

Global Security Briefing – May 2016

Climate Change: Prospects for Effective Future Action

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Summary

This briefing updates an earlier ORG report on climate change and points to the significance of the recent acceleration in global warming in relation to the need for a radical transition to ultra-low carbon economies world-wide. It examines this in terms of the chances of such a change, not least in the context of the current US presidential election campaign.

Introduction

When Oxford Research Group developed its analysis of global security problems in the early 2000s, it took the view that the long-term threats that faced the world community encompassed trends that were scarcely factored in to conventional security analysis. Its conclusions were written up in a briefing published ten years ago next month (*Global Responses to Global Threats*, June 2006, see Executive Summary at the end of this briefing) and focused on four potential drivers of conflict:

- Climate change
- Competition over resources
- Marginalisation of the majority world
- Global militarisation

Since then, ORG has continued this work, with a particular emphasis on global militarisation and the manifest failures of the war on terror in Afghanistan, Iraq and Libya, but the overall analysis has continued, not least in relation to climate change. A briefing in March 2014 (*Responding to Climate Disruption – Developing the Agenda*) focused on the policies required world-wide to develop low-carbon economies, placing particular emphasis on the role of states across the Global South:

Recent examples of short-term climate disruption have done much to bring the overall issue of climate change up the political agenda. In responding to what will be one of the key challenges of the next decades – well beyond the 15-year lifetime of the post-2015 global development goals currently under discussion – much of the attention has been focused on the need to adapt to those elements of climate change that are already irreversible and also to the need to de-carbonise existing high carbon-emitting economies. What needs much greater attention is the fundamental need to ensure that low-carbon emitters in the Global South are enabled to combine effective human development with responding to the challenges of climate change.

This briefing returns to the climate change theme in the light of last year's Paris conference and a number of other recent developments.

The Challenge

The Paris conference on climate change last December was effective in focusing attention on the dangers of climate disruption, and there was general agreement that any increase in world-wide temperature needed to be kept to 1.5 °C rather than the previously accepted figure of 2.0 °C, since it was now thought that the latter would lead to severe climate disruption with very serious consequences. This was against a background of a rise of just under 1.0 °C over the last century, most of it since the 1960s, meaning that temperatures should not be allowed to rise by more than 0.5 °C in the coming years.

The reality is that there are indications that this increase is very likely to be reached and then exceeded within the next five to ten years unless the process of de-carbonising human activity is substantially accelerated. While there is insufficient political will for this at present, a number of climate-related events over the past three years, and especially over the past nine months, may serve as a wake-up call for immediate action in spite of the political inertia in some key countries.

Current Trends

The February 2014 briefing commented on what appeared to have been a slowing down in the rate of increase in global temperatures and suggested an explanation:

In recent years there has been a relative pause in the rate of atmospheric warming but research points to aspects of the Southern Oscillation being responsible, temporarily slowing the overall rate of warming of the atmosphere, but not of the oceans. This is expected to change in the second half of the current decade and the effect of this will be that anthropogenic-induced warming and natural cycles will be in synchrony, leading to rapid change and greater climatic disruption.

In practice, 2014 turned out to be the warmest year on record and it was exceeded by 2015. There are strong indications that 2016 will be even warmer. The seven-month period between October last year and April this year saw every month break the warmest-ever record, sometimes by a degree. In early May, the highest temperature ever recorded in India came in the midst of a severe heat wave. Thus we have seen unprecedented and sudden increases in global temperatures, and there are some explanations for this.

The pattern of the last few decades has been for a reasonably steady increase in the concentration of carbon dioxide in the atmosphere and also an increase in temperature. The temperature change, though, is also affected by short-term factors which sometimes counter the overall warming trend and others that tend to exacerbate it.

As the previous briefing suggested, one of the main ones of these is the variably cyclical phenomenon of the Southern Oscillation. Mainly a Pacific Ocean process and more commonly known by one of its major components, the El Niño/La Niña phenomenon, this does appear to have been responsible for limiting the rate of warming from the late 2000s through to around 2012. This “pause” was taken by climate change sceptics and deniers to be proof of their view that climate change is not a serious problem, but from 2013 this effect became muted and now appears to have been reversed a couple of years earlier than expected.

It is this combination that has most likely been responsible for the recent temperature surge and it may persist for some months and even beyond the end of 2016. Even after its effect is no longer felt, the background trend will be towards continual warming, with two factors especially relevant.

Asymmetry and Feedbacks

The first is that there is now abundant evidence that climate change is globally asymmetric in its effect. Overall there are expected to be progressive increases in temperatures and changes in rainfall distribution, but with the temperature rises being much higher around the Arctic and northern sub-Tropics and global rainfall tending to fall more over the oceans than the land masses and more over the poles than over tropical and sub-tropical regions.

One important consequence is likely to be an adverse effect on the ecological carrying capacity, and therefore the productivity, of many of the world's most important croplands, especially in poorer countries across the Global South that are least able to cope with such changes. The consequences in terms of migration driven by desperation will be immense, given recent experience of very much lower migration pressures.

The asymmetry is also likely to have another effect in relation to positive feedback, where temperature increases brought about by climate change have effects which further increase the rate of warming. A well-recognised example of this is a variant of the Albedo effect – solar radiation melts sea ice in the Arctic leaving more open water. This absorbs more solar radiation than ice cover which means that the ocean warms, more ice melts and it warms the sea water further and yet more ice melts. The rate of loss of Arctic sea ice has generally exceeded the predicted levels of climate models, giving real concern that unanticipated changes are now under way.

A second probable positive feedback is that as the near-Arctic warms, large areas of permafrost will melt and marsh gas (methane) will be released from newly thawed and rotting vegetation. This is already being recorded and the considerable worry is that methane is a far more potent greenhouse gas than carbon dioxide.

Less recognised as a major problem until recently is the status of the vast Boreal forests of the near-Arctic that stretch across Alaska, Canada, Scandinavia and especially right across Siberia. As temperatures rise, these dry out in the spring and early summer resulting in a marked increase in wildfires. The recent Canadian experience that necessitated the evacuation of around 80,000 people from the town of Fort McMurray and surrounding communities brought this phenomenon world-wide media attention. Forests do regenerate in time but it takes decades for the equivalent of the carbon dioxide released in the original wildfires to accumulate in the new growth.

There is, in addition, the issue of the huge carbon sinks of the tropical rain forests. Large areas are already being lost to logging but the greater fear is that if climate change asymmetrically affects Amazonia with above average temperature increases, then there is a real risk that much of that carbon sink will be released into the atmosphere.

Consequences

The main consequences will be serious food shortages and the impact of more severe weather events. Both should be expected to lead to considerable suffering as well as social and political instability. Even more significant in global terms, there will be greatly increased migratory pressures, mainly from the worst affected regions towards relatively more wealthy and stable states. The reaction of European states to the recent relatively small influx of refugees from the Middle East and South Asia and of migrants from sub-Saharan Africa does not bode well for humanitarian responses. A “close the castle gates” mentality and refuge in more extreme right-wing politics seems all too possible.

Responses

The means exist to radically reduce carbon emissions from the Global North and to implement strategies for the development of low carbon economies in the Global South. There has been an impressive range of technical developments in the use of the most significant renewable energy resources, especially wind and solar power and this means it would be possible to cut carbon emissions across the world by at least 70% by 2030. This is far more than is currently planned but is feasible provided financial, technological and intellectual resources are devoted to the task. At the present time, this is seriously lacking and there is little evidence of the political wisdom and leadership required.

Prospects

This then raises the question of whether the current increase in global temperatures will be sufficient to cause a change in political attitudes. At the time of writing this does not look promising and much will depend on changes in the short term with these, in turn, depending on the possible impact of serious weather events. Some states such as Canada are showing a positive change in attitude but others, such as Britain, have governments which have reversed previous policies designed to encourage renewables and energy conservation.

Perhaps it is a regrettable reflection of current world politics that much will depend on the outcome of the US Presidential Election later this year. The George W. Bush presidency from 2001 to 2009 was a period of climate change denial which did great damage to world responses to the problem. The 2009-17 Obama administration has been rather better, although heavily constrained by domestic politics, especially the majority attitude of both Houses of Congress. If the 2016 election is fought by Hillary Clinton and Donald Trump, then the former is unlikely to reverse the modest gains of the Obama era but Mr Trump has made it abundantly clear that he would wish to withdraw from the Paris agreement and accelerate the domestic production of fossil fuels. In terms of prospects for a serious global change in attitude to climate change, much will depend on the result of the election.

Global Responses to Global Threats (ORG Briefing, June 2006) Executive Summary

Since 9/11 and the development of the 'war on terror', international terrorism has been promoted in Washington, London and other Western capitals as the greatest threat facing the world at the current juncture. However, this paper shows that international terrorism is actually a relatively minor threat when compared to other more serious global trends, and that current responses to those trends are likely to increase, rather than decrease, the risks of further terrorist attacks.

In examining these issues, this report offers an overview of four groups of factors that the authors have identified as the root causes of conflict and insecurity in today's world and the likely determinants of future conflict:

- 1 Climate change
- 2 Competition over resources
- 3 Marginalisation of the majority world
- 4 Global militarisation

These factors are the trends that are likely to lead to substantial global and regional instability, and large-scale loss of life, of a magnitude unmatched by other potential threats.

Current responses to these threats can be characterised as a 'control paradigm' – an attempt to maintain the status quo through military means and control insecurity without addressing the root causes. The authors argue that current security policies are self-defeating in the long-term, and so a new approach is needed.

This new approach to global security can be characterised as a 'sustainable security paradigm'. The main difference between this and the 'control paradigm' is that this approach does not attempt to unilaterally control threats through the use of force ('attack the symptoms'), but rather it aims to cooperatively resolve the root causes of those threats using the most effective means available ('cure the disease'). For example, a sustainable security approach prioritises renewable energy as the key solution to climate change; energy efficiency as a response to resource competition; poverty reduction as a means to address marginalisation; and the halting and reversal of WMD development and proliferation as a main component of checking global militarisation. These approaches provide the best chance of averting global disaster, as well as addressing some of the root causes of terrorism.

Governments will be unwilling to embrace these ideas without pressure from below. The authors argue that NGOs and the wider civil society have a unique chance to coordinate their efforts to convince government that this new approach is practical and effective. This will mean a closer linking of peace, development and environmental issues than has so far been attempted. New political leadership in the USA and UK in the coming years may well present the ideal opportunity for progress, but unless urgent action is taken in the next five to ten years, it will be extremely difficult, if not impossible, to avoid a highly unstable global system by the middle years of the century.

About the Author

Paul Rogers is Global Security Consultant to Oxford Research Group and Professor of Peace Studies at the University of Bradford. His 'Monthly Global Security Briefings' are available from our website. His new book Irregular War: ISIS and the New Threats from the Margins will be published by I B Tauris in June 2016. These briefings are circulated free of charge for non-profit use, but please consider making a donation to ORG, if you are able to do so.

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