

Climate Wars by Gwynne Dyer

CHAPTER ONE

The Geopolitics of Climate Change

The scenario I've just described is not the sort that the climate modellers produce; they wisely stay well clear of any attempt to describe the political, demographic and strategic impacts of the changes they foresee. My scenario also posits a higher global average temperature for 2045 than the bulk of the models predict, but 2.8 degrees Celsius higher by that date is within the range of possibility, especially if some of the positive feedback mechanisms, such as the partial failure of the oceanic carbon sinks, the melting of the permafrost, and an ice-free Arctic Ocean in the summertime, begin to operate within this period. Unhappily, recent data from the tropical oceans, the permafrost belt and the Arctic Ocean suggest that all these feedbacks may be starting to kick in now, much earlier than expected.

The scenario also assumes that the governments of the planet will not have taken advantage of the twenty-year window of opportunity that we still have to get global emissions of greenhouse gases down by 80 percent. It assumes that mid-century will see the world on the upper path of global heating, with the planet's average temperature already two or three degrees Celsius hotter and heading for eight, nine or ten degrees hotter by century's end. In this world, our worries are not just hotter summers, bigger hurricanes, rising sea levels and polar bears swimming for their lives. We are trying to avoid megadeaths from mass starvation and, quite possibly, from nuclear wars – and the odds aren't good.

This is a world in which food imports are no longer available at any price, as there is a global food shortage. But there are still relative winners and relative losers: the higher-latitude countries – northern Europe, Russia, Canada – are still getting adequate rainfall and are able to feed themselves, while those in the mid-latitudes are in serious trouble. Even the United States has lost a large amount of its crop-growing area as the rain fails to fall over the high plains west of the Mississippi, persistent droughts beset the southeast, and the rivers that provided irrigation water for the Central Valley of California cease to flow in the summertime. Countries of smaller size, like Spain, Italy and Turkey on the northern side of the Mediterranean (not to mention those on the southern side), find that their entire land area is turning into desert and that they can no longer feed their populations. The northeastern monsoon that brought rain to the north Chinese plain has failed, and the rivers that watered southern China have suffered the same fate as those that provided California's water: now they only flow in the wintertime.

This is a world where people are starting to starve, but it is not always the familiar scene of helpless peasant societies facing famine with numb resignation. Some of the victims now are fully developed, technologically competent countries, and their people will not watch their children starve so long as there is any recourse, however illegitimate, that might save them. So the lucky countries in the northern tier that can still feed themselves

– but have little or no food to spare – must be able to turn back hordes of hungry refugees, quite probably by force. They must also be able to deal with neighbours who try to extort food by threats – and these desperate neighbours may even have nuclear weapons. Appeals to reason will be pointless, as it is reasonable for nations to do anything they can to avoid mass starvation.

If the climate modellers will not generate this kind of scenario, who will? The military, of course.

The military profession, especially in the long-established great powers, is deeply pessimistic about the likelihood that people and countries will behave well under stress. Professional officers are trained to think in terms of emergent threats, and this is as big a threat as you are going to find. Never mind what the pundits are telling the public about the perils of climate change; what are the military strategists telling their governments? That will tell us a great deal about the probable shape of the future, although it may not tell us anything that we want to hear.

In Britain, climate change has been taken seriously at the official level for a long time, and the British Armed Forces are free to discuss any scenarios they want. The *DCDC Global Strategic Trends Programme 2007—2036*, third edition, 2006, a ninety-one-page document produced by the Development, Concepts and Doctrine Centre within the British Ministry of Defence and regularly updated online, is “a source document for the development of UK Defence Policy.”

In many ways, it is a remarkably sophisticated document. At one point, for example, it observes that “by the end of the period [2036] it is likely that the majority of the global population will find it difficult to ‘turn the outside world off.’ ICT [information and communication technology] is likely to be so pervasive that people are permanently connected to a network or two-way data stream with inherent challenges to civil liberties; being disconnected could be considered suspicious.” But on the political and strategic impacts of climate change, it is surprisingly terse. Here is all it has to say on the matter:

The future effects of climate change will stem from a more unstable process, involving sudden and possibly in some cases catastrophic changes. It is possible that the effects will be felt more rapidly and widely than anticipated, leading, for example, to an unexpected increase in extreme weather events, challenging the individual and collective capacity to respond . . .

Increasing demand and climate change are likely to place pressure on the supply of key staples, for example, a drastic depletion of fish stocks or a significantly reduced capacity to grow rice in SE Asia or wheat on the US plains. A succession of poor harvests may cause a major price spike, resulting in significant economic and political turbulence, as well as humanitarian crises of significant proportions and frequency . . .

Water stress will increase, with the risk that disputes over water will contribute significantly to tensions in already volatile regions, possibly triggering military action

and population movements . . . Areas most at risk are in North Africa, the Middle East and Central Asia, including China whose growing problems of water scarcity and contamination may lead it to attempt to re-route the waters of rivers flowing into neighbouring India, such as the Brahmaputra . . .

A combination of resource pressure, climate change and the pursuit of economic advantage may stimulate rapid large-scale shifts in population. In particular, sub-Saharan populations will be drawn towards the Mediterranean, Europe and the Middle East, while in Southern Asia coastal inundation, environmental pressure on land and acute economic competition will affect large populations in Bangladesh and on the East coast of India. Similar effects may be felt in the major East Asian archipelagos, while low-lying islands may become uninhabitable.

There now, that wasn't so bad, was it? A shortage of fish here, a major price spike in food there, a little border war between China and India over re-routing the rivers, and a few tens of millions of climate refugees heading north out of sub-Saharan Africa and Bangladesh. If that's the sum of the damage climate change that will bring in the next thirty years, we can live with that.

Unfortunately, that isn't the end of it. This exercise in future-gazing only takes us out to 2036, not to 2045. Far more importantly, it is dated December 2006, which means that the climate forecasts it is using come from the Intergovernmental Panel on Climate Change's 2001 report, not its 2007 report. Essentially, the data it is using are on average close to ten years old. That makes a big difference, because the data and the forecasts have been getting steadily worse. The next iteration of the DCDC report will at least refer to the 2007 IPCC report (although that is already seriously out of date, too), and is likely to feature much darker scenarios on the climate-change front.

So, if the British Armed Forces aren't producing up-to-date scenarios about the political and strategic impacts of climate change, who is? The American military? But here we have the problem that the U.S. government, from the inauguration of President George W. Bush in January 2001 until sometime in late 2006, was in complete denial about climate change. In subsequent months the phrase "climate change" was finally heard to pass the president's lips unaccompanied by disparaging remarks several times, so, in late March 2007, the U.S. Army War College sponsored a two-day conference on "The National Security Implications of Climate Change," at which civilian strategists and active duty and retired officers explored a wide range of climate-related security issues. It seems clear that the military had been chafing at the bit for some time previously, however, since the following month saw the publication of a study that had been in the works for at least two years. At the time when it was commissioned, no bureaucratic warrior experienced in Washington's ways would have risked putting his or her name on a study of the geopolitics of climate change, so the Pentagon farmed the job out to the CNA Corporation.

I have long been interested in and concerned about how environment affects security, and I spent eight years at the Department of Defense with that portfolio, environmental

security. I was approached by a group of foundations several years ago and asked specifically if I would examine the national security implications of climate change, and for that purpose I assembled the Military Advisory Board of retired three- and four-star generals to assist us in that effort.

In our report, we were looking primarily over the next thirty to forty years. There are certainly disruptive events that could potentially occur earlier. An extreme weather event, or multiple extreme weather events, could occur at any time. But the more significant implications probably occur over the next several decades, and then of course far into the future. Unless we begin to reduce greenhouse-gas emissions and change the way we use energy, we really have some frightening futures.

–Sherri Goodman, general counsel, CNA Corporation, in an interview with the author, February 4, 2008

The CNA Corporation is actually the old Center for Naval Analyses, descended from the group of scientists who brought the fledgling methodology of “operational research” to bear on the problem of anti-submarine warfare during the Second World War, and subsequently on other problems of naval strategy and tactics as well. It is now described as “a federally funded research and development center serving the Department of the Navy and other defense agencies.” It produced its report, *National Security and Climate Change*, in April 2007.

The exercise involved choosing eleven recently retired three- and four- star generals and admirals from all four services, exposing them to the views of a large number of people working on climate change or related fields, and then writing a study on which the retired military men were asked to comment and elaborate. It created quite a stir when it was published, precisely because it effectively circumvented the Bush ban on treating climate change as a real and serious phenomenon.

You already have great tension over water [in the Middle East]. These are cultures often built around a single source of water. So any stresses on the rivers and aquifers can be a source of conflict. If you consider land loss, the Nile Delta region is the most fertile ground in Egypt. Any losses there [from a storm surge] could cause a real problem, again because the region is so fragile . . .

We will pay for this one way or another. We will pay to reduce greenhouse-gas emissions today, and we’ll have to take an economic hit of some kind. Or we will pay the price later in military terms. And that will involve human lives. There will be a human toll. There is no way out of this that does not have real costs attached to it.

–General Anthony C. “Tony” Zinni, USMC (Ret.), former commander in chief, U.S. Central Command, *National Security and Climate Change*, April 2007

The *National Security and Climate Change* study is sixty-two pages long and very well sourced, but it doesn’t really offer scenarios. It covers all the bad things that may happen

if global warming progresses past a certain point, region by region, but it doesn't even specify what that point is. Indeed, it resembles a more concise version of all the books that have been published by various luminaries over the past couple of years rehearsing all the undesirable things that will happen to us if we don't pull our socks up and deal with global warming: a dab of science, a shopping list of small and large disasters in no particular order (not even in a likely time sequence), and a good deal of exhortation to take this seriously.

The real point of the exercise was probably to persuade a largely military audience of the importance of climate change by having the retired generals and admirals give it their imprimatur. A panel of experts wrote the actual report, but the senior officers were each given an entire page to express their views on the contents and the topic – and it is their testimony that is the heart of the matter. They are intelligent men of considerable experience, so they offer coherent and convincing testimony. But they are clearly selling something.

People are saying they want to be convinced, perfectly. They want to know the climate science projections with 100 percent certainty. Well, we know a great deal, and even with that, there is still uncertainty. But the trend line is very clear. We never have 100 percent certainty. We never have it. If you wait till you have 100 percent certainty, something bad is going to happen on the battlefield. That's something we know. You have to act with incomplete information. You have to act based on the trend line . . .

The situation, for much of the Cold War, was stable. And the challenge was to keep it stable, to stop the catastrophic event from happening. We spent billions on that strategy. Climate change is exactly the opposite. We have a catastrophic event that appears to be inevitable. And the challenge is to stabilize things – to stabilize carbon in the atmosphere. Back then, the challenge was to stop a particular action. Now, the challenge is to inspire a particular action. We have to act if we're to avoid the worst effects.

–General Gordon R. Sullivan, USA (Ret.), former chief of staff, U.S. Army, *National Security and Climate Change*, April 2007

What they are selling is a mission. The next mission of the U.S. Armed Forces is going to be the long struggle to maintain stability as climate change continually undermines it. The “war on terror” has more or less had its day, and besides, climate change is a real, full-spectrum challenge that may require everything from special forces to aircraft carriers. So it's time to jolt the rank and file of the officer corps out of their complacency, re-orient them towards the new threat, and get them moving.

Excerpted from **Climate Wars** by Gwynne Dyer Copyright © 2008 by Gwynne Dyer. Excerpted by permission of Vintage Canada, a division of Random House of Canada Limited. All rights reserved. No part of this excerpt may be reproduced or reprinted without permission in writing from the publisher.

REQUIRED RECIPROCAL LINK:

http://www.randomhouse.ca/catalog/display.pperl?isbn=9780307355843&ref=externallink_SWGC_ClimateWars