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World food supplies at risk as climate change threatens international trade, warn experts

Chatham House report warns 'chokepoints' in the supply of food, such as the Suez Canal, the US rail network and the Turkish Straits, could become 'epicentres of systemic disruption'

Ian Johnston Environment Correspondent | @montaukian | a day ago | 79 comments



Visual reminders of the canal's strategic importance to Egypt are not in short supply. One bank has been taken up with a large sign saying "Welcome to Egypt" (Reuters) Reuters

The world's food supplies are in danger as climate change and the increasing reliance on global trade threaten to create shortages and sudden, dramatic increases in prices, according to a new report by the leading think tank Chatham House.

The report's authors warned of a "growing risk ... to human security" with the potential for "systemic disruption" and so-called Black Swan events – major unexpected changes.

They called for an international "emergency response mechanism" to be created to help deal with crises as they arise and an increase in emergency food stocks.

Urgent action should also be taken to improve "weak and ageing" infrastructure in major crop-producing regions such as Russia, Ukraine and the US, the report added.

Global warming is expected to produce more violent storms and increased flooding in some areas, which could damage roads, railways and ports. And, as the temperature and rainfall change, this could also affect crop yields.

The report, called *Chokepoints and Vulnerabilities in Global Food Trade*, said international trade had enabled certain areas to specialise in certain types of food production, which had maximised productivity and reduced prices, but warned this food system was now "coming under increasing strain".

"While market forces have largely adjusted adequately until now, the capacity of international trade to correct for supply disruptions in a climate-changed world is less certain," the report said.

"Climate change will suppress growth in crop yields and make harvests more variable.

"It will threaten the reliability and integrity of the infrastructure on which international trade depends.

"In addition to more regular and more severe weather-induced damage to roads, railways, ports and inland waterways, climate change will have a multiplying effect on security and political hazards affecting the infrastructural backbone of international trade."

Experts highlighted 14 chokepoints around the world – such as the Panama and Suez canals, the US rail network and its inland waterways, Brazil's roads and the Turkish Straits – that are vitally important to the continued flow of food.

Just three regions, the US, Brazil and the Black Sea area, account for 53 per cent of global exports of wheat, rice, maize and soybean. The first three crops make up 60 per cent of the food we eat, while soybean is 65 per cent of animals' protein feed.

The report said the chokepoints were the "potential epicentres of systemic disruption".

"A serious interruption at one or more of these chokepoints could conceivably lead to supply shortfalls and price spikes, with systemic consequences that could reach beyond food markets," it said.

"In an increasingly unpredictable world, ensuring the resilience of populations and critical infrastructure to compound and cascading supply chain disruptions, and to 'black swan' events, will become increasingly vital yet ever more challenging.

"Without significant investment in new approaches ... food trade chokepoints will pose a material and growing risk to systemic stability and to human security, chiefly in the world's most food-insecure and politically volatile regions."

The report found 10 per cent of global trade in cereals, soybeans and fertilisers passed through a maritime chokepoint for which there was "no viable alternative".

"Over the past 15 years, all but one of the 14 critical chokepoints has been subject to closure or to restrictions on traffic," it added.

The rapid melting of ice the Arctic is opening up new shipping routes between the northern Atlantic and Pacific but the authors said this was "unlikely to relieve pressure on existing shipping routes before the second half of the century".

One of the authors, Laura Wellesley, said the oil industry had been "mapping this sort of risk for years but it has been woefully overlooked in discussions of food security".

"Past events, including floods in Brazil and the Southern US, and the export bans on wheat from the Black Sea countries that contributed in part to the Arab Spring, give us a flavour of the sort of disruptions that can occur when chokepoints are closed," she said.

She said governments had a tendency to make decisions in their own "short-term, national interests in mind".

But these could "exacerbate the global problem, and undermine systemic resilience".

"We need a new, collaborative approach to mapping and mitigating the growing threat we all face," Ms Wellesley said.

Robin Willoughby, Oxfam head of food and climate policy and campaigns, said climate change was "the single greatest threat to our chances of winning the fight against hunger".

And he added: "The global food system is woefully unprepared to cope with its savage impacts.

"Small-scale farmers and poor urban consumers are on the front lines of increased weather and food price volatility.

"They need major new support to adapt to the changing climate – from improved irrigation schemes, crop insurance and agricultural research and development to stronger social protection.

"As the Paris Agreement failed to provide these new resources, responsible leaders in rich and poor countries alike should start to plug the gap immediately."

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aplonia 8 hours ago

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The Pragmatist 9 hours ago

Flatfred - so CO2 concentrations increase and as a result plants have a more favourable environment and proliferate.

They use up some of the increase in CO2 but not enough to stop it increasing - quite a simple concept but clearly beyond you..... but as Hitchens says, don't argue with an idiot, he will bring you down to his level and beat you with logic

Reply-1 reply 0 likes

The Pragmatist 9 hours ago

Actually the quote is incorrect - as a correction - it was Mark Twain - and the quote is "and beat you with experience" - still the point is the same.

Reply: 0 likes

Jeradon 16 hours ago

The problem comes from the organisation of international trade. What transits on bulk cargoes are the cash crops (rice, wheat, soy, chocolate) used and transformed by factories in the developed world. Civil wars, droughts or choke points create penalty. Third world countries rely themselves on localities agriculture (except when most of the land is used on cash crops such as palm oil). But that's only part of the problem.

Farmers in the UK have discovered warm winters and cold springs/summer which do reduce yields or even ruin the crop. Those problems come from the weakening of the jet streams i.e. polar air moves south with greater ease, and tropical air can travel up north. That's going to worsen, so...Unless they invest in hydroponic farms you may discover price hikes for UK crops too.

Reply-1 reply +1 likes

wildworld 12 hours ago

Britain set for a bumper crop of strawberries this year - The Telegraph

www.telegraph.co.uk/Lifestyle/Foodanddrink/Foodanddrinknews

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www.dailymail.co.uk/news/article_.../Cauliflowers-galore-bumper-crop-hits-shelves.html

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the average food index price is at an 8 year low. Im guessing benign weather is responsible for the bumper crops we are seeing world- wide.

Reply: -1 likes

Trustnothingbutfacts 16 hours ago

Wasn't Trump the only one who said he was going to fix infrastructure problems in the USA as Obama never did and all Clinton could do was attack Trump. So Trump will set the example here and once more America will be a bread basket for the world as its long been. However other countries need to do their bit like keeping it in their pants and stop producing more kids than they can afford or feed. That's where the real problem lies, not being self sufficient and balancing population with food supply.

Reply: 0 likes

lzzyme 16 hours ago

Lol, any more bombastic disaste headlines Indy? Nobody believes you and nobody cares. Tell the third world to have less children they can't feed. The real problem is not global warming but overpopulation which, btw, does not happen in the West.

Reply: +1 likes

alleypalley0115 17 hours ago

That's the problem with technology, the more advanced, the smaller the parts, the easier it breaks. Apply the same thing to human culture. Our entire planetary economy is dependent on boxes filled with silicon chips that break if you drop them or get them wet and we built all our cities on rivers and oceans set to rise. Millions of people live in the Netherlands or New Orleans, places that without human technology; levees and dams, would be underwater. Swathes of land that would have been feral is now the food supply for millions. We evolved, matured and live comfortably with necks just above the water, certain there would be no rise.

Reply: +1 likes

madranon 18 hours ago

Bit of advice here, don't churn out sprogs if you don't have a clue how to feed them.

The less mouths there are to feed the easier it is to feed them.

Anyone who doesn't understand that deserves all they get.

Reply-3 replies +2 likes

flatfred 16 hours ago

Don't churn out American sprogs, they will be responsible for 12 times as much co2 as an African.

Reply-2 replies 0 likes

Trustnothingbutfacts 16 hours ago

Yep, remove all that CO2 and we'll all starve as plants wont grow.

Reply: +1 likes

wildworld 12 hours ago

and the deserts will green so the Africans will be happy.

Reply: 0 likes

thepainter 18 hours ago

It is a bit like the civilisations of the past that disintegrated,except now it is on a world scale. . .

Reply: +2 likes

PG 20 hours ago

All the big mouthed politicians who acclaimed the Paris agreement , have said nothing about the pollution from the marine transport sector which pollutes more than all land vehicles , and this because it will effect world trade , and governments and big business budgets . The Paris agreement is the biggest scam yet , and has not touched the real polluters .

Reply-5 replies 0 likes

EdZuidervijk 19 hours ago

The largest single user of energy, i.p. coal, is the production of cement which accounts for 10-15 percent of all energy use. I don't think that usage will or can be reduced in any meaningful way. That's why it's never mentioned either.

Reply-3 replies +1 likes

flatfred 16 hours ago

Yet more bullcrap from edzudwank.

Reply: -2 likes

flatfred 13 hours ago

What does " the largest single user of energy, i.p. coal is the production of cement" mean ? Any ideas ?

Reply: +1 likes

wildworld 12 hours ago

"What does " the largest single user of energy, i.p. coal is the production of cement" mean ? Any ideas ?"

Under every turbine is a 1000 tons of cement . Guess where the energy to make this comes from .

Reply: -1 likes

Tiny Toy 17 hours ago

Sea freight has done arguably more than any other sector to experiment with and adopt alternative energy sources. Fuel cells and Flettner sails are rapidly increasing in number.

However even if you run ships on diesel they are still considerably more energy efficient and less polluting on a cargo weight basis than any form of land transport, so it would be advisable to start with the latter.

Reply: +4 likes

PG 20 hours ago

This is so obvious except to world leaders and civil servants . It is not just food that will be affected , it will be water also . Food exporting countries will no longer export when there is a shortage , and seeing many countries reliance on imported food , because of the food sector is aiming for quick profits , and not caring about pollution from transport , there will be not enough food production in developed countries , and all those who fled there will be the first to suffer .

Reply-1 reply +2 likes

alleypalley0115 17 hours ago

Infinitely profit doesn't exist on a finite planet, sadly we are learning this too late.

Reply: +1 likes

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