CAFOD
A better world needs all of us **Policy Briefing**

Iran, El Niño and the looming global food crisis: The case for agroecology as a systemic response

Summary

The global food system is in an acute crisis. A perfect storm of the Iran conflict, a predicted record-breaking El Niño year, and a fall in development assistance means 2026-7 could see millions more go hungry.

The problem is systemic and requires long-term solutions. As climate change continues, these crises are only going to get more severe. A food system that is dependent on fossil fuel-based fertilisers and chemical inputs is vulnerable to collapse.

The UK government must urgently boost support for high resilience agroecological approaches. This can be done through UK aid, climate, and agriculture spending, as well as through utilising the UK's seat at powerful international bodies such as the World Bank.

Introduction:

A crisis is brewing in the global food system. Aid agencies, international organisations and food security experts are warning that 2026–27 could see one of the most severe global food system shocks in recent years, with the World Food Programme warning that food insecurity could rise significantly.

But this is no one-off event that can be managed away. This year's polycrisis is just yet another step towards the long-term collapse of an unsustainable global food system that is no longer fit for purpose.

This is why there is an urgent need to rethink the way in which we produce, distribute, and consume food to create a system that can work in this more dangerous, climate-change impacted world.

Agroecology must be a big part of any such solution. A growing body of evidence suggests that low-input, farmer-centric approaches can reduce dependence on global supply chains, protect the environment, while maintaining crop yields and improving community resilience to crises.

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The Iran crisis is a food crisis

Months on from the outbreak of war between the US and Iran, the Strait of Hormuz remains a key bottleneck for global supplies of fertiliser and the raw materials needed to produce it. Between 20 and 30% of globally traded fertilisers, half of global sulphur exports, and 20% of liquefied natural gas exports normally transit the Strait.[1] Fuel itself is also needed in irrigation systems and for the operation of farming equipment, which means that high prices caused by the crisis further raise food production costs for farmers.

At the outset of the Hormuz crisis, the World Food Programme (WFP) estimated that an additional 45 million people could be pushed into food insecurity by the crisis in the Middle East.[2] It has since said that "this scenario is now unfolding", with the fallout already having deep and long-lasting effects in some of the world's most vulnerable countries.[3]

The impact is yet to be fully felt. Despite the fact that global urea prices have now dropped back to near pre-crisis levels, the damage has already been done, with impacts now locked in for this year's planting season. Farmers facing urea price spikes of 85% this spring,[4] made decisions accordingly, including abruptly cutting fertiliser application or reducing planting without the time or support needed to adapt their farming systems. For example, in Ethiopia, 80% of the country's cereals are sown in May-June right just as urea prices peaked as a result of the Hormuz crisis.[5] This means that currently lower prices will have very little mitigating impact as the high costs are already priced in.

The UN Food and Agriculture Organization (FAO) said back in April that any crisis over 40 days long already will lead to serious impacts until the end of 2027.[6] Months on, it is clear that we are very much living in this scenario.

There is an urgent need to rethink a food system that is so dependent on supplies of fertiliser and other environmentally damaging inputs that can be so easily disrupted.

Predictions of most severe El Niño on record

This crisis is further compounded by the El Niño climatic phenomenon. El Niño is a periodic warming of the tropical Pacific that can profoundly disrupt rainfall and temperatures across the globe. This year the phenomenon is expected to be the most severe in decades, with the WFP warning that it could push at least 49 million additional people into acute food insecurity by the end of 2027.[7]

While forecasting the exact impacts is difficult, reductions in rainfall are expected across swathes of sub-Saharan Africa, including in countries like Sudan which is already wracked by war and humanitarian crisis. In these places, early action and preparedness to boost resilience is vital to avert catastrophe. The more prepared and self-sufficient communities are, the less pressure there will be on emergency humanitarian supplies when the crisis hits its peak.

Climate change means that strong El Niño events are going to become ever more common. A recent study suggested that El Niño events have become 36% more intense over the past four decades.[8]

This is not a one-off crisis

The Hormuz crisis is not the first geopolitical shock to expose the vulnerability of the global food system. We are now living through the fifth major food crisis in two decades. This year it is El Niño and the war in Iran, before that it was the Ukraine war, and before that Covid, the Arab Spring, and the 2007-8 food price spike.

Russia's invasion of Ukraine in 2022 disrupted supplies from two countries that together accounted for almost 30% of global wheat exports. Within weeks, global wheat prices had risen by around 50%, while the FAO Food Price Index reached its highest level on record.[9]

The Covid pandemic disrupted supply chains and livelihoods worldwide, hiking global food prices by 14%[10] and sharply increasing food insecurity, particularly among poorer households. In both 2007-8 and 2010-11, a combination of factors sent global food prices soaring, triggering food riots in dozens of countries and contributing to the Arab Spring.

This should tell us that a short-term, managerial response to this crisis is insufficient. The system itself is broken and fundamental changes to the fragile, global-supply chain dependent food system are warranted to ameliorate ever more frequent shocks.

What is agroecology

Agroecology is a set of approaches to agriculture that work with both nature and communities rather than against them. It promotes the use of low-input, sustainable practices such as composting, intercropping, and seed sharing, to protect both the environment and the communities that produce food.

But it is so much more than just a collection of sustainable farming practices. It is a movement. Fundamentally, agroecology is about moving the locus of power over our food from a handful of multinationals to food producers and consumers in a way that protects the environment.

Agroecology is increasingly recognised as a significant and necessary part of the change needed to render the global food system both environmentally sustainable and resilient to our increasingly climate change impacted world. This is reflected in the fact that many major international food and agriculture organisations such as the FAO[11] and international policy processes such as the Convention for Biological Diversity (CBD),[12] recognise the importance of agroecology.

What agroecology needs most is scaling up. While major donors, governments and international institutions continue to accept continued dependence on fossil fuels or false solutions that preserve the weaknesses of the current system, agroecology risks being crowded out as a scalable systemic solution to the challenges the food system faces.

This transition is urgent. The current system is one in which just four firms control half of the global commercial seed and pesticide markets[13] and one in which global agrifood systems account for almost a third of global greenhouse gas emissions.[14] But it is also one in which small-scale, peasant or family farms feed the vast majority of the world – by some estimates up to 70-80%.[15] This shows how realistic and scalable a global food system based on these producers is – after all, we are already most of the way there in some ways.

How agroecology boosts resilience

1. **Fewer inputs, fewer dependencies**

   Agroecology can reduce farmers' exposure to supply shocks by reducing the volume of purchased inputs needed. Low-input practices such as crop rotation, composting, and intercropping can replace much synthetic fertiliser use without sacrificing production. Even partial adoption of these practices can have huge benefits. For example, a recent study found that rotating maize or wheat with legumes reduced nitrogen fertiliser requirements by 41-46% while maintaining high yields.[16]

2. **More diversity, better risk management**

   Agroecology can also make food production more resilient by spreading risk across different crops, varieties and farming activities. In a diverse system, drought, flooding, pests or extreme heat are less likely to affect every crop in the same way or at the same time. Just as in finance, diversification spreads risk. Monocropping risks total and catastrophic loss. Agroecology also boosts soil and ecosystem resilience, helping crops withstand droughts and floods.

3. **Better social cohesion and knowledge**

   Resilience also depends on whether farmers have the knowledge and freedom to adapt when conditions change. Agroecology takes an approach that combines scientific and local knowledge, farmer-to-farmer learning and locally adapted solutions rather than prescribing one-size fits all approaches. This is not a soft, intangible benefit. Agroecological education leads directly to tangible and quantifiable benefits. For example, one review found that farmer-field schools teaching low-input techniques led to a 20% increase in farmer income and a 13% increase in yields.[17] Agroecology projects also increase community cohesion and cooperation, leading to greater resilience during crises and reduced conflict.

Case study: Bangladesh

A groundbreaking study by CAFOD and its local partners in Bangladesh has shown that farmers who practice agroecology suffered only half the damage from a major cyclone compared to other farmers. Agroecological approaches meant that farmers were able to adapt and recover faster. They were also able to rely on savings rather than debt when the crisis hit.[18]

Case study: South Sudan

South Sudan faces multiple crises. The country is wracked by internal conflict and recurrent floods and droughts. CAFOD has supported local food producers in the Malakal region to use agroecological approaches such as so-called "floating gardens" (crops planted on rafts that rise and fall with floodwater) to maintain food production during climatic shocks.

Policy recommendations

1. **Put agroecology at the heart of the FCDO's approach to agricultural development, food security and climate finance.**

   In an era where aid budgets are being cut, it is imperative for the UK to find cross-cutting, cost-effective solutions that can provide genuine benefits in terms of climate change adaptation, poverty reduction, disaster resilience, and food security. Investing in agroecological approaches would achieve all of this at once. The UK should treat agroecology not simply as a small-scale experiment, but as a core food security and risk-reduction strategy in an era of increasing climate, conflict and price shocks.

2. **Use the UK's seat at the table in multilateral institutions to promote high-resilience approaches, not dependence on fragile global supply chains.**

   The UK should use its leading role in multilateral financial institutions such as the World Bank to steer more finance towards diversified, low-input, locally adapted food systems and away from investments that deepen dependence on fossil-fuel-intensive fertilisers, monocultures and fragile supply chains. It should also challenge lending conditionalities and policy reforms that undermine farmers' rights to preserve traditional seeds or favour dependence on commercial agricultural inputs over locally controlled alternatives.

3. **Mainstream long-term resilience work into emergency response**

   Immediate measures such as food assistance and anticipatory action will remain essential during the current El Niño and Hormuz shocks. But crisis spending should come in tandem with measures that reduce the need for humanitarian response. This may include promotion of locally adapted, non-proprietary seeds, crop diversification, soil restoration, or support for local producer networks. Ensuring local ownership of the process will also enable local actors to better link short-term humanitarian assistance to the longer term needs of beneficiaries on the ground.

"The earth is essentially a shared inheritance, whose fruits are meant to benefit everyone."

Pope Francis, Laudato Si

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