' need to show short-term results or by the priorities of donors and implementing agencies.

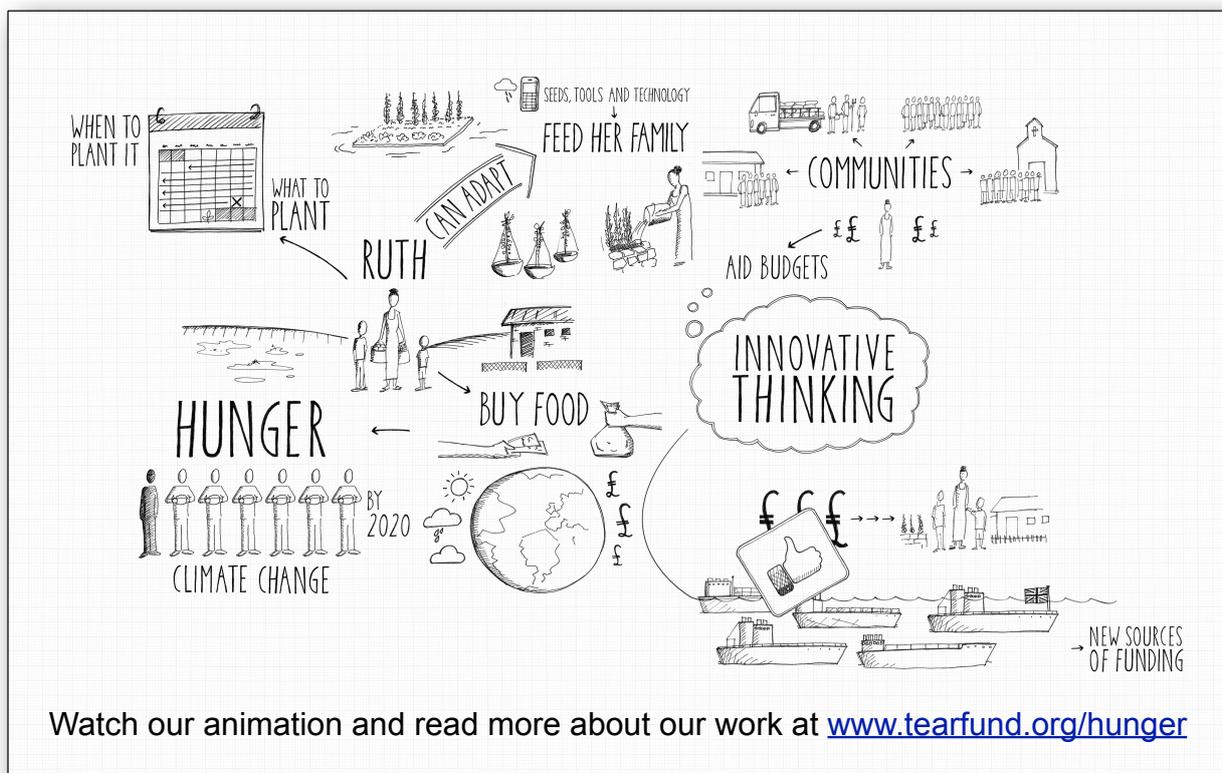
## Conclusion: coming into port

Smallholder farmers must be supported as they try to adapt to climate change. We need more and better investment in sustainable small-scale agriculture. Everyone should be able to grow or afford to buy enough nutritious food to lead an active life, now and in the future, whatever the climate.

We urgently need a revamped and more equitable global food system. Strong political leadership is required to champion agriculture, as the UK prime minister did at David Cameron's Global Hunger Event in August 2012.

The UK government needs to recognise that climate change is a key driver of hunger, and it should acknowledge the need for new and additional money to help smallholder farmers adapt to current and future threats to their livelihood.

The UK government has the opportunity to take the helm and seek out new sources of funding to make sure everyone has a fair deal - from land to sea. A shipping levy could be the lifeboat the world needs to ensure a future where everyone has enough to eat.



Watch our animation and read more about our work at [www.tearfund.org/hunger](http://www.tearfund.org/hunger)

<sup>17</sup> Tearfund and Cafod (2012) *Quick off the blocks? UK adaptation finance and integrated planning*  
[http://tilz.tearfund.org/webdocs/Tilz/Research/Quick\\_off\\_the\\_blocks\\_D5.pdf](http://tilz.tearfund.org/webdocs/Tilz/Research/Quick_off_the_blocks_D5.pdf)

**Hope on the horizon:  
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