



Making the Important Urgent

Can climate migration light up the slow-burn politics of the climate emergency?

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1. Key points

Every aspect of 'climate migration' is contested, from the numbers to the name. But disliking the concept does not make it any less of a reality. The prospect of many millions leaving 'apocalyptic' conditions in uninhabitable regions in the hope of finding safety in Europe grows as temperatures rise.

The presentation of this risk as a security threat can be seen as a move to dehumanise, militarise, and contain it. But the longer the UK and Europe do nothing to address the root causes, the greater the risk that when the response comes it will be as unjust and inhumane as it is ineffective.

Instead, this paper proposes a call to action that is clear, simple, urgent, and pragmatic: focus existing resources and programmes on developing agriculture in vulnerable countries across Africa, the Middle East, and South Asia.

This initiative leverages the UK's existing politics, finances, capabilities and policies to influence change at a global scale. In this way the UK can catalyse decarbonisation, use climate-smart agriculture to draw carbon out of the atmosphere, and make sure that the most basic needs of food and livelihood are met, even as conditions deteriorate.

Good politics and good policy start with recognising and communicating honestly and realistically. The important only reaches the political to-do list when the majority of voters recognise that the problem is both urgent and affects them as intimately as the many other worries they have.

Unlike heatwaves, droughts and floods, a clear and present risk to UK security fulfils those criteria.

2. Introduction

Very little divides politicians, academics, the media, and citizens like the subject of immigration: Card (2022). Climate migration inherits this capacity to divide academia, perhaps because it brings together two topics that are uncomfortable bedfellows: the climate emergency and immigration. But if the prospect of climate migration is real and can be used to catalyse urgent and beneficial action to address the climate emergency, then it should be.

This paper presents the case that:

- large-scale and international climate migration, including to Europe and the UK, should be treated by policymakers as a predictable consequence of the climate emergency;
- the presentation of climate migration as a security risk to the UK and its allies is a measured and reasonable assessment by military and intelligence organisations;
- climate migration (perhaps uniquely) is a frame in which the climate emergency might be upgraded politically from being 'important' to being 'urgent;'
- the only way materially to reduce the risk of climate migration is to address its root causes – not its symptoms; and,
- the call to action must be designed pragmatically and not ideologically.

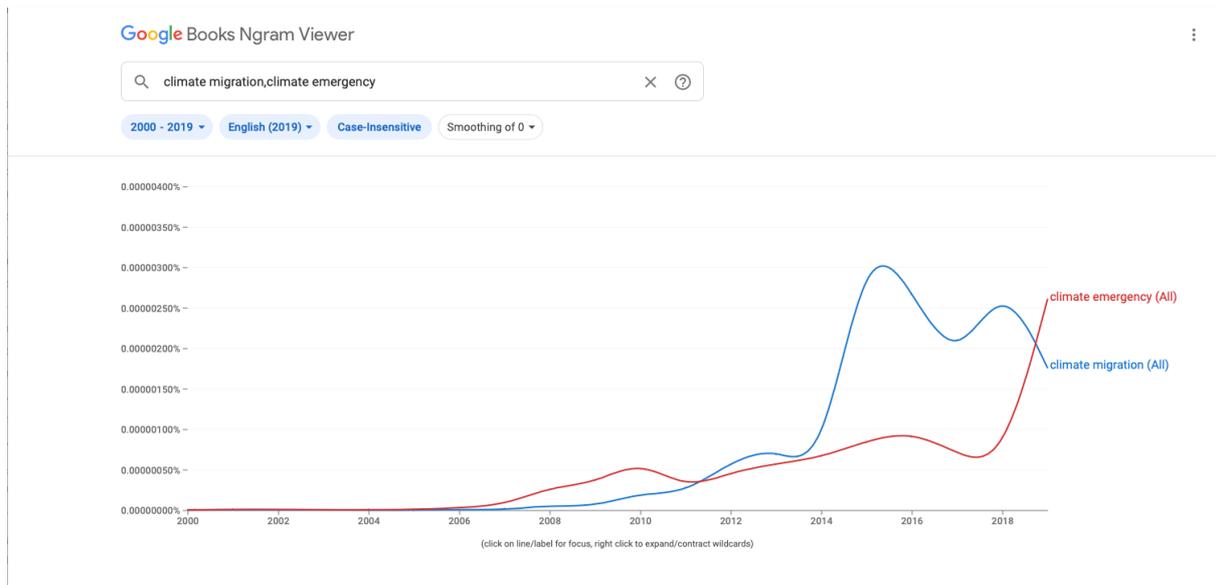
Climate migration may be a spontaneous response to a natural disaster, or it may be a planned response to deteriorating conditions. It is a rational response, and it is not to be condemned or demonised. But it is not within the scope of this paper to address the injustice of the climate emergency, nor to respond to the new agenda for academic research called for by Boas et al. (2019). It is a paper that recognises the legitimacy and diversity both of climate migration itself, and of the scholarship on the subject, while seeking to address the realities of UK society and politics.

In this rapidly-deteriorating climate emergency what is politically possible matters. There is a painfully small window in which humanity can do anything that will materially change the trajectory of global heating and avoid the 'ghastly future' depicted by Bradshaw et al. (2021A). That window is defined by political will as much as by time and space. We will do nothing unless political expediency directs politicians to take urgent action; and that depends on their perception of what matters to the majority of voters in countries like the UK. That, in turn, depends on voters seeing the climate emergency as an immediate and existential threat to them. Failing this, politicians will not only focus on other pressing issues such as food and energy prices and economic growth, but they may well seek to address them with policies that exacerbate the climate emergency.

Politics is a question of choices. Among the choices available to politicians in the UK, taking radical and urgent measures on climate change does not feature, even in the face of heatwaves, droughts, wildfires, and floods at home and abroad. This may be a quantitative question – more frequent and more severe events could change this. Or it may be a qualitative problem – this is just not the kind of problem that really worries people.

But immigration is exactly that kind of a problem and therefore climate migration needs to be part of the way people understand the consequences of climate change. And it must be presented in a way that underlines both the scale and the urgency of the problem. Contrary

to what is suggested in some of the scholarship, that is not the case today. As of 2019 – the latest data available – ‘climate migration’ was declining as a topic just as ‘climate emergency’ was rising:



Source: Google Books Ngram viewer, August 2022

3. Is climate migration a thing? Quantifying the risk

The starting-point for much of the debate about the scale of climate migration was work presented in Myers (2002) and Myers (2005):

When global warming takes hold there could be as many as 200 million people overtaken by disruptions of monsoon systems and other rainfall regimes, by droughts of unprecedented severity and duration, and by sea-level rise and coastal flooding.

Myers himself acknowledged to the precarious nature of such estimates: Brown (2008). However, in Brown (2008) the International Organisation of Migration (IOM) assessed Myers' estimate using three IPCC scenarios for temperature and sea level rise, world population, and efforts at mitigation and adaptation. The IOM is the UN institution whose mission is to protect the rights and interests of migrants.

1. The Good. The most optimistic of these scenarios would see a temperature rise over the century of around 1.8°C. In this “unlikely” scenario, migration along existing routes

would increase by between five and 10 per cent. This might equate to 25 million additional refugees to 2050. “There would be increased rural to urban migration but it would prove largely manageable, if not indistinguishable, within existing patterns of migration.”

2. The Bad. In this scenario, efforts at both mitigation and adaptation are inadequate (but may nonetheless appear optimistic given the lack of progress since 2008). Under this scenario the temperature peaks at 2.4°C, with a likely range from 1.7°C to 4.4°C. The author continues,

According to the Stern report, a 3°C temperature rise would mean 1 to 4 billion people would suffer water shortages and between 150 to 550 additional million people would be at risk of hunger. Conversely other areas would gain unwelcome water with coastal flooding affecting between 11 and 170 million additional people each year. Marginal lands would become increasingly uninhabitable, with dramatic increases in internal rural to urban migration and also emigration to richer countries, particularly of young, skilled people. Meanwhile, millions of people would be temporarily displaced by individual extreme weather events.

3. The Ugly. The third scenario is similar to the second except that humanity continues to derive most of its energy from fossil fuels. In that case, the temperature reaches 4.0°C (with a likely range from 2.4°C to 6.4°C). In this scenario, Myers’ estimate could be conservative:

Under this scenario, predictions of 200 million people displaced by climate change might easily be exceeded. Large areas of southern China, South Asia, and the Sahelian region of sub-Saharan Africa could become uninhabitable on a permanent basis. Climate forced migration would be unmistakable with tens of millions of people at a time displaced by extreme weather events, such as floods, storms and glacial lake outburst floods, and many millions more displaced by climate processes like desertification, salinization of agricultural land and sea level rise.

So, which of these scenarios is most realistic? Three years ago, the United Nations Environmental Programme (UNEP 2019) advised that even if Paris Agreement commitments are met, the current trajectory of GHG emissions will result in a peak temperature change of 3.2°C. Nothing has happened since 2019 that would suggest that the IOM’s “Ugly” scenario is not also the most likely one. If we take urgent and radical measures now, then perhaps the ugliest scenarios can be avoided. This paper urges such action, but cannot assume it.



While migration may have complex causes and factors, it is the rising temperature that matters most. This is the key driver of climate migration according to Hoffmann et al. (2020), a meta-analysis of 30 country-level studies of the relationship between climate change and migration. Von Uexkull et al. (2016) found that whereas earlier research using 'naïve models' had found no connection between drought and conflict, their own more contextual models showed a 'vicious circle' of conflict and environmental shock.

The studies done in the early 2000s looked at the scale of climate migration over a period to 2050. If temperatures rise more quickly than was being modelled 20 years ago, then this will determine the timing and impact as well as scale of climate migration. As high as it seems, 200 million migrants spread evenly over 30 years would be more manageable than the same number concentrated in a decade.

As well as timing, geography matters. Where climate migrants originate from and where they seek to migrate to is also crucial from the perspective of destination countries. There has been a tendency in the scholarship to describe climate migration as largely an internal problem and thereby to downplay the risks of international climate migration. For example, Hoffman (2020) confirmed earlier findings that environmental migration is often short-distance, regional and temporary. In practice this means that it is often internal or from one low-income country to another.

In 2018, the World Bank published its Groundswell report on internal climate migration, Rigaud et al. (2018). Reviewing the Groundswell report, McLeman (2019) observed that the Groundswell Part 1 estimate of 140 million might "turn out to be too conservative if internal migration is the only mobility option." In the revised Groundswell Part 2, Clement et al. (2021) conclude that across the six study regions, as many as 216 million people could migrate internally due to slow-onset climate change impacts by 2050.

But how realistic is it to think that migration will be largely internal? There is clearly a tension here between the desire to travel as little as possible and the ease with which migrants are able to move to more distant countries where they may perceive they have better prospects. This gap between the reality of life in the origin country and the expectations of a better life in a destination country is the basis of the migrant's decision-making, according to Homer-Dixon (1999). The equation is dynamic, and worsening climatic conditions will work against

the pattern of short-distance, regional and temporary migration in these studies. The 30 studies in Hoffman et al. (2020) mainly cover periods from 1960 to 2010. Three ended in 2010, one in 2014, and one in 2015. However, according to NOAA (2022), every year since 2014 has been amongst the 10 hottest years on record. The cumulative, spreading and often sharp increases in temperature can be expected to change the pattern as well as the scale of climate migration over time. There will also be tipping-points, for example when migration from the countryside to cities overwhelms the cities themselves. Infrastructure, ethnic tensions and shortages of food and other necessities will set the limits on how much internal migration cities can accommodate. This chain in Syria is described by McGuire (2022):

Although disaffection with the Assad regime was undeniably the principal cause, the worst drought in almost 1,000 years may well have seriously inflamed the situation. Drought conditions became established during 2006 and continued into 2011, when fighting started in earnest. Over the period, the country's farming sector was eviscerated. More than three-quarters of Syrian farms failed, and in parts of the country 85 per cent of livestock died, motivating the wholesale movement of 1.5 million people from the land and into the major urban centres, notably Damascus and Homs, wherein a comparable number of refugees from the Iraq War had already been shoehorned.

Is it likely that in such circumstances, international destinations will be able to adopt policies of containment that counteract forces of life and death playing on people with no alternative to international migration? Or will would-be migrants resort to ever more desperate and dangerous ways to survive? In spite of the UK's stated policies and efforts, according to Lee (2022), in the first seven months of 2022, 14,000 migrants succeeded in crossing the English Channel, almost all risking their lives in the process.

4. Challenging climate migration

Scholars have contested every aspect of climate migration, including the term itself. Summing up this perspective, Boas et al. (2019) contends that "there is a danger that migration policy will continue to be based on weak scientific evidence that reinforces the self-perpetuating myth of climate change migration as a looming security crisis." Tschakert and Neef (2022) emphasises the injustice in the causes, framing, narratives, and likely responses to climate migration; and questions "progressive scholarship and new theorizing [which] risk

to further silence the bodies and voices of those concerned when, in fact, they themselves should be narrating their stories and truths, speaking for themselves, in their own words, and in their name ...”

As an alternative approach, Boas et al. (2019) presents a new and preferred way of understanding and researching climate mobility. These propositions may be welcomed as a new basis for research and several of the underlying assumptions are unimpeachable. But the paper is not a safe guide for policy, with two problems standing out.

The first is the assertion that:

There is already considerable evidence that migration is not solely driven by climate change. It is instead influenced by a mix of climatic, socio-economic, cultural and political factors. Even when climate change does play a role, it remains difficult to determine the extent of its influence ... As a consequence, predictions of mass climate-induced migration are inherently flawed.

The absence of a scientific basis for estimating climate migration may complicate decisions about how to respond to it, but it does not mean that it is not a real risk.

The second addresses the related issues of modelling and communication:

Current climate migration models typically reinforce linear ‘crisis’ or ‘mass’ migration assumptions. The news media and policy alike tend to interpret the results of these models incorrectly. For example, they often refer to the maximum figures of a range as ‘predictions’, which in turn may be used to support the politics of border securitization. Policy should instead rely on research that better accounts for the nonlinear complexity of mobility in the context of climate and social change in its evidence base.

This suggests that policymakers will misinterpret and over-react to estimates of climate migration. Yet policymakers have not acted on the upper estimates of climate change models: they have ignored them. All the modelling done on climate change has not brought about any material policy action, as there has been none: Bradshaw et al. (2021A). Instead, the modelling of climate change has brought its own problems, as scientists have been overly-cautious: Brysse et al. (2013). All the evidence is that the risk is all the other way, as

Brown (2008) observes, “there has been a collective, and rather successful, attempt to ignore the scale of the problem.”

Nonetheless, the ‘scale of the problem’ warrants words as strong as those of Bradshaw et al. (2021B): “hundreds of millions of people are sadly already on the apocalyptic frontline of challenges to their livelihoods.” Policymakers who assume that climate change will cause migration by 100s of millions of people over the coming decades – with the risk that it will happen more quickly and at a larger scale than predicted 16 years ago – would appear to be acting more reasonably than those who dismiss or downplay the risk, however worthy their motives. In any case, as Busby (2018) – which considers the relationship between climate and security via conflict, rather than migration – observes:

Policymakers do not have the luxury of waiting for an academic consensus on the nature of the relationship between climate factors and security. However, without a strong academic foundation, the policy community runs the risk of suboptimal outcomes because policies and funding may be poorly matched to the nature of the climate-security nexus.

If the motives of researchers include the fear of demonising migrants and provoking damaging as well as ineffectual policy responses, then their anxiety is understandable. It is critical that the threat of mass climate migration is used to motivate policies that address the root causes of climate migration. Prevention is both a better and a more feasible response than containment.

But inaction will not reduce the risks of poor policy. On the contrary, the sooner politicians address the problem the better. Once climate migration starts happening on a mass scale, policy responses will turn to containment, not prevention, as with the recently proposed and quickly abandoned policy of pushing back migrants’ dinghies across the English Channel: Parkinson (2022).

A well-intentioned desire to deny or downplay climate migration now will lead to much worse consequences later.

5. Climate migration as security risk

Climate migration has been identified as a security threat by both military and civilian analysts. Climate security was first substantively debated by the UN Security Council in 2007, with a further major debate in 2011 and its definition remains open to debate: Busby (2022). For the IPCC, Adger et al. (2014) summed up the complex but clear relationship:

Climate change threatens human security because it undermines livelihoods, compromises culture and individual identity, increases migration that people would rather have avoided, and because it can undermine the ability of states to provide the conditions necessary for human security. Changes in climate may influence some or all of the factors at the same time. Situations of acute insecurity, such as famine, conflict, and sociopolitical instability, almost always emerge from the interaction of multiple factors. For many populations that are already socially marginalized, resource dependent, and have limited capital assets, human security will be progressively undermined as the climate changes.

In February 2021, US President Biden signed an Executive Order in which he directed the National Security Advisor to prepare a report on climate change and its impact on migration. The White House (2021) *Report on the impact of climate change on migration* addresses many of the points made in this present paper, including a call to address the root causes. The report also identifies that climate migration can be ‘weaponised:’

Russia also sees some benefits in the destabilizing effects of large-scale migration to the EU, particularly as it relates to the rise of xenophobia and political parties skeptical of the European project and the broader liberal order [Shinkman (2019)]. Despite likely challenges around the effects of weather extremes, including Arctic warming, flooding and increased forest fires, Russia may on balance benefit from climate change via the expansion of areas available for cultivation, resource extraction, and previously inaccessible maritime routes ... [Lustgarten (2020)].

These risks are further developed in National Intelligence Council (2021) which notes that 500 million people depend on coral reefs, 99% of which are predicted to be degraded even at 2°C of heating.

Scholars have identified the intent behind such reports. Boas (2015) defines ‘securitisation’ broadly as “the process through which non-traditional security issues (such as climate

change or migration) are discussed and/or acted upon in terms of security and thereby drawn into the security domain.” Boas agrees with Brown et al. (2007) that “it is part of a clear process to invest the international debate with a greater sense of urgency.”

As Boas (2015) observes, climate migration is a shortcut for describing the security impacts of global warming and the UK’s Foreign, Commonwealth and Development Office (at the time the FCO) was an early proponent of climate securitisation:

[The] FCO’s securitising move on climate migration emerged to promote greater action on climate change amongst the emerging developing countries and the United States (US); specifically, binding measures to reduce greenhouse gas (GHG) emissions under the UNFCCC. In order to promote such action, the FCO raised the issue of climate migration to demonstrate that inaction can create dire circumstances.

Boas (2015) warns that:

Despite climate politics being a primary context for the securitisation of climate migration, there are risks for it producing aversive policies in the domain of immigration and military policy. A number of academics have warned that security framings of climate migration can lead to the militarisation of climate change or to increased border controls to stop so-called ‘climate refugees’ ...

Selisny (2022) provides a broader and more detailed analysis of climate securitisation and a discussion of US, UK and NATO approaches to the integration of climate change and security into the political agenda.

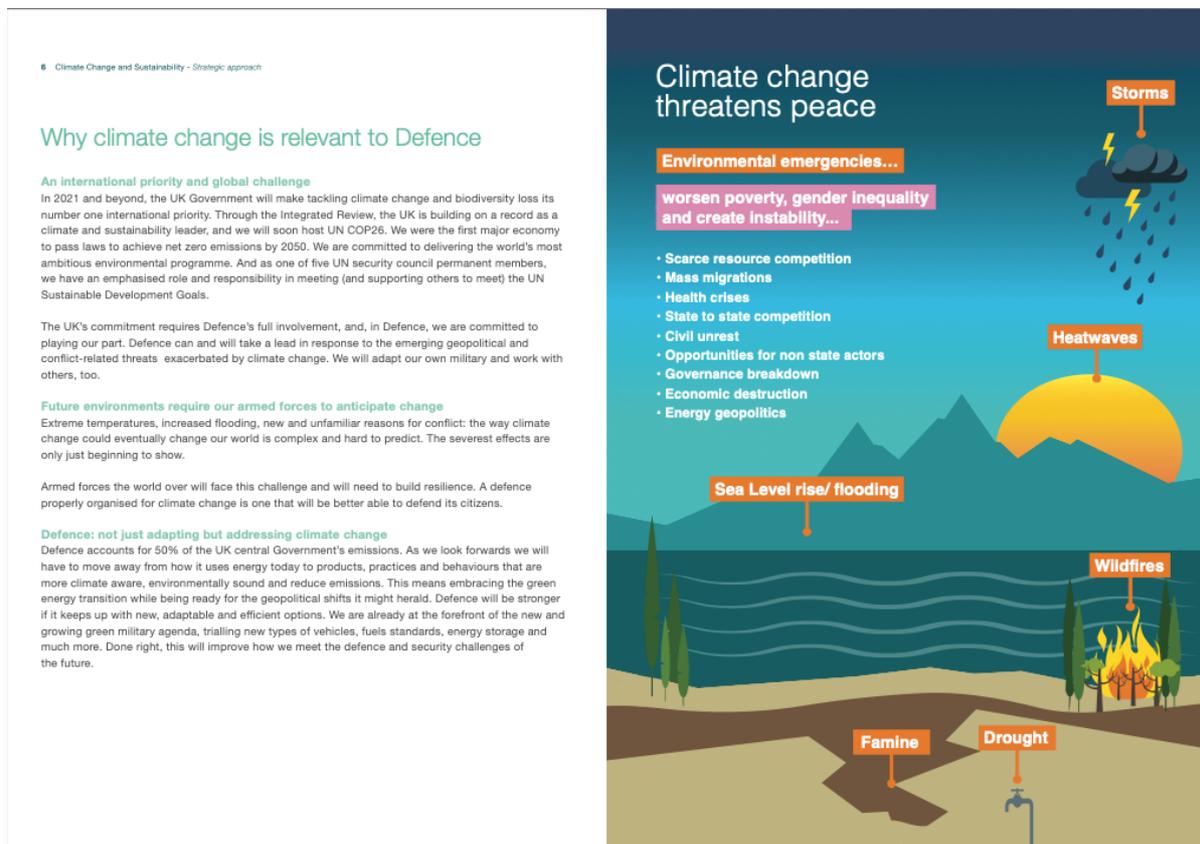
What stands out in all of this work is that NATO and the US and UK military have no self-interest in promoting climate change or climate migration as a security risk. Conflict with unarmed and desperate civilians, including children, is not something that any armed force wishes to undertake or can be armed for. It would not be a basis for increased spending on the number of personnel or hardware. On the contrary, considerable resources will need to be applied to preserving the armed forces’ combat capabilities in a hotter environment and decarbonising their equipment. The self-interest of the military is, if anything, to make sure that action is taken on climate change now so that the risks of conflict are reduced, and the military is not drawn into such conflicts as well as into border protection against civilians.

International Military Council on Climate and Security (2021) observes that:

If climate change results in additional migration, either directly or indirectly, this could be exploited by anti-immigrant political forces for their benefit, and contribute to increased ethnonationalism that is harmful to European security. These dynamics may also increase calls to the military to assist with border control, which could contribute to tensions and humanitarian concerns.

This has already happened. The Royal Navy has been deployed in the English Channel to ‘protect’ the UK from migrants crossing from France: what does ‘protection’ mean here?

In 2021, the UK Ministry of Defence set out its *Climate Change and Sustainability Strategic Approach* which explains why climate change matters for Defence, and why Defence matters for climate change. “Mass migration” appears once and is identified as one of the ways in which climate change threatens peace. It does not state or imply that such migration could be international, or destined for Europe or the UK. The relevant pages of the MoD report are reproduced here to demonstrate the content and tone of the UK military on this topic.



Source: Ministry of Defence (2021). *Climate Change and Sustainability Strategic Approach*

In summary, just as predictions of 200 million climate migrants have not led to bad policy decisions, so climate migration has not been militarised in the UK. The question is whether it can be securitised for good purpose in the current political environment.

6. Political implications and opportunities

The record-breaking summer of 2022 brought climate change into the daily lives of Britons. Just one day in which temperatures exceeded 40°C for the first time was enough to close schools, start fires and severely impact healthcare and transport services. These events coincided with the contest for the leadership of the British Conservative Party, whose winner would be the next Prime Minister. The candidates were accused of ignoring or downplaying the climate emergency: Mulcahy (2022). This was in spite of the fact that 81 per cent of Britons already recognised the climate emergency before the heatwave: Flynn et al. (2021).

This was not, however, the first time physical reality and electoral politics appeared divorced. A decade earlier the US Presidential election played out with a similar ‘conspiracy of silence’ as noted by Brulle (2012):

In a summer dominated by heat waves and a devastating nationwide drought, it would seem that climate change would be a major issue in the US presidential campaign. However, quite the opposite is happening. Neither President Barack Obama nor the presumptive Republican nominee, Mitt Romney, has focused any attention on this critical issue. In a recent speech on the Senate floor, Senator John Kerry characterized the political discourse in the United States as a “conspiracy of silence ... a story of disgraceful denial, back-pedaling, and delay that has brought us perilously close to a climate change catastrophe.”

Thus, it would be incorrect to associate climate “silentism” with conservative politics: it is more a feature of mainstream politics. In this arena, the urgent invariably trumps the important, especially if the important involves short-term pain for long-term gain. In the UK and across Europe, politicians and voters are ruing decades of failure to invest in non-fossil energy and to insulate buildings. As a result, businesses and consumers are hostage to price increases, and soon energy shortages, caused by the Russian invasion of Ukraine. This is not just affecting the economy, it is also limiting the strategic response to Ukraine.

The mathematics of Britain's decision-making on energy is instructive. In the absence of a government intervention, which would simply transfer the cost to taxpayers, UK households will pay on average £3,400 for gas and electricity in the next year compared with less than £1,200 in 2019: Sheppard (2022). According to Office of National Statistics (2022), the UK

has 28 million households so that represents a cost of over £60 billion in one year, enough to pay for three Sizewell C nuclear power stations or to double the UK's offshore wind capacity.

Could climate migration catalyse action when nothing else has? Immigration certainly is a topic regarded by the British Conservative Party leadership candidates as both urgent and compelling for their electorate, as it has been in many electoral contests across Europe, the United States and elsewhere in the past decade. The two leading candidates committed to strengthen policies on immigration:

Liz Truss and Rishi Sunak have vowed to toughen controls on migration into the UK as part of their bids to become next Tory leader and prime minister. Mr Sunak said he would tighten the definition of who qualifies for asylum and introduce a cap on refugee numbers. Ms Truss said she would extend the UK's Rwanda asylum plan and increase the number of Border Force staff. [Lee (2022)]

If there is one consequence of the climate emergency that could help change it from being an important issue into an urgent one, then logically that should be immigration.

This was the role that immigration played in the Brexit referendum of 2016. Analysis of the causes of that vote by Clarke et al. (2017) concluded that “a number of the forces that ultimately led to Brexit were operating for more than a decade before the referendum.” So what made it so urgent for Britain to leave the EU? It was a combination of underlying attitudes and a sudden event. On the underlying attitudes:

Britain is not unusual by EU standards when it comes to attitudes regarding immigration. In general, Europeans prefer immigrants from their own ethnic groups and they prefer poor immigrants from Europe to immigrants who come from elsewhere. People are most strongly opposed to poor migrants from different ethnic groups who come from outside of Europe, which explains why Europeans reacted so strongly to the flood of immigrants coming from Africa and the Middle East following the announcement by Chancellor Merkel in 2015 that Germany would open its borders to all. [Clarke et al. (2017)]

And the sudden event was that announcement:

when Chancellor Angela Merkel announced her open-door immigration policy it was initially popular in Germany but had the effect of striking a major blow at European integration, and might even have tipped the balance in the 2016 referendum in the UK by invigorating already potent anti-immigration sentiments. [Clarke et al. (2017)]

The UK's political scene remains very much dominated by the politicians and voters who brought Brexit, even if the new British Prime Minister was not amongst them at the time. There is every reason to believe that they would respond to the climate emergency if it was framed in terms of climate migration and combined with a well-crafted call to action.

In this context, Katharine Hayhoe's counsel on communication, quoted in Gewin (2017), is relevant as it balances the need to find an issue that matters with the need to offer hope:

Pinpoint the values that people already have and that you can identify with. Is there a shared concern about water, energy, air quality, national security or the economy?

After you've bonded and connected with that audience, don't begin or end with science. People are interested in science, but if we're talking about climate change, you have to connect it to something that matters to them. Keep the message clear, uncluttered and uncomplicated. End with solutions and suggestions of actions to take, and offer hope. Fear paralyzes us. Hope is what keeps us going.

7. Call to action: hope and pragmatism

Mass climate migration is not inevitable if preventative action is taken now on its root causes.

This is the view of the authors of the main quantitative assessments of climate migration, who are at pains to emphasise that action can be taken to prevent it. The essential logic is stated by Myers (2002): "There is much scope for preventive policies, with the aim of reducing the need to migrate by ensuring an acceptable livelihood in established homelands." In spite of the passage of almost two decades of inaction, the World Bank's Groundswell Part 2 report of 2021 still proposes that 80 per cent of predicted climate migration could be avoided with the right preventative policies: Clement et al. (2021).

Clearly, however, time is short. Unless preventative steps are taken as a matter of urgency, there may be very little left to protect in the homelands of either origin or destination countries in the 'ghastly future' that we are determined to shape for ourselves: Bradshaw et al. (2021A).

Once climate migration starts to escalate there is evidently a risk that "a rising tide of refugees will reduce, not increase, international cooperation in ways that will further weaken our capacity to mitigate the crisis." Bradshaw et al. (2021A).

Purely from a practical perspective, the call to action needs to be addressed to those with the political power to take that action. However, this is not inconsistent with standing in solidarity with those most affected by the problem as advocated by Bluwstein et al. (2021).

If this call to action is to succeed where previous ones have not, then it needs to meet certain criteria:

1. **Communication.** The logic is compelling and easy to explain. This must include presenting the ask as being (a) urgent and (b) in the direct, short-term and personal interests of the audience. Complexity should be avoided, in explaining the problem, the solution and the benefits. It is also necessary that the proposed strategy addresses the perception that the UK is a marginal player in climate change and cannot affect its overall trajectory.
2. **Bureaucratic alignment.** To avoid barriers being erected and objections raised, the proposed action goes with the grain of current thinking and programmes within government. Existing programmes can be directed toward this end, expanded and integrated, rather than demanding a U-turn.
3. **Ideology.** The justification is not based on ideological grounds, nor does it fall into the trap of being associated with issues that bring identity politics into play. These only serve to undermine the call to action, to politicise what is apolitical, and to polarise people such that many cannot support a perfectly reasonable policy.
4. **Pragmatism.** The call to action is pragmatic. This means that choices must be made and priorities set, so that political capital as well as government's resources can be concentrated and focused. The goals must be achievable and not merely desirable. They must also be ones that individual countries can materially affect without having to engage in time-consuming and probably ineffectual multilateral negotiations.

This paper proposes that the UK can make a difference internationally by focusing on an international agricultural development programme.

(This will be addressed shortly, but it is important to emphasise that this call to action should not preclude the UK taking other initiatives to address both its domestic and international emissions. For example, the proposal for a Border Carbon Adjustment, or tax on GHG emissions embedded in UK imports meets the above criteria and is a powerful way for Britain to leverage its large trade deficit and status as a major importer to incentivise decarbonisation internationally. On this, see Adams et al. (2022) and note the political

appetite for pricing products to reflect their environmental impact in research by the Climate Engagement Partnership (2021). The point here is not that this paper's call to action should be seen as excluding all other policy initiatives, but that they should be consistent and should, in any case, meet the criteria set out above.)

The call to action, then, is for the UK Government to *combine a large part of its considerable overseas aid and international climate finance budget and resources and focus them on agriculture in strategic countries that are most exposed to the climate emergency.*

The overall goal of preventing climate migration is to meet the challenge set by Myers (2002) to ensure “an acceptable livelihood in established homelands.” The danger in such a goal is that the range of possible interventions is almost infinite. It could, for example, be framed in terms of the Sustainable Development Goals (SDGs). But this is a trap: most of the nature-related SDGs are on track for failure (Bradshaw et al. (2021A)), precisely because 17 goals is too many.

We need to go back to basics, and the reality is that the climate emergency will take us back to the most basic problem of all: feeding ourselves.

While this might have seemed like an abstract and distant problem just a year ago, the Russian invasion of Ukraine has demonstrated to the public that energy and food shocks can be caused by conflict in distant places. It has also provided a view of conflict and migration much closer to home than previously. The UNHCR estimates that a total of up to 8.3 million refugees could have fled Ukraine by the end of 2022, out of a population of just 43 million: Siegfried (2022). The UK had granted visas to 166,000 Ukrainians after six months of war.

Myers (2002) considers the risk factors for climate migration in sub-Saharan African, concluding that “most important of all will be the region's incapacity to feed itself.” IFRC and WWF (2022) identifies food systems as a solution that “use nature to both mitigate greenhouse gas emissions and to help communities to adapt and become more climate resilient.” This, it is proposed, is where we need to focus our call to action: on agriculture. It meets the four ‘call to action criteria.’

1. Communication. The logic of improving agriculture is compelling and easy to explain. Given the current food and energy crisis, the urgency is also evident. The causal relationship between rising temperatures and risk to food production is intuitive. Food shortages and price inflation affect everyone and they are also the most obvious and basic reason why people are forced to leave their homes. It is also logical that

migration from the countryside to a city does not solve the problem if there is no food being produced. Finally, the UK like many countries depends on quite a range of imported foods, which will dry up as the climate deteriorates. The problem is failing harvests, the solution is climate-smart agriculture (discussed below) and the benefits have a simple headline: “Food.”

2. Bureaucratic alignment. In the UK government there are already three departments that address climate and agriculture in LDCs: the Foreign Commonwealth & Development Office (FCDO); the Department for Business, Energy & Industrial Strategy (BEIS); and the Department for Environment, Food & Rural Affairs (Defra). These can be expanded and integrated with resources switched from other programmes that are less impactful. One of the great benefits of agricultural development is that the benefits can be felt immediately and quantified.
3. Ideology. Even someone who denies climate science would have no reason to object to development measures aimed at making agriculture more productive in countries that are prone to drought and famine. Churches and NGOs have been undertaking agricultural extension work for decades, with climate change only recently becoming part of their thinking.
4. Pragmatism. Given that agricultural development is a known and existing capability of the UK government and development agencies, that the results are measurable, and the resources available, political capital and government resources can be concentrated and focused. The goals are concrete, achievable and short-term. Importantly, to answer those who belittle the UK’s capacity, it can make a material difference by itself, with an aid budget of about £10 billion a year – Loft and O’Brien (2021); and a budget for International Climate Finance of £11.6 billion over five years UK Government (2021). That is a total of over £60 billion over five years.

Just as a failing agricultural system damages society and the environment, so an improving system is a ‘force multiplier’ for progress, underpinning all the SDGs. But to achieve these benefits, we must apply agroecological principles – MacLaren et al. (2022); and not continue to export to LDCs the high input, monocrop model that has caused so much harm across the developed world and will cause even worse damage abroad: see for example OECD (2022) *Analysis of the environmental performance of the agriculture sector*.

The System of Rice Intensification (SRI) illustrates the potential of agroecology in action. Any approach to agricultural development in South Asia and many parts of Africa needs to

include rice, a staple food for over three billion people. SRI, sometimes combined with practices such as intercropping and cover crops, has been found to offer the kind of multiple benefits that only agriculture can:

- More food. Increased grain yield by at least 20-50%, with some studies reporting increases from 50% up to 100% or more. Styger and Uphoff (2016), Thakur et al. (2021), Africare Oxfam America/WWF-ICRISAT (2010), Styger and Traoré (2018)
- Better food. Enhanced micronutrient content with increased levels of iron, calcium, manganese, and zinc; and lower levels of arsenic and mercury by up to 90%. Thakur et al. (2020), Ishfaq et al. (2020), Styger and Traoré (2018), Mishra et al. (2021).
- Improved economics. Farmers' net income increases by 40%-70%, up to 250%. This is more than the yield increase, thanks to lower input costs, notably seed, energy and synthetic chemical fertilisers and pesticides. Nayar et al. (2020), Styger and Traoré (2018), Mishra et al. (2021), Behera et al. (2013)
- Water conservation. Water savings per hectare are at least 35% for irrigated rice production. With the higher grain yield, total water use efficiency increases by 52%, and irrigation water use efficiency by 78% compared to conventional crop management. Jagannath et al. (2013)
- Lower emissions, especially methane. The reduced application of water reduces methane emissions by up to 85%; and overall SRI offers a 40% net reduction in Global Warming Potential (GWP) per hectare, and a 60% reduction in net GHG emissions per kg of rice has been observed. A current SRI project in Nigeria, funded by the UK FCDO, is also supporting evidence of increased soil organic carbon and carbon sequestration. Islam et al. (2020), LaHue et al. (2016), Gathorne-Hardy et al. (2016), LINKS Nigeria (2021).

FAO (2016) describes SRI as a practical, low-cost innovation for improving food security. With energy and agrichemical costs at higher levels, and water increasingly scarce in many rice-producing regions, the case for SRI has strengthened since these studies were done.

Several countries have adopted SRI into their Nationally Determined Contributions (NDCs) and are more generally committed to the same logic of agricultural development that this paper advocates. One example is Vietnam, whose initiatives are described by Clement et al. (2021) as an example of what can be done to address the risks of climate migration:

Agricultural production that aligns with the natural and dynamically changing ecological conditions of the deltas could help maintain natural capital and keep adaptation options open and flexible for the future. There are also cross-sectoral opportunities to increase resilience, particularly at the water-energy-food nexus. Most

notably, traditional rice production uses large amounts of water to inundate fields, which could be increasingly challenging as climate change makes water supplies less reliable. The flooded fields also emit large amounts of methane. Climate-smart techniques such as alternate wetting and drying can sharply reduce emissions and water demand, contributing to both mitigation and adaptation. Vietnam's updated NDC identifies that approach as one of several climate strategies being implemented in agriculture, including in rice cultivation ... [Citing Nguyen et al. (2019), Adhya et al. (2014), Torbick et al. (2017) and Socialist Republic of Viet Nam (2020)]

8. Conclusions

Climate migration is not a risk, it is an *inevitable* consequence of our current trajectory. The ultimate and main driver of climate migration is the increasing temperatures being experienced in already environmentally and socially vulnerable regions of the global south. Temperatures are rising inexorably, and setting new records, often by substantial and unexpected amounts. Politicians and the public care about and fear migration, and especially mass migration from less developed countries. With the lessons of Ukraine fresh in people's minds, this moment represents an opportunity to convey the need for urgent action to address the root causes of climate migration.

The call to action needs to be pragmatic. This paper proposes that the action required is to focus on agricultural development in countries across Africa, the Middle East and South Asia. By applying agroecological principles, farmers can work with nature, both to secure their own livelihoods and the food supply to their communities and region, and also help conserve water, protect biodiversity and human health. In addition, by reducing emissions and drawing carbon from the atmosphere as they build soil organic carbon, farmers can help slow the build-up of GHGs in the atmosphere and even draw them down. With the UK's help, farmers can both secure their own homelands and influence the broader trajectory of climate change.

The UK Government, which already engages in agricultural development, and has a budget of over £60 billion available for the next five years for overseas development and international climate finance, is invited to co-ordinate, expand and focus its efforts on agricultural development. This is the only way that the UK can avert what will otherwise turn the climate emergency into a social and political catastrophe in a few, short years.

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