



appg

for climate & security



On 11 March 2023, the All-Party Parliamentary Group for Climate & Security held its Spring Dinner in the House of Commons. Attended by parliamentarians, military and crown servants, and representatives from think tanks, corporate, and charitable sectors, the event was hosted by the Rt Hon Philip Dunne MP (Chair of the APPG), Professor Tim Clack (Director of CCIP), and Ms Louise Selisny (APPG Secretariat Coordinator). The opening remarks by the two event speakers, Prof Pete Falloon (Met Office) and Professor Tim Benton (Chatham House). These have been lightly edited. The Q&A session and subsequent discussions are not reported as they were subject to the Chatham House Rule.

SPENDING, SUPPLY CHAINS, & SPIKES

CLIMATE CHANGE & FOOD SECURITY

Speakers: Prof Pete Falloon and Prof Tim Benton

Prof Tim Benton centred his talk on food-related cascading risks and their governance. He explained that risk is traditionally seen as the likelihood of an impact arising from a combination of hazard, exposure, and vulnerability. A hazard could be, for example, the occurrence of drought or extreme rainfall in a particular place impacting food production. The exposure could be the reliance on food from this place. The vulnerability could be associated with any factors that might affect the severity of the impact, such as whether there are food stores or produce from alternative places that can be drawn upon by way of response.

This is important globally and also to the UK. Many of the ingredients in the majority of prepared foods (such as vegetable oil, starch, salt, and sugar) consumed in the UK have been imported. For some foods, such as fruit and vegetables, at certain times of the year the UK is almost totally reliant on its imports (over 80% at peak times), and increasingly such produce come from drought-prone countries. The globalised connectivity and complexity of the web of supply are growing over time.

Prof Benton noted that in a globalised world, where climate change is a reality, and where nation states are increasingly acting in more narrow self-interest, cascading risks will increase. He asserted that, in such contexts, hazard, exposure and vulnerability each escalate. Furthermore, in the world of cascading risks, exposure and vulnerability take on quite different properties. Exposure relates to the degree to which you are integrated into the global economy, how reliant you are for cross-border flows of goods or services, and how porous your border might be to things a country may want to defend itself against. Vulnerability then equates to the absence of resilience to the way the risk may be transmitted: are there buffer stocks, a resilient supply infrastructure and diverse supply routes, significant credit and ability to control borders, and what proportion of people may be affected by any impacts, itself often related to inequality? What further hazards arise from environmental change?



It was noted that many cascading risks have a direct impact on national security through increasing the dynamics of resource availability (directly, as in food, or indirectly, as in minerals for fertiliser or resource transition). Volatility may drive local or interstate contestation and conflict, which may further impact on global markets through supply chain disruptions. Here the examples of the Panama Canal and the Red Sea were discussed.

Prof Benton described how risk cascades can have long-term consequences through the example of the food price spike in 2010/11. This episode was explained as being initially triggered by extreme heat in the summer of 2010, impacting in Eastern Europe and particularly in Ukraine and Western Russia. It was extreme in its temperature (over 40°C) and duration (lasting from July to mid-August) and saw wheat yields decline by about one-third. It was described how the thinness of global food markets means that interruptions in supplies can have big effects, because market shortfalls tend to produce market runs, which in turn, amplify the impact and cause policy responses – like export bans – that may relieve some problems locally but amplify the price spike.

In 2010, Russia imposed an export ban in order to ensure Russian grain access. A range of countries responded in similar, and uncoordinated, ways as dictated by national self-interest and domestic politics. Combined, the yield shortfalls amplified by export bans led to a global food commodity price spike and was likely further amplified by financial speculation. This price spike was the largest during the modern era, only recently surpassed by the impacts on global food commodity markets by the illegal invasion of Ukraine – affecting both the same region and seeing similar consequences unfold.

Prof Benton noted that, across the world, the 2010/11 food price spike had impacts, particularly on low-income households in low and middle-income countries. Responses included increasing work to bolster earnings, accessing savings where available, and reducing spending on 'non-essentials'. Rising food prices exacerbated feelings of powerlessness for economically marginalised groups, who identified collusion between powerful incumbents (such as between politicians and 'big business') alongside a disregard for their economic marginalisation.

It was also described how the food price spike also led in many places to a politicised response and to food-related civil protest, including riots, across a range of countries.

In high-income countries, social impacts were more muted. Food inflation increased about fivefold in 2010, and as prices rose, across the board households bought less and traded down in quality, particularly in lower-income groups. Emergency food provision, exemplified by the food-bank charity, the Trussell Trust, saw a 50% increase in demand in 2010/11.

Prof Benton described a number of dynamics of hazard-(geo)political interactions:

- Securitising supply chains through ally-shoring and on-shoring undermining global market functioning, increasing the amplification of price signals following disruption;
- The retreat from rules-based cooperation is similarly undermining as is populism and narrow self-interest which create the conditions for protectionism (e.g. Trump and the China trade war);
- Disruptive events often increase future risks (e.g. holding back sustainability transitions or amplifying environmental impacts);

It was highlighted that a vicious circle exists where actions to manage risks – such as supply chain volatility – can make the overall risks worse. The consequence is that managing adaptation to, and mitigation of, risk is more difficult as the risk grows.

"Rising food prices exacerbated feelings of powerlessness for economically marginalised groups, who identified collusion between powerful incumbents (such as between politicians and 'big business') alongside a disregard for their economic marginalisation."

Cascading risks were described as radically uncertain. The 'black swans' and 'black elephants' were discussed and it was noted that things will happen but it is difficult to predict exactly what, when and how. Adaptation to the risks increasingly requires resilience building.

A number of food security responses were described including:

- Increasing ally shoring and/ or diversification of supplies of critical goods;
- Increasing national self-sufficiency/ on-shoring;
- Building redundancy and storage in the system;
- Taking steps to avoid single points of failure (e.g. securitising supply and modularity of supply);
- Encouraging flexibility, agility, substitutionality and doing-without (at the producer and consumers ends); and
- Staging early intervention in hotspots of risk (e.g. supplying aid or harder power response).

Prof Benton concluded that food securitisation costs but that the costs of climate-related risks are orders of magnitude greater.

As part of this event - please see also see the Met Office specially prepared for the APPG.