

# GOVERNANCE FOR A RESILIENT FOOD SYSTEM

**Alex Evans**

**Center on International Cooperation, New York University**

**1 June 2011**

## **Oxfam Discussion Papers**

Oxfam Discussion Papers are written to contribute to public debate and to invite feedback on development and humanitarian policy issues. They are 'work in progress' documents, and do not necessarily constitute final publications or reflect Oxfam policy positions. The views and recommendations expressed are those of the author and not necessarily those of Oxfam.

For more information, or to comment on this paper, email [advocacy@oxfaminternational.org.uk](mailto:advocacy@oxfaminternational.org.uk)

## EXECUTIVE SUMMARY

Today, the world produces enough to feed all seven billion of its inhabitants – but nearly a billion people still go without. This paper is about why this global scandal continues, and what can be done to solve it. Its central argument is that access to food is as important as how much food is produced – and that in a world of food price volatility, climate change and other kinds of shocks and stresses, the challenge of building resilience in the food system takes on overwhelming importance.

Section One of the paper looks at what needs to happen within developing countries, focusing, in particular, on a massive scale-up in provision of social protection systems that target the poorest and most vulnerable people. The last few years have seen extraordinary progress in social protection provision in many emerging economies, for example Brazil where the Zero Hunger program has slashed rates of hunger – but a huge amount still remains to be done, especially in low income countries.

This section of the paper also discusses the wider challenge of reducing vulnerability to hunger in developing countries and increasing resilience. While social protection systems are a central part of the puzzle, other crucial areas for action include climate adaptation, disaster risk reduction, peacebuilding, natural resource governance and in particular a strong focus on employment and livelihoods.

Section Two of the paper turns to action that needs to be taken internationally – above all to tackle the sharp increase in food price volatility of recent years. The section starts with a discussion of why prices have become so volatile, that draws a line between the changing supply and demand fundamentals on one hand and ‘positive feedback’ loops on the other where behaviours in response to high food prices have the effect of amplifying the problem.

The section then sets out a range of actions that are needed to reduce volatility and protect poor people, including reforms to increase the reach and effectiveness of humanitarian assistance; investment in scaling up food reserves, especially at regional level; and tighter controls over export bans and restrictions. Section Two also includes a discussion of the role of financial speculation in increasing volatility, and whether action is needed to tackle this.

Section Three focuses on ways of easing current tightness in the global supply and demand balance for food through policies to reduce demand. While policymakers are right to focus on increasing food production, a range of factors – including climate change, water scarcity, competition for land, energy security issues and falling rates of crop yield growth – suggest that this may not be easy.

So it makes sense for policy makers also to focus on reducing demand for food, crops and land where possible. The paper identifies four areas for action in this regard: reducing food waste, rethinking support regimes for inefficient biofuels, nudging affluent consumers towards more resource-efficient diets, and taking action to address unsustainable rates of population growth.

Finally, Section Four explores how this agenda can be put into practice – both in terms of where the key political opportunities lie, and what kind of international institutional reforms are needed. It begins by setting out why multilateral action is so crucial to the global food justice agenda, and proposes a range of essential reforms to the current multilateral system to increase its effectiveness on surveillance, decision-making and implementation.

The section then concludes with a discussion of where political opportunities are likely to be found for taking forward the recommendations in this paper – focusing in particular on this year’s G20 agenda, emerging economy leadership in multilateral contexts, and the opportunity to renew the global development agenda presented by the 2015 deadline for the Millennium Development Goals.

## INTRODUCTION: HUNGER AND RESILIENCE

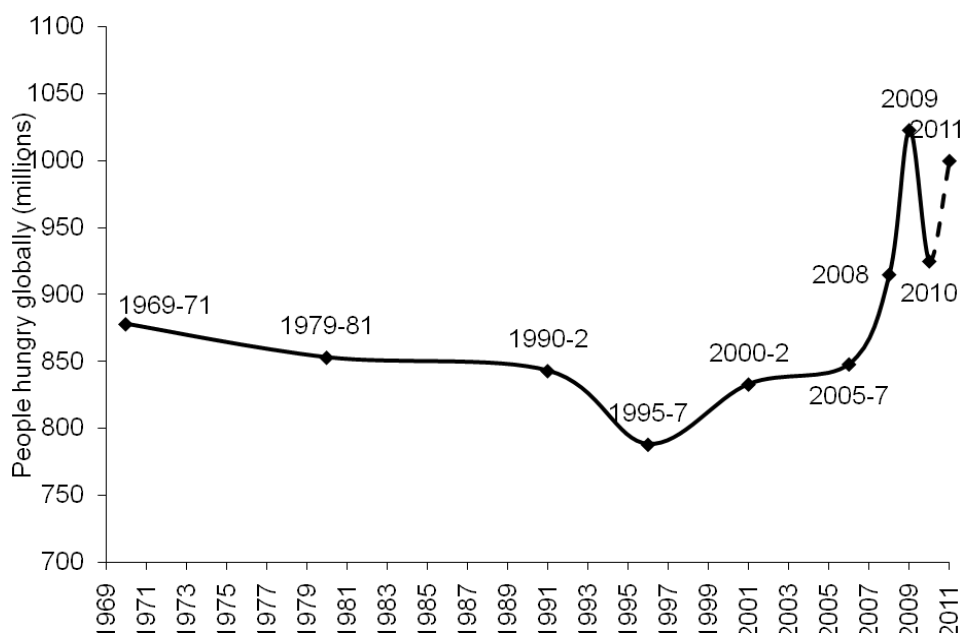
*'Starvation is the characteristic of some people not having enough to eat. It is not the characteristic of there not being enough to eat.'*

–Amartya Sen<sup>1</sup>

At the beginning of the 21<sup>st</sup> century, humanity has achieved an astonishing feat. Even as the world's population has grown exponentially – to the brink of the seven billion mark – it has managed to ensure that food production has kept pace. Yet this breathtaking success is matched by an equally astonishing failure. For even though enough food is available to feed each one of the world's people adequately and healthily, the reality is that today, every seventh member of the human race – 925 million people – is denied access to enough food. In many parts of the world, women are especially likely to go hungry.

And the total of hungry people is rising, not falling. Back in 1995, there were around 790 million people without enough to eat.<sup>2</sup> During the global food price spike that peaked in 2008, the total topped the billion mark for the first time. And while it began to fall again as the global financial crisis brought commodity prices down from mid-2008 onwards, the fact that the UN Food and Agriculture Organization's Food Price Index is, at the time of writing in April 2011, even higher than it was in 2008, strongly suggests that the dip in the number of hungry people was just a lull.<sup>3</sup>

**Fig 1: The global hunger total**



Source: FAO and World Bank data

Even in proportionate terms, with agricultural productivity growth outstripping population growth, no real inroads have been made into tackling world hunger – and we are now in serious danger of starting to go into reverse. While the percentage of undernourished

<sup>1</sup> Sen A., *Poverty and Famines: An Essay on Entitlement and Deprivation*, Clarendon Press (1981)

<sup>2</sup> FAO /WFP, *State of Food Insecurity in the World 2010*

<sup>3</sup> FAO Food Price Index: <http://www.fao.org/worldfoodsituation/wfs-home/foodpricesindex/en/>

people in developing countries fell from over 30 per cent in 1969–71 to around 16 per cent in 2005–07, it then began to rise again to 2008.<sup>4</sup>

These numbers rightly kindle a sense of outrage in most people – especially given the human impact that hides beneath the statistics. The legacy of the food price volatility of recent years is a generation of children living in poverty who will now be stunted, for life. The nutrition deficiencies they faced as children will often also mean that they face learning difficulties, cutting off life chances before they have had a chance to develop – and meaning that in many cases their children, too, will begin life in poverty traps.<sup>5</sup>

This discussion paper – produced to contribute to debate at the launch of Oxfam’s Grow campaign – focuses on why so many of the world’s people still go hungry, and what can be done about it.

At the core of the paper is the argument that *access* to food is as important as how much food is produced. As policy makers realised the extent of the global food crisis during the 2008 food price spike, they often tended to focus almost exclusively on the need to produce more food – overlooking the crucial point that producing enough food to feed everyone is no guarantee that everyone will in fact be able to feed themselves.

As the last few years have shown again and again, poor people and poor countries are highly vulnerable to sudden-onset shocks (whether food price spikes, extreme weather impacts or export bans) and slower-onset stresses such as gradual price inflation, declining water availability, or increasing average temperatures that can reduce crop yields. All too often, this vulnerability is most apparent in poor people’s food insecurity – unsurprisingly, given that poor households typically spend 50–80 per cent of their income on food.<sup>6</sup>

The need to tackle poor people’s particular vulnerability to shocks and stresses leads naturally on to the question of how to replace vulnerability with *resilience*. While the technical definition of resilience refers to the capacity of a system (an ecosystem, say) to ‘absorb disturbance and reorganize while undergoing change so as still to retain essentially the same function, structure, identity and feedbacks’,<sup>7</sup> in the context of international development, it can be interpreted more broadly to refer to the ability of poor people to cope with shocks and stresses within a broader context of progress on human development goals.

It implies a vision of development that starts from clear-eyed recognition of the very real threats to poor people and to the progress made in recent years that comes from emerging risks like climate change and global economic instability. But it is also a development agenda that looks beyond the need to defend existing progress against such risks, and insists on the need to make *more* progress in spite of conditions of global disruption and turbulence.

---

<sup>4</sup> FAO / WFP, *State of Food Insecurity in the World 2010*

<sup>5</sup> DFID, “Children and the Food Price Crisis”, Young Lives Policy Brief 5, September 2008

<sup>6</sup> Evans A., *The Feeding of the Nine Billion: Global Food Security in the 21<sup>st</sup> Century*, Chatham House, 2009

<sup>7</sup> Walker B., Holling C.S., Carpenter S.R. and Kinzig A., ‘Resilience, Adaptability and Transformability in Social-ecological Systems’ in *Ecology and Society*, Volume 9, No. 2, Art 5, 2004

# 1 RESILIENCE IN DEVELOPING COUNTRIES

Almost invariably, poor people are the most exposed to high food prices – just as they are to resource scarcity, to climate change, and to shocks and stresses of other kinds.

In part, as already noted, this is because poor households spend such a high proportion of their income on basic goods such as food and energy. It is also the result of poor people's high dependence on natural assets, like land, water, fisheries and forestry. Three-quarters of the world's poor live in rural areas – and while most of them are involved in smallholder farming, they have tended to lose out from high food prices rather than benefiting from them, because low yields per hectare means most of them are still net food buyers.

This dependence on natural assets increases poor people's exposure to environmental shocks like droughts or floods. All too often, these kinds of shocks lead to vicious cycles and chronic poverty traps – as, for instance, when droughts force poor families to sell productive assets like livestock, or to take children out of school, so making eventual recovery more difficult. These kinds of cycle are often a key part of the reason why people become poor in the first place, and why it's so difficult later to escape from poverty.<sup>8</sup>

And these kinds of shocks and stresses are likely to intensify in the future. Climate change impacts are becoming more evident, more frequent and more intense. Competition for land and water is intensifying. There is a real risk that inflation and price volatility will continue to affect food and other basic goods.

So what needs to be done to replace poor people's high levels of vulnerability with resilience and the capacity to adapt?

As ever in development, there are no one-size-fits-all approaches. Instead, a whole range of approaches is available to draw on for ways of reducing the risks faced by poor people in a volatile world hallmarked by increasing resource scarcity – including some of the most exciting and innovative areas in international development. Some of the key elements of this emerging agenda are:

- **A strong focus on employment and livelihoods.** While social protection systems (discussed in detail below) are rightly commanding high levels of attention among donors and civil society organizations alike, the best form of social protection is a decent job or livelihood. However, the global financial and economic crisis of the last few years has had a strongly negative impact on employment – and past crises have often seen a major lag in employment recovery. Moreover, with 45 million new entrants to the global labour market every year, mostly young women and men, 300 million new jobs will be needed by 2015 simply to keep pace with the growing global labour force.<sup>9</sup> Governments have a key role to play in supporting employment creation, sustaining enterprises, providing skills training and education, and facilitating re-entry into the workforce, among other areas.
- **An approach to agricultural development centred on small-scale food producers.** Three quarters of the world's poor people live in rural areas, and of the 3 billion rural people in developing countries, 1.5 billion are in small-scale producer households.<sup>10</sup> At present, the fact that most small farmers are net food buyers means that high food prices have often been a curse rather than a blessing, and small farmers are also highly exposed to climate change and weather variability. But when governments get the right conditions in place for

---

<sup>8</sup> Heltberg, R. & Siegel, P.B. 2008. *Climate Change: Challenges for Social Protection in Africa*. Paper for conference on social protection for the poorest in Africa. Washington DC, World Bank.

<sup>9</sup> ILO, *Recovering from the Crisis: A Global Jobs Pact*, adopted at International Labour Conference 98<sup>th</sup> Session, 19 June 2009 – available at [http://www.ilo.org/public/libdoc/ilo/2009/109B09\\_192\\_engl.pdf](http://www.ilo.org/public/libdoc/ilo/2009/109B09_192_engl.pdf)

<sup>10</sup> World Bank, *Agriculture for Development: World Development Report 2008*

small farmers to manage risks such as weather variability and input price fluctuations – as for instance in Vietnam, which has gone from being a food-deficit country to a major food exporter, largely thanks to improvements on small farms – agriculture can have an especially powerful role in reducing poverty and building resilience.

- **Strong emphasis on disaster risk reduction (DRR)**, which has been the focus of a sharp increase in interest and commitment in recent years. The case of Japan provides a clear illustration of the value of effective disaster risk reduction: while the tsunami of 2011 was devastating in its impact, the earthquake that triggered it caused minimal direct damage, thanks to Japan's leadership and experience in DRR, from its building codes to high preparedness throughout society. The 2005 Hyogo Declaration on DRR saw 168 governments commit to a ten-year programme of integrating DRR into their national development strategies and the work of international agencies.
- **Resilient governance and emphasis on peacebuilding** and other approaches to conflict prevention and resolution. This is particularly important in the area of natural resource governance, as competition for land and water intensifies and poor people find themselves at risk of reduced access to natural assets, through conflict with others over those assets, or being displaced – risks thrown into especially sharp relief by the emerging trend towards 'land grabs' (discussed later in the paper). More broadly, the role of the state itself is crucial – including both the state's accountability and legitimacy in the eyes of its citizens and its capacity for managing shocks and acting as an enabler for other sources of resilience.
- **Social networks.** Finally, it is worth emphasising that poor people generate substantial resilience themselves – through friends, families and local institutions such as religious bodies and community groups. Oxfam's research on how the global economic crisis has affected developing countries has emphasised how poor people all over the world have weathered the storm of recent years through 'turning to one another to share food, money and information to recover from lost jobs or reduced remittances'.<sup>11</sup>

---

<sup>11</sup> Green D., King R., Miller-Dawkins M., *The Global Economic Crisis and Developing Countries*, Oxfam, 2010

Significantly, there are extensive linkages and overlaps across all of these areas, with similar themes cropping up again and again (Box 1 summarises five of the most important).

### Box 1: What builds resilience?<sup>12</sup>

Five themes consistently emerge as important in building up poor people's and poor countries' adaptive capacity:

- The importance of **assets** – from land to livestock, and from tools for livelihoods to education;
- The centrality of **institutions** and **entitlements** – in particular as ways of guaranteeing rights and access to key resources assets;
- The key role of **knowledge and information** – for example, seasonal weather forecasts or agricultural extension services in the farming context;
- The value of **innovation** – which in turn relates to whether systems (governance systems, communities, ecosystems and so on) are able to adapt and change themselves;
- And finally, the significance of **flexibility and foresight** – often challenging when governments or individuals are struggling to cope with the present, but nevertheless a crucial component of what makes actors resilient to shocks and stresses.

So building resilience – whether in response to a specific threat (as for instance in the case of adapting to climate change, which will clearly increase the overall level of risk faced by poor people) or more generally – is emphatically not a separate, stand-alone area of activity. Rather, it is about taking an approach to development itself that is aware of risks and vulnerabilities, and that seeks to manage and reduce them at the same time as making progress on development.

This means that investing in resilience can have ripple effects, driving progress on multiple agendas at the same time. Nicholas Stern has argued that social protection is a key part of climate adaptation, for example, while the UK's Overseas Development Institute has undertaken research into the links and overlaps between social protection, climate adaptation, disaster risk reduction and livelihoods approaches.<sup>13</sup> The peacebuilding NGO International Alert, meanwhile, has argued that 'peacebuilding and [climate] adaptation are effectively the same kind of activity, involving the same kinds of methods of dialogue and social engagement, requiring from governments the same values of inclusivity and transparency'.<sup>14</sup>

### The special role of social protection systems

One of the most crucial areas where progress can be made in improving poor people's resilience, particularly with regard to access to food, is investing in social protection systems.

These kinds of system have already contributed to breathtaking reductions in poverty and inequality in some of the world's largest emerging economies, and could now start to do the same in low-income countries – if developing country governments embark on a sustained push, and if their international partners can provide enough support while resisting the temptation to micro-manage.

---

<sup>12</sup> Adapted from Africa Climate Change Resilience Alliance, *Consultation Document: the ACCRA adaptive capacity framework*, October 2010.

<sup>13</sup> Stern N., *Key Elements of a Global deal on Climate Change*, LSE, 2008; Jones L. et al, *Responding to a Changing Climate: Exploring how disaster risk reduction, social protection and livelihoods approaches promote features of adaptive capacity*, Overseas Development Institute, 2010

<sup>14</sup> Smith D. and Vivekananda J., *A Climate of Conflict: The Links Between Climate Change, Peace and War*, International Alert, 2007

Defined as ‘public actions carried out by the state or privately that can enable people to deal more effectively with risk, vulnerability to crises or change and that help to tackle extreme and chronic poverty’, social protection takes a huge range of forms.<sup>15</sup> Among those most relevant to food security are:

- Cash and in-kind transfers, like Ethiopia’s Productive Safety Net Programme, which transfers both cash and food during periods of seasonal food insecurity by providing people with employment on public works projects; or Brazil’s *Bolsa Familia* (family grant) system (see Box 2);
- Employment guarantee schemes, like India’s National Rural Employment Guarantee Act, which guaranteed 100 days of employment per year to poor people in 200 of India’s poorest rural districts – often on projects that contribute to sustainable agriculture and climate adaptation, like tree planting or strengthening flood defences;
- Mother-and-child health and nutrition systems or school feeding programmes, which are becoming increasingly important in many countries and which form a key plank of Brazil’s *Fome Zero* (Zero Hunger) program (again, see Box 2).

Social protection systems like these have crucial advantages as a way of protecting poor people during periods of high or volatile food prices.

Because they are targeted at the poorest and most vulnerable people, they are much more affordable for developing countries than economy-wide subsidies, which often contribute to further inflation. Where food price controls have the potentially disastrous effect of reducing incentives for farmers to increase food production, social protection systems create no such problems. And where food export restrictions can create catastrophic ripple effects for food import-dependent countries (see Section 2), social protection systems avoid knock-on effects elsewhere in the world.

As importantly, social protection systems can have a transformative impact on poor people by providing them with a secure platform from which to build livelihoods and break free of dependency and anxiety.

So far, though, only a fraction of the people who need access to social protection actually have it.

The International Labour Organization, for instance, estimates that only 20 per cent of the world’s people have access to adequate social protection of any kind.<sup>16</sup> Moreover, a substantial proportion of this total is accounted for by social insurance systems like social pensions or health insurance, where social security is financed by contributions based on the insurance principle of pooling resources with others. These tend to be concentrated in middle-income countries.

If the focus is narrowed to social assistance systems – in which public actions are targeted at the neediest people, without depending on contributions – the total is significantly lower, with only around 750 million people enjoying access to some form of social assistance.<sup>17</sup>

But although a huge task lies ahead in ensuring access to social protection for everyone who needs it, recent years have seen extremely encouraging progress, particularly on access to social assistance. Some of the most impressive progress has been in emerging economies like China, India, Mexico and Brazil (see Boxes 2 and 3), where governments have invested heavily in building up their social protection programmes with striking results – including, in some places, marked reductions in overall levels of inequality.

---

<sup>15</sup> DFID, *Social Protection in Poor Countries*. Social Protection Briefing Note no. 1., 2006

<sup>16</sup> International Labour Organisation: see <http://www.ilo.org/global/about-the-ilo/decent-work-agenda/social-protection/lang--en/index.htm>

<sup>17</sup> Barrientos A. et al, *Social Assistance in Developing Countries Database*, Version 5.0, July 2010



## Box 2: Brazil's *Fome Zero* (Zero Hunger) program

Brazil's *Fome Zero* program was launched by then-President Luiz Inácio Lula da Silva in 2003, with the objective of eradicating hunger in Brazil by 2015. A key plank of the program, the *Bolsa Família* ('family grant') targets direct financial aid to the poorest families, and has contributed to a fall in the poverty rate from 22 per cent to 7 per cent of the population between 2003 and 2009, with the income of poor Brazilians growing seven times as much as the income of rich Brazilians over the same period.

But *Fome Zero* extends to many other areas too, including low-cost restaurants, education about healthy eating, and one free meal a day for all children in public schools (two in the poorest areas). Crucially, *Fome Zero* also provides extensive support to small and family farmers – in many cases, it purchases their food directly for use in school meals or canteens.

So instead of focusing only on food production or access to food, Brazil's integrated approach tackles both at once – increasing food security for poor farmers and poor consumers in urban areas at the same time.

Where most remains to be done, by contrast, is in low-income countries, and especially in sub-Saharan Africa. Here too, progress is being made, but too often, the trend is towards small-scale pilot programmes that are heavily driven and micro-managed by donors. Where social protection programmes in Africa have broken out of this mould and moved towards wider levels of coverage – as for example in Ethiopia or South Africa – this has been because an assertive government has really taken control of the process.

While donors' enthusiasm for social protection is welcome and significant, future progress will depend on their remembering – and being reminded of – two important lessons.<sup>18</sup>

The first is that on social protection as on so many other areas of development assistance, *there is no one-size-fits-all approach*. As noted above, social protection takes many forms: what works in one country may be totally inappropriate, or a political non-starter, somewhere else. But some donors – including the World Bank – are too quick to assume that cash transfers will always be the right approach for all countries.

The second key lesson is that *for social protection to work, it has to be rooted in national politics, not imposed from above*. While financing and government capacity are often issues that have to be addressed in scaling up social protection, the biggest barrier to building up social protection in poor countries is often a tough political context. For instance, if policy makers and public debates focus on fears that social protection will encourage dependency (a concern not supported by the evidence, which shows that poor people actually tend to use social transfers as small investments).<sup>19</sup>

But at best, social protection provision can not only protect poor people from shocks, but also contribute towards the creation of a social contract between the state and its citizens through acting as part of a bargain between both sides that leads to increased state accountability and responsiveness. Donors therefore need to invest in making sure they really understand the political economy of countries in which they operate – and then work with the grain of pro-poor drivers of change, rather than supplanting or bypassing them.

One way in which they can do this, of course, is through financial support – where the issue is not only to provide enough funds, but also to do it in the right way. In particular, that means giving aid as budget support wherever possible, given the need to support domestic political choices as discussed above; and longer-term, more predictable aid flows, given the multi-year financial commitments involved.

<sup>18</sup> See for example the joint IDS / ODI / UEA / RHVP paper on *Social Protection in Africa: A Way Forward*, 2010: <http://www.odi.org.uk/resources/download/5010.pdf>

<sup>19</sup> Chronic Poverty Research Centre, *The Chronic Poverty Report 2008–09*.

### Box 3: Examples of existing social assistance programs<sup>20</sup>

#### China

The *Di Bao* Minimum Living Subsidy Scheme pays poor households the difference between their monthly income and a minimum level set by city governments. Benefits are targeted at people with '3 no's': no ability to work, no income and no support from family members. In 2007, the scheme covered 22.7 million poor urban households; rural beneficiaries are now increasing fast, and the government plans to cover 1.3 billion citizens by 2020. The scheme currently costs around US\$2bn.

#### India

The *Maharashtra* National Rural Employment Guarantee Scheme was launched in 1979 and now offers 100 days of work per year to beneficiaries. In 2007, 33.7 million households – every fourth household in rural India – received support. The scheme accounts for 2.3 per cent of total central government spending.

#### Mexico

The *Oportunidades* (Opportunities) program reaches 5 million households (3.5 million of them in rural areas). Families receive grants for food, energy and education, as well as a pension for senior citizens; in return, recipients commit to school education and health checks. The scheme cost US\$3.6bn in 2009, 0.32 per cent of Mexico's GDP.

#### Brazil

The *Bolsa Familia* (Family Grant) program reached 12.5 million beneficiary households in 2009. The poorest families receive a flat rate grant and an additional sum per child; families in moderate poverty receive a small amount per child. Grants are dependent on children attending school and on regular health checks for mothers and young children. The scheme costs around 0.3 per cent of Brazil's GDP and has reduced inequality by around 21 per cent.

#### Ethiopia

The Productive Safety Net Programme provides employment on public works projects for chronically food insecure people, as well as direct support for those unable to work. In 2009, the program reached 8.2 million people (11 per cent of the population) for 6 months of the year – although the fact that some benefits are paid in cash rather than food has meant that the PSNP's ability to provide food security can be undermined by rising food prices. The scheme cost 2 per cent of Ethiopia's GDP.

Donors also have important support to contribute in helping to create the administrative capacity that poor countries need in order to design and implement social protection systems. Targeting social protection at the people who need it most is highly intensive, sophisticated work, and requires effective states to do it.

But the challenge of building up resilience is by no means limited to what happens within developing countries' borders. On the contrary, the sheer scale of the volatility that has been such a feature of globalization in recent years means that a major push to build up resilience is also needed at international level. This is the subject of the next section.

---

<sup>20</sup> Examples taken from Barrientos et al, *op. cit.*

## 2 RESILIENCE AT GLOBAL LEVEL

Globalization has entered a highly volatile and unstable phase – and food prices have been one of the areas where the rollercoaster ride has been most pronounced. While high food prices have themselves been a problem for poor people, it is the sharp volatility of prices in recent years that has been most damaging of all.

So why have prices been so volatile? Part of the reason is simply because the supply and demand fundamentals for food have become progressively tighter in recent years. Demand is rising because the world's population is growing, and because of a larger and more affluent global middle class switching to more resource-intensive 'Western' diets.

But on the supply side, meanwhile, production has struggled to keep pace. The productivity gains of the 'Green Revolution' have been running out of steam in recent years – from around 2 per cent a year in the 1970s and 1980s to 1.1 per cent a year in the 1990s and the first half of the last decade, with the rate projected to keep falling.<sup>21</sup> Competition for land and water is also helping to limit supply growth, pushing food prices upwards in the process.

The convergence of the world's food and energy economies is also emerging as a key factor in food price inflation and volatility. The fossil fuel dependence of modern agriculture means that high oil prices exert upward pressure on food prices too, as costs increase for on-farm energy use, inputs like fertilizers and pesticides, processing, and transportation. At the same time, high energy costs increase the attractiveness of biofuels as a substitute for fossil fuels; in the process diverting crops to engines instead of plates and creating another source of competition for land (see Section 3 for a full discussion of biofuels).

And while higher average temperatures could lead to higher global crop yields for the next few decades, a warmer world is projected to reduce yields immediately for low latitudes (i.e. most developing countries). Moreover, extreme weather events are already impacting yields in many countries (including, for instance, droughts in Russia and China, and floods in Australia and South Africa), and will do so much more in future.

But food price inflation is not simply the result of supply and demand. Also important is the fact that as food supply chains have become more globalized and efficient, so they have in the process also become more brittle and less resilient. 'Just-in-time' logistics can reduce the margin of error and create risks of supply interruptions in extreme circumstances. One of the drivers of the 2008 food price spike was that countries' food stocks had fallen to historically low levels: from more than 110 days' worth before 2000 to just over 60 days' worth in 2004.<sup>22</sup>

Above all, a more globalized food system equals a more interdependent one too – which makes the system vulnerable to zero-sum games when governments or other key players succumb to panic or herd behaviours.

If, for example, key food exporters suddenly reduce or suspend their exports because of domestic unrest over food prices – as more than 30 countries did at the height of the 2008 spike – then countries that depend on their imports are left hanging in the wind. By the same token, if import-dependent countries start panic buying on international grain markets to try to build up stockpiles and head off unrest over food prices – as various Middle Eastern and North African governments have been doing in early 2011 – then this too has the effect of worsening the problem for everyone else, as prices are forced still higher.

---

<sup>21</sup> Trostle R., *Global Agricultural Supply and Demand: Factors Contributing to the Recent Increase in Food Commodity Prices*, US Department of Agriculture Economic Research Service, 2008

<sup>22</sup> *Ibid.*

So what can be done to reduce food price volatility? This section of the paper sets out two areas for action.

- First, measures to **make markets work better** in periods of tight supply and demand, including food reserves, more effective regulation of commodity futures and improved market transparency.
- Second, ways of **reducing the risk of global zero-sum games** on food, such as panic buying and export bans, protectionism in agricultural trade, and the need to balance countries' right to decide their own policies with their international responsibilities to their trade partners.

### **Making markets work better**

The first set of actions needed centres on recognising the vulnerability of food markets to supply and demand shocks. As the development expert Homi Kharas observes, 'What makes food markets distinctive is that both supply and demand curves are highly inelastic, meaning neither responds much to price changes in the short run. The most basic economics dictates that small shocks in either supply or demand will therefore lead to large price changes.'<sup>23</sup>

#### **Food reserves**

One obvious set of actions that can be taken to build in greater resilience to such price changes is through investing in food reserves. Food reserves come in a variety of forms: from community reserves that reduce post-harvest waste and give small farmers more control over when to sell their crops; to strategic reserves at national level that are used for price stabilization; and international reserves available for emergency use (which may be either physical stockpiles, or 'virtual' reserves based on promises to provide food if it is needed).

However, food reserves do come with costs and trade-offs. Running large inventories is expensive, and as a result no-one wants to pay for them unless they have to: private sector companies have no incentive to hold stocks beyond their own needs, while governments tend to want cheap, simple solutions. Food reserves are also often complicated to run, and can have the effect of distorting prices when reserves are released, in effect reducing farmers' ability to profit from periods of high prices.

In spite of these issues, food reserves have an important role to play in ensuring food security. For example:

- They can create preparedness for food emergencies, ranging from humanitarian relief operations after disasters to ensuring that a country can still access grain, even if tight international markets have fallen prey to spasms of export restrictions (as happened at the height of the 2008 food spike).
- 'Buffer reserves' – those used for price stabilization rather than only in emergency conditions – can also be used to guard against excessive price volatility, an important factor given the inelasticity of supply and demand for food.
- Reserves can provide support to smallholder farmers when the grain used for reserves is sourced from them. (This is the principle of the World Food Programme's Purchase for Progress initiative, which purchases food for emergency operations from small farmers in developing countries, rather than from OECD producers – thus helping small producers as well as the recipients of food assistance).

Between the 1960s and 1980s, food reserves were widely used. After that, however, they began to decline, as structural adjustment programmes in developing countries insisted on their being phased out; as the private sector moved towards just-in-time supply chains; and as structural oversupply of food, coupled with the high cost of holding reserves,

---

<sup>23</sup> Kharas H., *Making Sense of Food Price Volatility*, Brookings Institution, 2011

began to make them seem unnecessary. More recently, increased trade liberalization has increased the liquidity of global markets for many foods (although not all: rice markets remain relatively illiquid, for example), further reducing the apparent need for countries to maintain their own stocks.

However, the food price spike that peaked in 2008 brought many of these assumptions back into question, and the issue of food reserves is now coming back on to the agenda. But there are still important questions about what kind of approach makes most sense in which circumstances. In broad terms, the main options available are:

- *Community reserves*, which work by buying food from farmers when prices are low and then keeping it until prices are high enough to cover purchase and management expenses. This can be used as a reserve during the seasonal 'hunger gap', or be used as collateral for pre- or post-harvest credit. Community reserves often also play a social function, by providing food to the poorest families in the community.
- *National-level reserves*. Following the 2008 food price spike, many governments – including Burkina Faso, the Democratic Republic of Congo, Malawi, Zambia, Pakistan and Nicaragua – decided to scale up their food reserves for emergency use. But the use of national reserves for price stabilization is much more contentious, due to risks of corruption, the discouraging effect buffer stocks have on private stockholdings, the expense involved, and other factors. Major exporter governments can also use stocks to manipulate prices.
- *Regional-level reserves*, which can mean food is in the right place when it is needed while reducing some of the risks associated with national reserves. A range of governments are currently considering pooled regional arrangements, including the ECOWAS group of West African states, and a major proposal for a new South East Asian rice reserve involving the ten member states of ASEAN, China, Japan and South Korea.
- *Global reserves*, where a proposal by the International Food Policy Research Institute for a 'virtual' reserve has received considerable attention in recent years. It would be based on coordinated commitments by participating countries as well as a small physical reserve for humanitarian needs.

As yet, there is little consensus on which of these options (or a blend of them) makes most sense. However, it is important that countries have the space to try out different approaches, and also that the results of these experiments are shared, so as to allow improvements to be made over time. What is clear, though, is that the low stock levels that preceded the 2008 food price spike did contribute to increased overall vulnerability to food price volatility, and that a move towards higher stocks would increase global resilience.

### ***Financial speculation***

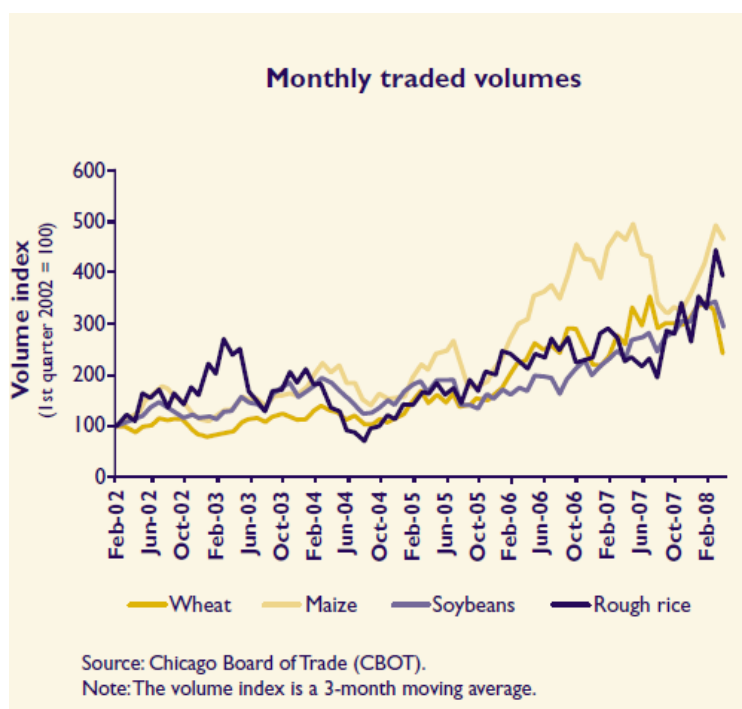
A second key issue in the area of making markets work better is the question of the role that financial speculation has played in amplifying food price volatility.

There is considerable disagreement about the role that financial speculation has played in driving food price inflation and volatility. While it is clear that traded volumes of agricultural commodity futures have increased markedly in recent years, as Figure 2 illustrates, that is not the same as saying that speculative activity has been responsible for rising food prices. In some ways, speculation can be seen as a 'canary in the coal mine', in that food prices are going up, and becoming more volatile, for reasons that are very much rooted in the real world economy.

A further challenge arises from the difficulty of distinguishing in practice between the use of financial futures to hedge against price volatility – something many farmers, food companies and others engage in – and the use of such instruments purely to make bets on future commodity prices. In reality, these apparently very different activities are two sides of the same coin, and distinguishing between one and the other is not always possible.

These kinds of methodological issue mean that discussions of the role of commodity speculation tend to be studies in carefully worded ambiguity. The International Food Policy Research Institute, for example, undertook a detailed review of the data, and concluded that: 'The results show that speculative activities might have been influential, but the evidence is far from conclusive.'<sup>24</sup>

**Figure 2: Monthly traded volumes of futures contracts, 2002–08**



Source: International Food Policy Research Institute

Moreover, badly designed policy intended to tackle the perceived excesses of speculation can itself have negative consequences. While the aftermath of the global financial crisis means that commodity traders can make an attractive pantomime villain for politicians, campaigners and the media, the reality is that new investment in agriculture is urgently needed, including from the private sector, given that part of the backdrop to the 2008 food price spike was a long period of under-investment in agriculture.

While discussion of the role of investors has often fallen prey to exaggeration and stereotypes, however, it is also the case that private sector involvement in agriculture can cause real problems.

Firstly, speculation may not be the main cause of food price inflation, but it can still amplify volatility at the margin, particularly given the volumes now being traded. Most investors seeking exposure to commodities have no intention of taking physical delivery of the commodity in question, which means that futures markets cannot altogether lose touch with real world supply and demand fundamentals. But during periods of high volatility (such as at the height of the 2008 food price spike), futures markets can add 'froth' to prices and accentuate the peak of the spike.

Secondly, large and influential commodity trading firms may have conflicts of interest. For example, Glencore – a major global commodities trading house – published a briefing note in summer 2010 setting out reasons for Russia to impose an export ban on wheat, but failed to disclose until a year later that it had a major speculative bet in place at the time, that wheat prices would rise. The Russian government did indeed impose an export

<sup>24</sup> Robles M., Torero M. and von Braun J., *When Speculation Matters*, International Food Policy Research Institute, 2009

ban shortly after Glencore's note was published – sending wheat prices rocketing, and acting as a key driver of the renewed food price spike that has gathered pace over the last year.

Thirdly, private sector investors in farmland can cause major negative impacts on people living in poverty if deals are not sufficiently development-attuned. While it is governments and sovereign wealth funds which account for the bulk of the land grab phenomenon (see below), private sector firms can contribute exactly the same problems of poor environmental impact assessment; displacement of people who may have farmed the land in question for decades despite lacking formal title to it; minimal job creation; and scant benefits to the host country.

As governments assess the need for additional regulation of financial activity in agriculture, given the sector's unique sensitivity, they should start by taking an incremental 'no-regrets' approach that opts for modest initial wins while gathering more data about what is happening.

A first step along these lines could be for governments to mandate additional transparency requirements in food commodity futures. At present, many commodity futures contracts are traded 'over the counter' (OTC), that is, privately negotiated and traded between two parties without going through an exchange. Such deals are subject to minimal information disclosure requirements, yet account for enormous sums of money: overall, outstanding OTC commodity derivatives accounted for a notional total of \$2.9 trillion in June 2010.<sup>25</sup> If these OTC contracts instead had to be cleared formally through an exchange (such as the Chicago Board of Trade), this would introduce important new reporting requirements without impeding the capacity of food producers and purchasers to hedge against possible price variations. Governments could also require major private sector players, such as global grain companies, to disclose their reserves as a way of reducing scope for market manipulation.

At the same time, governments could do much to put their own house in order on the transparency front. For example, governments including China and India regard information about agricultural commodity markets, in particular their stock levels, as highly confidential. This level of opacity in turn increases the uncertainty faced by markets, and with it the risk of volatility. The French 2011 G20 agenda includes proposals to address this issue, but could also usefully provide money and resources for the UN Food and Agriculture Organization to increase its own surveillance of markets, including making greater use of field work and satellite imagery, rather than relying as heavily on government data as it does now.<sup>26</sup>

### **Reducing the risk of global zero-sum games**

The second key area for action to tackle food price volatility is in measures to reduce the risk of global zero-sum games in international trade.

As already noted, the global food outlook will be heavily shaped by a tighter balance between supply and demand. In such conditions, there are real risks when governments' actions are motivated by narrow, short-term interests – or by outright panic – without regard for the knock-on consequences of their actions.

The food price spike that peaked in 2008 provided a vivid warning of the need for governments to think holistically about how their actions can affect prices, and each other. As prices increased, many import-dependent governments frantically started trying to rebuild their depleted food stockpiles by buying up grains and other foodstuffs on international markets – in the process, of course, pushing prices up still higher. The same dynamic has been evident again in 2011, when Middle Eastern and North African governments engaged in panic buying of wheat and other commodities to try to help contain political unrest (catalysed at least in part by food price inflation).

---

<sup>25</sup> Data from Bank of International Settlements: see <http://www.bis.org/statistics/otcder/dt1920a.pdf>

<sup>26</sup> Blas J., "Help ease food crisis by lifting export bans", *Financial Times*, 7 May 2011

The concerns of import-dependent countries to ensure their food security are also evident in the recent – and enormous – global trend towards land grabs, mirroring the intensifying global scramble for oil and mineral resources. Gulf states and Asian countries such as South Korea, India, China and Japan have leased huge tracts of land throughout the developing world. In many cases this has been with minimal transparency or environmental impact assessment, low employment creation, crops exported and – most worrying of all – minimal consultation or involvement of local people, thousands of whom have found themselves displaced from land that they may have relied on for decades despite not having had formal title or ownership.

Nor are import-dependent governments alone in this failing. As already noted, the 2008 food price spike saw more than 30 food exporters imposing export restrictions or outright bans as a means of trying to reduce food prices at home and hence ease urban unrest over price inflation. This trend was instrumental in bringing the food price spike to its peak, particularly in rice prices, where relatively illiquid international markets for the grain contributed to a sudden outburst of acute price volatility.

In all these cases, a common theme is that while such actions may make sense up to a point for individual governments, the overall effect is to increase perceptions of scarcity and the risk of more ‘resource nationalism’; panic buying and export bans also have the effect of pushing prices up still further, thus worsening the problem they were intended to address in the first place. The potential for positive feedback loops (where the effects of a change amplify the change) is obvious – as is the risk of global zero-sum games of competition rather than cooperation.

These kinds of dynamic represent a big change for international trade. Until food prices began to rise after 2000, commodity prices – including food – had been in a slump for years. Commodities were a buyer’s, not a seller’s market; the sorts of issues that led to trade disputes and World Trade Organization cases tended to focus heavily on issues of market access.

But with the emergence of food inflation and volatility, a shift towards a seller’s market is becoming evident, in which trade disputes are as likely to be about security of supply as they are to be about market access.

Crucially, these kinds of disputes are not well covered by existing international trade rules. The General Agreement on Tariffs and Trade (GATT) and the WTO Agreement on Agriculture (AoA) do include rules against export restrictions – but important caveats apply, which seriously weaken these rules’ effectiveness.

One is that while most export restrictions are prohibited under the GATT, temporary restrictions are allowed in the specific case of food. Another is that countries suspending exports are supposed to take account of the effect on importers, notify the WTO that restrictions have been implemented, and provide justification if asked. But these requirements do nothing to prevent countries from imposing export bans – and in any case, even these modest requirements apply only to developed countries, thus missing out key exporters such as Argentina or Thailand.

In the long run, policy makers should be aiming to agree new, tougher trade rules that prevent a repeat of the kind of volatility seen during the last food price spike and that could yet erupt this time around. Respect for developing countries’ policy space should continue to be an important principle in international trade, as should emphasis on ‘special and differential treatment’ for developing countries. But at the same time, the extent of interdependence in 21<sup>st</sup> century trade, coupled with the challenging global food outlook, means that policy space has to be coupled with responsibility – and with binding rules if countries refuse to display it.

Given the state of the Doha trade round – still on life support after ten years of negotiations – that is unlikely to happen any time soon. In the meantime, then, policy makers should focus on more achievable measures that would still have a tangible impact.

High on their task list should be some form of global emergency management mechanism that provides communication and coordination between countries in conditions of high



volatility. This could potentially help to ease some of the risks of panic buying by import-dependent countries that have the effect of pushing prices still higher.

Another essential basic step is for exporters to agree that food to be used as humanitarian assistance should always be exempt from export bans, so that the World Food Programme and other emergency relief agencies are able to source food when it is needed.

In particular, while formal rules against the sudden imposition of export restrictions may be out of reach for now, it might be achievable to persuade major exporters at least to make a political commitment not to impose sudden export restrictions. Proposals for a G20 Code of Conduct on food export restrictions could easily encompass such a commitment and could help to bring more stability to food markets.

Finally, policy makers should be clear that moving forward with the Doha Trade Round does remain essential for global food security, however difficult progress has been – in particular, movement on reform of OECD farm support policies, which are even more problematic in conditions of high and volatile global food prices (see Box 4).

#### **Box 4: Does reform of OECD farm support regimes still matter?**

The scale of rich countries' support to their farm sectors is breathtaking. In 2008, OECD countries provided US\$265bn in support to their agricultural producers – equivalent to 21 per cent of producers' total income.

For years, Oxfam has campaigned for an end to rich countries' farm support policies, arguing that they represent outrageously unfair competition with farmers in developing countries, who find themselves undercut by subsidized rich country exports at home even as tariffs and other trade barriers deny them access to OECD countries' own markets with their exports.

Because these calls were made during a period of sustained low food prices (and indeed a multi-year slump in the case of many agricultural commodities), the question inevitably arises: does reform of subsidy regimes like the EU's Common Agricultural Policy still make sense in a very different world of high food prices? Or are high production levels in OECD countries in fact part of the solution for a world in which food seems to be becoming scarcer?

The answer is that not only does reform of rich world farm support regimes remain essential in a world of higher and more volatile food prices; if anything, it becomes more urgent.

This is because having some domestic food production capacity can be an important source of resilience during periods of acute volatility on global food price markets – domestic capacity which, as just noted, is directly undermined if the developing country has to compete with imports that have been unfairly subsidized by rich world exporters.

While the Doha Round was supposed to include elimination of many OECD subsidies (especially export subsidies), numerous loopholes were still in place to allow the USA and European Union to continue subsidizing their farm sectors: a 2008 Oxfam briefing paper noted that the Doha Round would be 'unlikely to oblige either the US or EU to cut a single dollar from the subsidies it pays its farmers'.<sup>27</sup>

Meanwhile, some OECD subsidies have also directly contributed to the degree of food price volatility of recent years. In the USA, for example, generous support for producing ethanol from corn means that this year as much as 40 per cent of the US corn crop will go to biofuels rather than food. The fact that the USA is also the world's largest corn producer means this feeds straight through to global corn prices, which have recently been at record highs.

The recent volatility of food prices makes it more important than ever that developing countries have the policy space to protect their citizens (whether producers or consumers).

For example, governments need to have the flexibility not only to be able to lower tariffs during periods of high prices, but also to put them back up again if prices subsequently fall. While total food self-sufficiency will rarely if ever make sense as a policy objective for

<sup>27</sup> Oxfam, *The Time is Now: how world leaders should respond to the world food price crisis*, Briefing Note, 3 June 2008

developing countries, retaining at least some domestic food production capacity can be an important source of resilience for developing countries – which therefore need to be able to shield domestic producers from extreme price volatility or from sudden surges of imports. This consideration is at the heart of debates in the Doha Round about the ‘Special Safeguard Mechanism’, which allows some countries the right to impose high duties on imports when import volumes rise above a certain level, or if prices fall below a certain level.

### 3 CHANGING THE DEMAND FUNDAMENTALS

So far, this paper has focused on measures to increase the resilience of the food system – both in developing countries, through employment, small farmers, social protection and other measures, and internationally through measures to reduce the volatility of food prices and the vulnerability to shocks of international trade.

But measures to increase resilience will only be of limited usefulness if the supply and demand fundamentals for food continue to worsen – in much the same way as effective climate adaptation is not a substitute for tackling the underlying causes of climate change through reducing emissions.

As the issue of global food security started appearing on heads of governments' policy agendas from 2007 onwards, many of them rushed to the conclusion that their most important task was simply to increase production of food in line with demand projections, such as the World Bank's forecast that 50 per cent more food would be needed by 2030, and the UN Food and Agriculture Organization's projection that 70 per cent more food would be needed by 2050.<sup>28</sup> (This emphasis on production was politically expedient for many OECD countries, as it enabled them to argue for continuation of farm support regimes.)

Increasing production is certainly part of the solution to global food security for all – although as previous sections have discussed, making sure that there is enough food for everyone is no guarantee that everyone will in fact get fed. But realistically, there are hard questions about whether the current tight supply–demand balance for food will be resolved on the supply side alone.

As noted, the crop yield gains of the 20<sup>th</sup> century Green Revolution have been running out of steam in recent years. Competition for land is intensifying. Water scarcity is already acute in many regions due to unsustainable use patterns, especially of groundwater, and will worsen in many other regions as climate change gathers pace. Other climate impacts, particularly extreme weather events, are likely to reduce crop yields too. Higher energy prices will increase the cost of many inputs that are essential for food production under current agricultural models, including fertiliser and fuel for on-farm energy use, processing and distribution.

For all these reasons, it is possible that supply will fail to keep pace with growth in demand, even assuming an immediate and large-scale reversal of the under-investment in research and development, and in agriculture generally, of recent decades. So it follows that if demand reductions can be made – for food, for non-food crops, for land, for water, and so on – then this will help to make the overall global food security challenge easier. In particular, four key areas for potential action stand out:

- Reducing the proportion of food that goes to waste;
- Rethinking policies that support the most inefficient biofuels, above all corn-based ethanol;
- Nudging the 'global middle class' towards more resource-efficient diets;
- Investing in areas like girls' education, women's empowerment, access to reproductive health services and other policies that can help to stabilise global population at low- rather than high-end estimate levels.

---

<sup>28</sup> World Bank, *op. cit.*; FAO, *How to Feed the World in 2050*, available at [http://www.fao.org/fileadmin/templates/wsfs/docs/expert\\_paper/How\\_to\\_Feed\\_the\\_World\\_in\\_2050.pdf](http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf). Both figures are before additional demands for crops to use as biofuels are taken into account.

### ***Reducing the proportion of food that goes to waste***

In broad terms, food waste happens in two areas of the food supply chain. First, there is waste associated with inefficient production – primarily in developing countries, where post-harvest losses represent a major drag on food productivity.

Secondly, though, food is also wasted on the demand side, principally in developed countries, where an astonishing amount of the food is wasted. In the UK, for example, 8 per cent of dairy products goes to avoidable waste, as does 10 per cent of eggs, 13 per cent of meat and fish, 17 per cent of cereal products, 20 per cent of fruit, 24 per cent of vegetables and 32 per cent of bread.<sup>29</sup> Tougher regulation is needed on food companies and supermarkets to reduce food waste, while individual consumers also need to take responsibility for dramatically reducing the amount of food that they throw away.

While reducing food waste in OECD countries obviously does not literally mean that food that would have been wasted will instead reach poor people, the underlying point is that reduced food waste means reduced demand – no trivial consideration, with the global supply–demand balance for food as tight as it is today, and given that the 40 million of tonnes of food wasted each year by US households, retailers and food service companies represents enough food to meet the needs of all the world's undernourished people over the same period.<sup>30</sup>

### ***Rethinking biofuel support policies***

Demand for crops could also be reduced by a rethink of policies that support biofuels – especially the most inefficient ones, and above all, corn-based ethanol.

Biofuels are an increasingly important contributor to the total global supply of liquid fuels. They contributed nearly 75 per cent of the net global increase in non-OPEC oil supply in 2008 – a highly politically significant fact, as policy makers in oil-importing countries contemplate OPEC's growing share of world oil production.<sup>31</sup>

And while biofuels contributed only 1.5 per cent of total global liquid fuel supply in 2008, this had a huge effect on food prices. The IMF has observed that biofuels accounted for almost half the increase in the consumption of major food crops in 2006–7, primarily because of corn-based ethanol in the USA. In 2011, as noted, around 40 per cent of US corn production will go to car engines rather than the food chain – a major reason why corn prices have been at record levels this year.

While the USA aspires to a position of global leadership on food – particularly through its Presidential *Feed the Future* initiative – it maintains a studious silence on the effect that its ethanol policies have on global food prices. Indeed, the Obama Administration recently *increased* support to the US's ethanol industry by amending Environmental Protection Agency regulations to increase the amount of ethanol that can be blended into gasoline.

This is the opposite of what the USA should be doing if it is serious about being a global leader on food security. Instead, it should announce a moratorium on support for corn-based ethanol – a hugely inefficient form of biofuel which would wither away if its policy support regime were removed – and other national support and subsidy regimes should undergo independent review to assess their compliance with global food security objectives.

Other OECD countries' biofuel policies are also seriously problematic. The European Union, for example, has in place a policy of obtaining 10 per cent of all transport fuels from biofuels by 2020; a 2010 analysis from ActionAid suggests that meeting this target would require up to 17.5 million hectares of land in developing countries, even before taking into account the additional land that would also be needed for biofuels production in developed countries, and the food production that this would displace into developing

---

<sup>29</sup> Source: UK Department of Environment, Food and Rural Affairs. Quoted in Financial Times graphic, 18-19 September, 2010.

<sup>30</sup> Stuart T., *Waste: Uncovering the Global Food Scandal*, 2009

<sup>31</sup> Blas J., "Biofuel supplies set to surge, says IEA", *Financial Times*, 11 June 2008

countries.<sup>32</sup> More recently, the Nuffield Council on Bioethics report concluded that EU and UK biofuel support policies had encouraged ‘unsustainable’ expansion of biofuels, and that current policies be replaced with a ‘more sophisticated’ approach that takes account of wider consequences of biofuel production.<sup>33</sup>

### **Encouraging more resource-efficient diets**

The ‘global middle class’ is expanding and growing more affluent at an astonishing pace, in particular as emerging economies maintain high rates of economic growth.

In the process, middle-class consumers in emerging economies are moving towards the high per capita energy use levels of Western consumers – and also towards ‘Western’ diets rich in meat, dairy products, and processed foods, all of which are far more resource-intensive in terms of grain use, energy intensity, water use, greenhouse gas emissions, and so on.

- While it takes 500 litres of **water** to produce a kilogram of potatoes and 1,900 litres for a kilogram of rice, for example, 3,500 litres of water is needed to produce a kilogram of poultry - and 100,000 litres for a kilogram of grain-fed beef.<sup>34</sup>
- The global livestock sector is responsible for 18 per cent of **greenhouse gas emissions** in CO<sub>2</sub> equivalent – a higher share than the global transport sector.<sup>35</sup>
- Americans eat roughly 800 kilograms of **grain** each per year, with the bulk consumed indirectly as meat (only around 100 kilograms is eaten directly as bread, pasta, breakfast cereal and so on). In India, by contrast, people consume around 200 kilograms of grain each a year, almost all of it eaten directly to satisfy basic energy needs.<sup>36</sup>

If consumers in the global middle class moved to more resource-efficient diets, and in particular ate less meat, this would significantly reduce demand for grains as feed for livestock and land for grazing, and ease a wide range of environmental impacts, particularly in the climate change arena.

They would also be substantially healthier. Developed countries are experiencing an epidemic of overweight and obesity. In the USA, for example, overweight rates were less than 50 per cent during the 1970s but are around 70 per cent today and still rising sharply. And while America shows the trend most clearly, rates of overweight, obesity and the illnesses associated with them are rising steadily in *all* OECD countries, where the least nourishing food also tends to be the cheapest.<sup>37</sup> Emerging economies are rapidly moving to the same trajectory.

In this sense, meeting a projection of 50 per cent more demand for food in two decades’ time is not even *desirable*, even if it is possible, given that a large proportion of the increase is accounted for by a shift to a less healthy, more resource intensive diet. Individual consumers can hence choose to make a tangible contribution to global justice and environmental sustainability by making less intensive food choices as well as reducing the amount of food they waste. Governments need to get much more serious about reflecting the environmental and social costs of different kinds of food through fiscal reforms and other nudges to consumers.

---

<sup>32</sup> ActionAid, *Meals per Gallon: The impact of industrial biofuels on people and global hunger*, 2010

<sup>33</sup> Nuffield Council on Bioethics, *Biofuels: Ethical Issues*, 2011. Available at: <http://www.nuffieldbioethics.org/biofuels-0>

<sup>34</sup> Pimentel D., *Livestock Production: Energy Inputs and the Environment*, 1997; quoted at <http://www.news.cornell.edu/releases/Aug97/livestock.hrs.html>

<sup>35</sup> FAO, *Livestock’s Long Shadow: Environmental Issues and Options*, 2006

<sup>36</sup> Brown L., *World on the Edge: How to Prevent Environmental and Economic Collapse*, Earthscan, 2011

<sup>37</sup> OECD, *Obesity and the Economics of Prevention: Fit not Fat*, 2010

## **Global population levels**

The issue of global population levels is one of the most charged and controversial in the global food security agenda.

Much of the controversy on this issue stems from historical baggage dating from the 1970s. In particular, Paul Ehrlich's book *The Population Explosion* set out an alarmist story of exponential growth in human numbers and contributed to a narrative that seemed to put the blame for environmental degradation at the door of poor people, because of rates of population growth in developing countries – rather than with affluent consumers, with their far higher per capita consumption levels.

In fact, the global picture on population today is far from the Malthusian nightmare of popular imagination. Global population growth rates peaked in 1963, at 2.19 per cent a year, and have now almost halved, to 1.15 per cent a year. If, as projected, growth rates continue to decline, then the world's population would in fact be on course to stabilize within the next century or two.

But the issue of population does still matter for development.

Remaining population growth will be heavily concentrated in developing countries, many of them net food importers with poor resource endowments, where resource scarcity trends are likely to have a powerful impact. Given higher population growth rates, these countries will either have more to do to improve crop yield productivity, or to import more food. More broadly, Jeffrey Sachs argues that population growth matters for development because:

- Families cannot surmount extreme poverty without a decline in the fertility rate;
- A country with rapid population growth faces intense fiscal challenges just to keep up with the population, not to mention achieve economic progress;
- The ecological and (closely related) income consequences of rapid population growth are devastating; and
- High rates of population growth do present threats to the rest of the world by raising pressures for mass migration and local conflict.<sup>38</sup>

Crucially, though, there is considerable uncertainty in population growth projections because so much depends on how future policies affect fertility rates. There is much more uncertainty over future world population levels than the oft-cited figure of around 9 billion people by 2050 might suggest: while the UN's latest medium projection for 2050 is still 9 billion, its low variant is below 8 billion, while its high variant for 2050 is around 10.5 billion.<sup>39</sup>

These levels of uncertainty make a huge difference to individual countries, where population will be a major determinant of the scale of the food security challenge from now to 2050 (see Box 5).

---

<sup>38</sup> Sachs J., *Common Wealth: Economics for a Crowded Planet*, Penguin, 2008

<sup>39</sup> UN Department of Economic and Social Affairs, *World Population Prospects: the 2010 Revision*, at <http://www.un.org/esa/population/unpop.htm>

### Box 5: How population changes the scale of the challenge: the case of Ethiopia

In Ethiopia, the food security challenge is already considerable, given the high population density in the country's highlands, flat-lining crop yields, relatively insecure land tenure, and poor employment opportunities outside agriculture, coupled with Ethiopia's status as a landlocked net food importer.

While all of these factors could improve or worsen substantially in the decades ahead, it is the question of future population growth that may make most difference. In 2005, Ethiopia's population was 75 million, with a population growth rate of 2.61 per cent over the preceding five years – a big decline from its peak of 3.31 per cent between 1990 and 1995, but still high in global terms.

Looking ahead to 2050, the UN forecasts a medium variant scenario of 174m people in Ethiopia, even assuming a population growth rate that falls to 1.12 per cent between 2045 and 2050. And given a *high* variant scenario, Ethiopia's population rises to 196m people in 2050.

But with a *low* variant scenario, on the other hand, a population of 153m people in 2050 is still a major increase on present levels, but a much easier food security challenge than would otherwise be the case.

So there is a compelling development case for supporting programmes to bring down high rates of population growth. Crucially, though, such programmes must be based on the principle of ensuring that women have the power to make their own family planning choices – a task that involves not only availability of contraception and health system capacity, but also a broader agenda of women's empowerment and (especially) girls' education.

## 4 MAKING IT HAPPEN

This paper has set out a framework for action on access to food and for increasing the resilience of the global food system. But a critical question remains: how will all this be achieved in practice? This final section discusses two aspects of this question: first, what kinds of multilateral reform may be needed to make international institutions more effective at dealing with issues of food justice, and second, where the key political opportunities lie for making progress.

### **Towards a multilateral system that can deliver**

Before considering what kinds of multilateral reform on food security may be needed, it is worth pausing to consider what roles need to be discharged at multilateral level – rather than being left to national governments or indeed to sub-national governance institutions, communities, or households.

Four key roles for multilateralism on food security and the wider task of managing the challenges of a resource-constrained world are:

- Agenda setting, undertaking research, setting technical standards and facilitating cooperation: for example, the UN's role in promoting the Millennium Development Goals, or its food agencies' work in producing the annual State of Food Insecurity report.
- Decision making, bargaining and rule setting: the multilateral system's role in providing all kinds of forums in which governments come together to negotiate agreements on issues like development financing, climate targets, trade policy and others.
- Enforcing rules and policing agreements: operating follow-up mechanisms to check whether member states have delivered on their pledges, and in some cases running systems for enforcing compliance through binding mechanisms
- Direct implementation: action 'on the ground' by international agencies in areas from humanitarian assistance to long-term development programmes, and from spending money to building capacity and providing technical assistance.

In each of these areas, however, there is a need for significant reform of the multilateral system as it is configured today.

**Agenda setting and research:** The key need is for better integration across different policy agendas. At present, the multilateral system is fragmented into numerous single-issue 'silos': one set of agencies deals with food and agriculture, another with energy, yet another with climate change, and so on.

In reality, though, these issues overlap closely with each other. Food and energy policies are linked through biofuels and the energy intensity of current food production. Agriculture fundamentally depends on the availability of water. Access to water often depends on the availability of energy, for instance to power groundwater pumps. Climate change will affect all of these areas.

Yet despite the crucial importance of these kinds of links, the issue of institutional silos means that they are often overlooked. To take an example, consider the issue of land. The International Energy Agency wants to see global biofuel production massively scaled up, to reduce reliance on OPEC oil – which would require large areas of land. Meanwhile, the UN climate process is about to scale up incentives for avoided deforestation (and potentially for afforestation too) – which will be another major source of demand for land. At the same time, the Food and Agriculture Organization and other agencies are focusing on the need to produce more food – which is also likely to need more land, in addition to improved productivity per hectare. Yet no agency has the role of 'connecting the dots' between all these potentially competing demands for land – leaving the multilateral



system at risk of promoting multiple agendas that are actually in competition with one another.

These issues of 'system coherence' are legion, and numerous solutions have been proposed. Often, they focus on 'redrawing the organogram' in some way, for instance by creating new agencies, or closing old ones down, or merging existing ones, or creating joint units and so on. However, long experience shows that these kinds of fix are often difficult to agree and that they under-deliver even when they are agreed (the UN Commission for Sustainable Development, intended to join up the dots across development, environment and other areas, has come to be widely seen as a toothless talking shop).

Instead, it may make more sense to see the challenge as improving policy integration across the institutional architecture that we already have through creating more incentives for agencies to work with each other, generating genuine shared awareness, and over time creating a culture of 'joint-ness'. One way of doing this in practice would be for governments to use the G20 or the Rio 2012 summit to commission a range of international agencies to work together to produce a World Resources Outlook that would look across food, agriculture, energy, land, water and climate change. This proposal, endorsed by the World Bank in its 2011 World Development Report, could potentially achieve a double win: providing policy makers with an integrated overview that they currently lack, while also forcing diverse international agencies to collaborate in producing a shared output.

**Decision making, bargaining and rule setting:** It is clear there are numerous areas where collective action between governments is needed. A global deal to stabilize the climate is a prerequisite for global food security. A pro-development trade round is needed, as is action to increase the resilience of the trade system during food price shocks. Much more development finance is needed, both for agriculture and for the resilience-oriented areas discussed in Section 2 of this paper. Governments will need to cooperate in order to take forward systems of regional or global food reserves.

But although the need for collective action is clear, the reality is that current multilateral institutions are badly configured to support and facilitate it. Decision-making bodies that are only focused on one issue struggle to take account of the big picture, often because they only engage one kind of policy maker (i.e. environment ministers to go environment summits, trade ministers to trade summits, agriculture ministers to agricultural summits and so on). As a result, a trend in recent years has been to hand over many 'difficult issues' to the level of finance ministers and heads of government, especially through the G8 and more recently the G20. The multilateral system is particularly weak in the area of crisis management, where it is often unclear which decision-making body is supposed to lead: this was a major issue when collective action was needed in 2008 to halt the spate of food export bans, for example.

To be sure, the lack of multilateral 'bandwidth' for dealing with complex global issues like food security, climate change and resource scarcity is not the only reason why not enough progress is being made on these agendas. The lack of political space for radical solutions, the dearth of high-level leadership, and in many cases the lack of fully worked-through policy options and solutions are all also big stumbling blocks. But even if these conditions were in place, the lack of multilateral bandwidth would still remain as a key obstacle.

As with agenda-setting and research, the underlying need is for much more shared awareness and interoperability – something that will not be achieved overnight. Much of the progress that is needed will have to come initially through national governments making their own policy making more coherent, given that the multilateral system generally reflects what happens in national capitals.

Ultimately, some kind of legitimate decision-making body on international economic issues is needed, comparable to the UN Security Council in the arena of conflict. The G20 lacks the legitimacy to play this role, while the UN Economic and Social Council has never become the forum it was intended to be. But in the more immediate term, there is – again – a real risk that valuable political energy could be wasted trying to devise a rational international organogram, without pausing to ask what collective action needs to *do*.

For now, governments should work hard to make the UN Committee on World Food Security (CFS) an effective decision-making body on food and agriculture issues. While some are sceptical about whether the body will be effective – pointing for instance to its large and arguably unwieldy membership – it has recently been reformed, and could potentially emerge as an engine for action. The next step should be for the CFS to focus on brokering action on a small number of specific, concrete areas, and then to follow this up with smaller action teams of governments, international agencies and other actors.

**Enforcing rules and policing agreements:** It is clear that current global arrangements are woefully inadequate. Financial pledges are often made and then not delivered; or it emerges later that the money was never really new and additional in the first place, but was instead no more than a ‘re-announcement’. (This was a problem with many of the national pledges made on agriculture and food security at the 2008 G8 summit in L’Aquila, for instance, and has been a constant problem in discussions about finance for climate adaptation).

Similarly, multilateral agreements on sustainable development and environment issues are plagued by the lack of enforcement mechanisms to police agreements – in stark contrast to the World Trade Organization’s substantial powers to enforce compliance in the trade context.

The problem with these shortfalls on delivery is double-edged: not only are agreed actions not undertaken, but trust and goodwill is also eroded for the future, undermining prospects for collective action when such action is badly needed. As the 2015 Millennium Development Goals deadline approaches, a key demand should be for governments to agree harder-edged policing measures to underpin their pledges and commitments: without this, multilateralism will be constantly undermined.

**Direct implementation:** Many parts of the international system are badly in need of reform to make them more effective. Many individual agencies seriously under-perform: in the food context, the Food and Agriculture Organization is a case in point, where although some parts of the organization are highly effective, the body as a whole is highly bureaucratic and has suffered from weak leadership in recent years. But the primary challenge is, again, that of improving the coherence of the system as a whole, both in specialised areas (such as humanitarian assistance), and on development more broadly.

Admittedly, some modest improvements have been made in recent years. Some reforms were made to humanitarian coordination and financing at the time of the 2005 UN World Summit; more recently, the ‘One UN’ approach has made some small steps towards improving the coherence of UN agencies on the ground. But the real outstanding issue is the coherence of the *whole* international system, not just the UN: international financial institutions like the World Bank and the IMF, regional development banks, and others all also need to be part of the solution.

A key area where progress could potentially be made – or where, conversely, problems of incoherence could be about to get much worse – is in the major institutional innovation currently underway on climate change. Climate finance, both for reducing emissions and for adaptation, is about to rise significantly. This will be especially important for food security and agriculture, given their centrality to adaptation, as well as agriculture’s own substantial emissions. It is hugely important that as climate finance is scaled up, it is joined up effectively with existing development assistance, and based on principles of ‘good donorship’ – something that will not happen without a concerted push.

## **Mapping the political opportunities**

The agenda set out in previous sections and in the discussion of international institutions immediately above is both wide-ranging and ambitious, and begs the question: can it be done?

A quick glance at the current political context for food security, resource scarcity and climate change is not encouraging. As just noted, current discussions are bedevilled by the legacy of a long history of broken promises, lack of accountability and limited follow-up. Key intergovernmental processes, such as the Doha Round and talks on a successor

climate agreement to Kyoto, look close to being 'multilateral zombies' (staggering on, never quite dying). The 20 years since the Rio Earth Summit have seen a failure to integrate development and environment, a problem that will challenge food security ever more in the future. Even as the need for collective action between governments becomes steadily more urgent, the prospects of it happening appear to be becoming more limited.

However, even in this often discouraging context, a number of important political opportunities over the next four years can already be identified:

- First, it bears repeating that by no means all of the key areas for progress depend on international cooperation. Indeed, much of the action will take place within individual developing countries – whether in scaling up agriculture, in expanding access to jobs, social protection or smallholder farm support, or in fighting for fair shares for all to natural resources like land, water, fisheries and forests. Civil society organizations have a crucial role to play in articulating the needs of poor people in these national political agendas, as well as in marshalling international support from both donors and global campaigning organizations.
- Second, 2011's G20 provides a major window of opportunity. The French government has made food security one of the key themes of its Presidency, and includes both export bans and financial speculation as core areas in which it wants to make progress. While it is likely to face challenges in getting both the USA and emerging economies on board with these agendas, there are nonetheless areas where progress is possible – for example, in improving international mechanisms for crisis management.
- Third, prospects for emerging economy leadership on food security and broader sustainable development issues may be enhanced by the number of summit processes that they will be chairing over the next 12 months. South Africa will chair the December 2011 climate summit, and President Zuma is also co-chair of the current UN High-level Panel on Global Sustainability; Brazil is hosting the Rio +20 Conference on Sustainable Development in June 2012; and Mexico will chair the G20 throughout 2012. If these governments are able to maximise coordination across these summits, this could further enhance their effectiveness.
- The 2015 deadline for the Millennium Development Goals provides a major opportunity to push donor countries to deliver on their promises, at the same time as renewing and refreshing the international development agenda. This will provide an especially important opportunity to address some of the priorities that were badly taken account of (or overlooked altogether) in the MDGs – including agriculture, employment, social protection, and population. At the same time, it is also important that the post-2015 development agenda puts emphasis on middle- as well as low-income countries – given that recent research suggests that three-quarters of poor people live in middle-income countries, and the fact that emerging economies are increasingly the development models that low-income countries aspire to follow.

However, although these windows of opportunity do offer some potential for progress, they do not alter the basic problem that so far, the political space and leadership needed for the agenda set out in this paper are not yet open. What, if anything, will change this central obstacle?

The default answer to this question is that shocks and stresses will act as game-changers. Without a major global push on food security and sustainable development more broadly, volatility – whether on food prices, oil prices, climate impacts or other areas – will steadily increase. This will eventually force policy makers to engage more seriously, and in the process call into existence the political space and leadership that is currently lacking.

But there is no guarantee that the policies adopted in such conditions would be progressive or pro-poor. On the contrary, as the 2008 food price spike showed, shocks can just as easily lead to outbreaks of zero-sum behaviour among states, with the impacts on poor people barely considered.

Part of the political task for organizations like Oxfam, then, is to anticipate and be ready for the windows of political opportunity that come immediately after shocks, when political agendas shift and there is suddenly willingness among policy makers and publics to 'think the unthinkable', even if only for a short time. This requires a major investment in advance planning – both on what kinds of policies should be advocated when opportunities emerge, and on the kinds of coalitions that will be needed to make them happen.

But at the same time, advocates of international development cannot afford simply to wait for shocks and stresses to open up political space – because every shock and every stress will hit poor people hardest. In policy terms, as previous sections have argued, this implies a need to invest in both resilience *and* long term solutions on food security and resource scarcity.

But in political terms, it implies a still larger task: that of persuading publics all over the world of the moral imperative to protect people living in poverty at exactly the moments when these publics' concerns will be to protect their own families, communities and nations.

## CONCLUSION

Food has always been at the same time a basic human need, and a central reference point in family life, society and culture. Now, with humanity facing a major period of global transition as it confronts climate change, economic instability and ecological limits, food will be at the very front line of the process of change already unfolding.

There is every possibility that this process can be brought to a successful conclusion, given political space, supportive leadership, governance systems that work and visionary ideas. By 2050, given these conditions and a little luck, the world will be well on the way to climate stabilization, with the low carbon economy a concrete reality at every turn. It will be producing its food in radically different ways, with agriculture an engine of ecological sustainability and restoration rather than being in conflict with them. And extreme poverty may be no more than a distant, bad memory.

But if the next few decades do lead to such a positive outcome, the process of getting there is likely to be unstable, uncertain and uncomfortable. Poor people and poor countries are likely to be most exposed to the shocks and stresses of a world in transition – often, through direct impacts on their food security.

So the challenge ahead is twofold. First, to ensure that as the world starts to live within its ecological means, enough environmental ‘space’ is safeguarded for the needs of the poor – not only through access to food, but also access to land, water, energy, and other essential natural resources and ecosystem services.

Second, to make sure that poor people are protected as the world makes its way to this new state – through real investment in resilience, both within countries and internationally.

Neither of these challenges will be easy; both will stretch human ingenuity to its limit. But above all, this is a moral test: one that asks, at a time when the extent of global interdependence has never been clearer, whether humanity is ready to live up to its highest ideas about who we are.

© Oxfam International June 2011

This paper was written by Alex Evans, Center on International Cooperation, New York University.

This publication is copyright but the text may be used free of charge for the purposes of advocacy, campaigning, education, and research, provided that the source is acknowledged in full. The copyright holder requests that all such use be registered with them for impact assessment purposes. For copying in any other circumstances, or for re-use in other publications, or for translation or adaptation, permission must be secured and a fee may be charged. E-mail [publish@oxfam.org.uk](mailto:publish@oxfam.org.uk).

For further information on the issues raised in this paper please e-mail [advocacy@oxfaminternational.org](mailto:advocacy@oxfaminternational.org).

The information in this publication is correct at the time of going to press.

[www.oxfam.org](http://www.oxfam.org)

Published by Oxfam GB for Oxfam International under ISBN 978-1-84814-879-6 in June 2011. Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK.

Oxfam is an international confederation of fifteen organizations working together in 98 countries to find lasting solutions to poverty and injustice:

Oxfam America ([www.oxfamamerica.org](http://www.oxfamamerica.org)),  
Oxfam Australia ([www.oxfam.org.au](http://www.oxfam.org.au)),  
Oxfam-in-Belgium ([www.oxfamsol.be](http://www.oxfamsol.be)),  
Oxfam Canada ([www.oxfam.ca](http://www.oxfam.ca)),  
Oxfam France - Agir ici ([www.oxfamfrance.org](http://www.oxfamfrance.org)),  
Oxfam Germany ([www.oxfam.de](http://www.oxfam.de)),  
Oxfam GB ([www.oxfam.org.uk](http://www.oxfam.org.uk)),  
Oxfam Hong Kong ([www.oxfam.org.hk](http://www.oxfam.org.hk)),  
Oxfam India ([www.oxfamindia.org](http://www.oxfamindia.org)),  
Intermón Oxfam ([www.intermonoxfam.org](http://www.intermonoxfam.org)),  
Oxfam Ireland ([www.oxfamireland.org](http://www.oxfamireland.org)),  
Oxfam Mexico ([www.oxfammexico.org](http://www.oxfammexico.org)),  
Oxfam New Zealand ([www.oxfam.org.nz](http://www.oxfam.org.nz)),  
Oxfam Novib ([www.oxfamnovib.nl](http://www.oxfamnovib.nl)),  
Oxfam Quebec ([www.oxfam.qc.ca](http://www.oxfam.qc.ca))

The following organizations are currently observer members of Oxfam International, working towards full affiliation:

Oxfam Japan ([www.oxfam.jp](http://www.oxfam.jp))  
Oxfam Italy ([www.oxfamitalia.org](http://www.oxfamitalia.org))

Please write to any of the agencies for further information, or visit [www.oxfam.org](http://www.oxfam.org).  
Email: [advocacy@oxfaminternational.org](mailto:advocacy@oxfaminternational.org)

[www.oxfam.org/grow](http://www.oxfam.org/grow)

**GRÖW**  
FOOD. LIFE. PLANET.



**Oxfam**