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for climate & security

FROM THE GLOBAL TO LOCAL

CLIMATE SECURITY PERSPECTIVES

Speakers: Lieutenant General (ret) Richard Nugee, Mr Christophe Hodder, and Ms Faisa Loyaan

Lieutenant General (ret) Richard Nugee CB CVO CBE

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The effects of climate change will impact our national security. This is certain. There will be some tangential benefits to the UK, a relative 'Goldilocks country'. But the negatives dwarf these.

Climate change is described as one of the most destabilising forces of our time. Climate change will precipitate physical shocks such as extreme weather, and see other nonlinear and unpredictable results. This will aggravate social tensions, increase competition for resources, provide a platform for extremism, and drive violent conflict.

There will be various drivers of tension and conflict, including reduced trade and population displacement.

Reduced Trade – the UK is a trading nation and part of a complex network of international commerce and supply chains. This network is becoming increasingly vulnerable to the effects of climate change. Climate change is, and will further, exacerbate geopolitical and geostrategic competition over mining and refining rights as well as control over disputed trade routes, primarily those in the High North.

The Stern Review noted it had, “assessed a wide range of evidence on the impacts of climate change and on the economic costs, and has used a number of different techniques to assess costs and risks. From all of these perspectives, the evidence gathered by the Review leads to a simple conclusion: the benefits of strong and early action far outweigh the economic costs of not acting.”

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On 19 June 2023, the All-Party Parliamentary Group for Climate & Security held its inaugural dinner in the Churchill Room of 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), Dr Tim Clack (Director of CCIP), and Ms Louise Selisny (APPG Secretariat Coordinator). The opening remarks by the three event speakers, Lieutenant-General (retired) Richard Nugee, Mr Christophe Hodder, and Ms Faisa Loyaan are presented here. Their biographies can be found on the [climate change & \(in\)security website](#). These have been lightly edited. The Q&A session and subsequent discussions are not reported as they were subject to the Chatham House Rule.



The Review calculated that investing 1% of GDP would be enough to mitigate the negative impacts of climate change, that would otherwise in the long-run cost around 20% of GDP. In short, pre-emptive and early action is far cheaper than other alternatives.

The warnings of the Stern Review were echoed recently by the Secretary of State for Defence during the UK COP Presidency: “[W]e will have to deal with the consequences of a failed climate policy, if that happens. We will have to deal with the consequences of migrant flows, of breaking down of communities, of fights over rare resources”.

The point is that climate change will make trade more difficult, with food security being particularly effected. Increased competition equates with increased cost. A lack of predictive analysis equates with a lack of preparation. The result will be unexpected and unforeseen competition caused by food shocks which will, in turn, lead to exponential increases in cost and a dramatic reduction in food security in terms of both affordability and availability.

Then we have the issue of displaced peoples and migration. In 2022, 32.6 million people were displaced by extreme weather-related events; more than those displaced by conventional conflict. The UN estimates that 76 million people, 1% of the global population, are subject to instability that is being exacerbated by climate change. Furthermore, the UN predict that 1 billion people will be displaced by 2050.

It is estimated that as many as 90% of those displaced will remain in their respective regions. But at least 10% - around 100 million people - will migrate throughout the Global North over the coming decades. This has the potential to destabilise even the strongest economies.

From a UK perspective, we can recognise that climate change will also impact our people. Climate change will impact UK citizens at home and abroad. We have already seen a wide range of shortages across sectors, including food, energy, and primary commodities. These shortages will be compounded by increasing costs; similar to the spikes we have seen with the Ukraine-Russia War.

The UK will be required to adapt to the effects of climate change, such as the increased frequency and severity of storms and droughts as well as increased land surface temperatures and melting sea-ice. Together, these will create climate change hazards, such as floods, droughts and rising sea-levels that,

ultimately, will result in impacts to human systems. Fresh water scarcity and the overwhelming of societal infrastructure being some of the most serious risks.

In Summer 2022, the UK had its first ever “Red Alert” warning for extreme heat due to the risk of, “serious illness or danger to life”. Valiant efforts stretched our Fire Service to unprecedented levels of the like not seen since the Second World War. The Chair of the National Fire Chiefs Council (NFCC) briefed the Prime Minister directly, and hourly reports were being provided to ministers. On the hottest day the UK had ever recorded, 15 fire and rescue services declared major incidents, and at one stage London Fire Brigade was in attendance of 15 separate large-scale incidents.

What to do? We can despair and decide that it’s too late, and so do nothing. Or we can act. The climate change assessment of risk has certainly changed in countries that have been more immediately affected.

In the US, in 2017, Hurricane Michael severely damaged 17 F22 jets, in 2021, 17 inches of rain fell in one 24-hour window, and, in 2022, 61 million people were under extreme heat warnings. In Canada, host to the newly established NATO Climate and Security Centre of Excellence (CASCOE), they have had blistering heat domes and widespread annual wildfires. Less than two weeks ago - the hottest day in Siberia ever – saw temperatures of nearly 40 degrees. In China, over 100 weather stations recently recorded “record temperatures”.

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Closer to home in Europe, last Summer, the rivers Loire, Danube, and Rhine, arteries of industry, ran dry - cutting off freight transport, agricultural irrigation, and power generation. This followed on from the relatively recent European drought of 2018, which caused a six-month suspension in barge traffic on the Rhine, with an estimated economic cost of over £4.2 billion.

And then to this year - already this month in the UK, we’ve seen higher temperatures, earlier. Despite all these “broken records”, 2024 is set to be a year of unprecedented global heat.

These new and severe risks require a new approach and innovative forms of assessment. Assessments should be based on coherent and comprehensive analysis. The climate change & (in)security project and I advocate for the creation of a UK Centre for Climate and Security – a centre that enhances our futures and foresight capabilities as well as our planning and preparedness as we move forward. The centre would coordinate climate analysis, climate intelligence, and systems thinking that would support evidence-based policy and decision-making.

We need to collaborate across government to understand and act now.

Mr Christophe Hodder

CCIP Research Associate & UN Climate Peace and Security Advisor

Thank you for inviting me and for the chance to share the current situation in Somalia, the dire shocks of climate change and the impact is making on the insecurity, stability and regional dynamics in the Horn of Africa.

I am the first climate peace and security advisor to a UN mission globally and I am situated in the Security Council's mandated mission to Somalia. My role is to understand, share, mainstream and help find interventions around climate and instability in the country.

Somalia is at the forefront of climate change, while contributing to 0.003% of the global Green House emissions. Somalia has struggled with insecurity and instability since the 1990s.

Ladies and gentlemen, the projections from the latest IPCC report paint a grim picture for the future. By 2080, we are expecting to see mean average temperature rises of between 1.4 and 3.4 degrees, up to a metre rise in sea levels, an increased number of extreme hot days, increases in precipitation and drought cycles, and – overall perhaps the most worrying figure – 50% less available water.

There are a number of pathways between climate change and conflict. The first pathway is: livelihoods and competition over resources, such as grazing lands and water. With over half of all conflicts since 1990 being linked to natural resource competition. We have seen in Somalia a threefold increase since 1990 in climate shocks and events compared to the previous period. Certain breeds of cattle have now been found unable to live with a 1.5 degree rise in average temperatures. This means lifestyles and the economy will change drastically over the coming years.

Displacement and the competition between host and displaced populations is another pathway and, in Somalia, we currently have 8 million people in need of humanitarian support, with close to 4 million people displaced due to climatic shocks.

Climate displacement is a key factor in the urbanization rate we are seeing of over 50%, with projections of 20-30 million Somalis living in coastal urban environments. International migration and internal migration are increasing and contributing significantly to regional and international instability.

Research shows that climate displaced populations in Somalia also “maladapt” to the changes, including by chopping down more trees and further contributing to desertification. With figures of close to 70% reduction of tree cover over the past 20 years, the charcoal energy and land degradation cycle is a key issue leading to gully and soil erosion and, in turn, reduced food security.

Armed Actors such as al Shabab use climate change as a tool. They have, for example, bombed and polluted water points and damaged river banks and irrigation channels which have led to an increased risk of flooding.



Al Shabaab also tax natural goods, such as the trade in charcoal and the water trucking of humanitarian actors. The group are using local disputes and competition over resources to provide legitimate services and economic opportunities to disfranchised communities. We are seeing a rise in terrorist recruitment through the lack of alternatives but also because al Shabaab can provide services in areas the government and the international community cannot reach. The illegal fishing trade and the trade in wildlife and charcoal are all used for financial gains.

Somalia's situation directly affects the region, particularly neighbouring countries through population displacement. Natural resource competition also plays out at the regional level, including through transboundary water issues, maritime border issues, damming of rivers, and fighting over precious minerals.

These pathways also play a part in the global security landscape. It is essential that the UK and its partners recognise the links to their security and strategic interests. The large-scale global movement of populations, increasing humanitarian disasters and needs, greater spread of radical groups, and the wider impact on instability in neighbouring countries should all be important parts of security thinking.

So, what can we do about it and what are the opportunities? We at the UN are working hard to firstly understand the links and, in partnership with think tanks such as CCIP, SIPRI, Adelphi and others, we now have more and more research showing the interlinkages, impacts and causes of climate peace and security. We also have research now at the local level looking at dynamic changes and doing deep dives into ongoing and active conflicts in the country.

As part of this work, the UN have developed cutting edge tools that overlay climate data, including deforestation and vegetation loss with conflict, to identify hotspots across the country. We are also going a step further and using a Chatham House model of strengths of association to try to predict conflict in areas and what will that means for future investments around peacekeeping and special political focus. From there we are identifying early warning systems and predictive variables to help direct interventions on the front line.

We are also working in partnership with the UK military in Somalia to develop new ways of working, including dropping seedballs through drones and then monitoring their growth and

impact in areas that are newly recovered. We are also working with military planners to look at areas of strategic importance that include where water availability is – and will be in the future – in places like Baidoa.

Together we are working across UN agencies and supporting the Federal and Member States to increase climate financing to support adaptation by communities in the hotspots and newly recovered areas in an attempt to reduce the short-term cycle of humanitarian financing which stood at a staggering US\$ 2.4 billion last year alone. This is projected to continue and to increase with the climate projections.

Finally, we are implementing projects on the ground to break climate displacement cycles.

These are early environmental interventions in those hotspots and interventions in urban areas where displaced populations are moving to. This includes nature-based solutions around water management and rangeland management interventions. We are investing in environmental mediation approaches as well and looking at how we can accurately portray climate change (rather than clans and communities) as the protagonist in the recent decades of conflicts.



Mr Faisa Loyaan
CCIP Senior Research Associate & Policy Researcher

Good evening and thank you. It is a great honour to be here and have the opportunity to speak at this APPG climate and security inaugural dinner.

I am a Research Associate of Climate Change & (In)Security Project and a Visiting Research Fellow at the Changing Character of War Centre at Oxford University. At Oxford, mentored by Dr Tim Clack, I am conducting a research study on Somali communities living in the border areas of Kenya and Somalia.

I spent my childhood in Somalia's capital, Mogadishu, moving to the UK as a teenager during the Somali civil war. I have spent my career working on development and peace issues across the Somali regions and have been based in Kenya for the past 20 years. I am also a co-founder and CEO of a local NGO based in Kenya and Somalia.

The aim of my research at Oxford is to understand how Somali communities are constituting or formulating their identities and how this is linked to both local and transnational conflict. My research is still underway, but it has already become clear that climate change is a key concern across communities in the region as it impacts on so many aspects of life. Climate change has been mentioned repeatedly by every interviewee I have worked with on the ground.

I would like to share some of my recent research observations about the borderland area between Kenya, Somalia and Ethiopia and the kind of insecurities they experience, including insecurity linked to the economic conditions in which they live, and climate change and its effects on the physical environment that impact on both livelihoods and social patterns.

I really would like to focus on two things specifically. First, economic insecurity which is very strongly linked with climate change, and, second, personal and individual insecurity which is linked with the conflict and the dynamics of living in the border area across the three countries.

I visited Kenya's Mandera County in March this year. I would like to give you a picture of what the border region looks like. The border is a small strip of land and there is a river that separates Kenya and Ethiopia on one side, and a strip of land that separates Kenya and Somalia on the other side. There is an official border that has been closed for the last 10 years but there is also an unofficial border crossing that is always open where goods and people can enter and exit Mandera anytime. One would easily think there is no border there – people have to provide a small amount of money for to cross but, generally, is not a big deal to cross the borders.

The people who live across these three borderland territories belong to the same ethnic community and share a common language, culture, and religion. They are largely pastoral communities dependent on livestock production as their main source of livelihood and have suffered historical marginalisation and underdevelopment. Their trade is strongly linked with the Somalia side of the border and to a lesser extent the Ethiopian side of the border. Locals see themselves as citizens of Kenya but with Somali origin. They tend to believe that they are better off on the Kenyan side than the other side of the border, particularly since the devolution process in Kenyan political structures has brought some resources to the county and they have seen some improvements in infrastructure.

Land is clearly important for lives and livelihoods, but I was particularly struck by the significance of the river system, which is the lifeline of that area and a connector across the countries. Water has been immensely impacted by climate change.

"economic insecurity [is] very strongly linked with climate change...personal and individual insecurity [is] linked with the conflict and the dynamics of living in the border area across the three countries"

There are three rivers in the borderlands: River Dawa, The Big River (wabiwenyn), and River Web (Wabiga weeb). These rivers meet and flow to the ocean just below Kismayo in Somalia. The people I have spoken to have a detailed understanding of the river and see the river as their lifeline. Climate change has increased their vulnerability and insecurity.

North East Kenya has experienced cycles of drought and flooding regularly for the past 50 months – much more intensely than in historical cycles. When I was there, the effect of the prolonged drought was evident. I crossed the border across the river and saw that the river that was just a moist sand and, strikingly, there was a decomposing animal in the middle of the riverbed.

"There are frequent tribal clashes ... most clashes are over community boundaries and pasture issues, when there is droughts or famine communities look for grazing land for their animals and they will go where there is rain and pasture, and this causes conflict most of the time."

In the words of one of my informants: "there is worsening drought and famine in rural areas, people lost livestock (perished); we used to drink from the river, but the river is now dried out, [it is] like this dry brown paper. Even in this town there is [a lack of water]".

The river is the main source of water for both livestock and humans so, when the river dries out, it is difficult for communities to sustain their livestock and their livelihoods.

A few weeks after I left Madera – at what turned out to be the end of the prolonged drought – heavy rains came and the riverbank burst. The subsequent floods destroyed properties, infrastructure, such as roads, and swept away homes. The flood also impacted businesses and saw an outbreak of cholera and malaria. With very little help from the national government, only a few aid agencies and county government provided drought responses.

The heavy rain after the prolonged drought – both symptomatic of climate change – added to the human security damage.

In my interviews, it became clear that the primary concern of local people was the severe and prolonged drought. Because of a lack of water, people had been forced to move from one place to another to seek water sources. I quote from my interviews again:

We have been forced to look for water and pasture for livestock."

"They were forced to take their livestock into Somalia [where it had rained]."

"Other research participants said that this had left people desperate and, as well as their livelihoods, their communal stability was threatened.

These conditions are made much worse by the clan conflict in the border and presence of al Shabab from Somalia.

In the words of one interviewee:

"This is a place [Mandera County] ... There are frequent tribal clashes ... most clashes are over community boundaries and pasture issues, when there is droughts or famine communities look for grazing land for their animals and they will go where there is rain and pasture, and this causes conflict most of the time. If they don't send [message] and say we are hit by drought and there is no grazing on our land and is dry received, but if they just enter other clan boundaries, this will trigger fighting to break out over water, pasture."

Climate change also effects how groups like al Shabab operate. For example, locals said that there had been fewer attacks from militant groups due to the challenges they faced operating during drought. They added, however, that people are more vulnerable to recruitment during drought because of the impact on their livelihoods and that al Shabaab exploits this. The possibility of attacks in the future thus increases. Droughts make people more vulnerable. Locals also see illegal arms that come and go through their regions as problematic and they feel threatened by the increasing influx of people from Ethiopia.

Climate change also impacts governance. The effects of climate change interact with existing social, economic, and political vulnerability to increase the risk of violent conflict. Weak governance and corruption have created a heighten inequality that worsen the impact of climate change on the community. Rural to urban migration has increased significantly.

From another interviewee: "When insecurity happens ... sometimes the Kenya army forces conduct operations in those areas arrest many civilians for having illegal arms, so there's mistrust between the forces and the locals. Matters are made worse because there is no one to speak with, because there are no elders living in areas located along Kenya-Somalia border. People have migrated from rural areas due to the drought and migrated to the towns after drought killed their livestock".

The situation in Mandera is complex because people are directly affected by the political and security situation each side of the border. The governance of climate change in those communities – and improvements to security – it seems can only happen if all the border states respond collectively.