New US and UK Government Strategies Highlight the Climate Change and Security Nexus

This paper is a review of the climate change and security references contained within six different reports released since January 2010 by the governments of the United States and United Kingdom, including:

- "Annual Threat Assessment of the US Intelligence Community for the Senate Select Committee on Intelligence" (US)
- "Quadrennial Defense Review Report" (US)
- "Quadrennial Homeland Security Review Report: A Strategic Framework for a Secure Homeland." (US)
- "Adaptability and Partnership: Issues for the Strategic Defence Review." (UK)
- "Strategic Trends Programme: Future Character of Conflict." (UK)
- "Strategic Trends Programme: Global Strategic Trends—out to 2040" (UK)

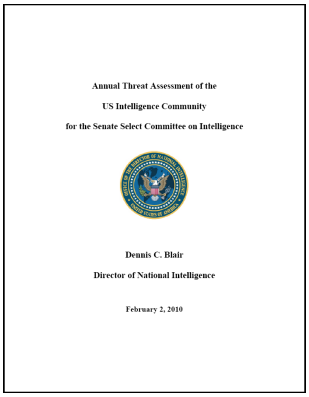
Common Themes

While each of these reports is unique in focus and has specific concerns, there are several themes that cross multiple or all of the reports reviewed below:

- Climate change is one of several "trends" or "drivers" of the current and future security environment
- The impact of the intersection of these trends is likely to increase human security concerns and sociopolitical instabilities, leading to an increase in need for humanitarian aid and assistance and possibly even humanitarian intervention
- The impact of the intersection of these trends is likely to also increase more traditional security concerns such as global balance of power, nuclear proliferation (as a source of clean energy), energy security, and the protection of critical infrastructure, while potentially decreasing the effectiveness of global governance structures
- Climate change will hold specific implications for military and defence forces. In particular, climate change will impact operating environments, changing the physical conditions troops face as well as changing operating strategies and the kinds of tools needed to successfully meet operational objectives
- Finally, there is a key intersection between the source and use of energy supplies and climate change: as energy security becomes more important, new technologies and sources of clean energy will become priorities for national governments, particularly those in the developed world.

United States

Dennis C. Blair. "Annual Threat Assessment of the US Intelligence Community for the Senate Select Committee on Intelligence." Office of the Director of National Intelligence: February 2, 2010. http://www.dni.gov/testimonies/20100202_testimony.pdf

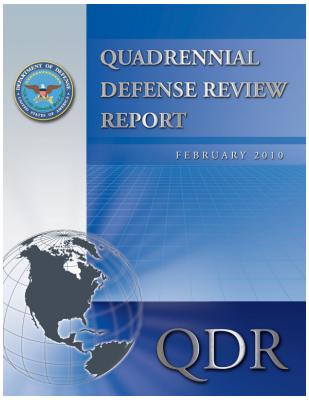

Annual Threat Assessment of the
US Intelligence Community
for the Senate Select Committee on Intelligence

Dennis C. Blair
Director of National Intelligence

February 2, 2010

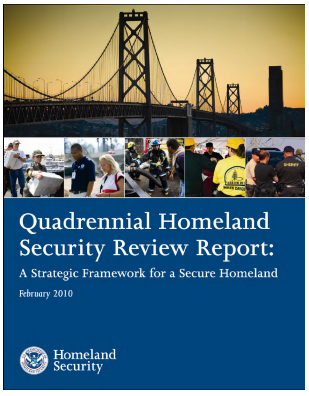
- "We continue to assess that global climate change will have wide-ranging implications for US National Security interests over the next 20 years because it will aggravate existing world problems—such as poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions—that threaten state stability." (39)
    - Unlikely to alone trigger state failure but may contribute to intra/inter state conflict
    - Water issues are a major concern
- Climate change may trigger more humanitarian crises (39)
    - May tax US military transportation and support structures
    - May strain US readiness posture and decrease strategic depth for combat operations
- Belief that effects of climate change are accelerating
- Regional Impacts (pg39-41)
    - India: effects manageable through 2030
        - greater impact after 2030 due to declining agricultural productivity and water supplies, and pressure from cross-border migration
    - China: increasing capacity to mitigate and adapt-
        - unsure if capacity will be fully used
        - coping ability reduced by internal migration, local water scarcities and changes in agricultural productivity and demand
    - Russia: significant impact on energy sector
        - Thawing permafrost will present a challenge for infrastructure
        - Robust capacity to respond to negative effects and mitigate risks of climate change
    - Mexico/Caribbean/Central America: water scarcity may spark tension/conflict
        - Migratory trends may increase crime concerns in region
    - Southeast Asia: state capacity weakened by poor governance
        - Region not yet focused on threat of climate change
        - Building of dam on Mekong River Basin a possible threat to agriculture, fisheries, human habitation in Cambodia and Vietnam
        - Large-scale migration could increase tension between diverse social groups
    - North Africa: will experience many climate-related pressures but not at risk of state failure
        - Climate change will impact food and water resources, economies, urban infrastructure, sociopolitical systems—leading to frequent civil unrest
        - Ineffective state responses may lead to local governmental collapses or humanitarian crises
        - Greater emigration to Europe is likely
    - Arctic: states have common goals but lack agreement on how to achieve them

Department of Defense, "Quadrennial Defense Review Report" United States: February 2010.
http://www.defense.gov/qdr/QDR%20as%20of%2029JAN10%201600.pdf



- Complex interplay of climate change and other trends (resource demands, rapid urbanization, new strains of disease, cultural and demographic tensions) may spark instability and conflict (iv)
- "Reforming how we do business": Need to innovate and adapt by crafting a strategic approach to climate and energy (climate change is an area where reform is imperative) (xv)
    - Manage the effects of climate change on operating environment, missions, facilities
- "Crafting a strategic approach to climate and energy": Climate change will shape the future security environment (84)
    - Will shape the operating environment through physical changes (i.e. changing temperatures, unpredictable weather, changing seasons)
- Climate change will have significant geopolitical effects around the world, contributing to poverty, environmental degradation, and fragility of governments (85)
    - May contribute to food and water scarcity, spread of disease, mass migration
- Climate change may accelerate instability or conflict (85)
    - Increasing the burden on civilian institutions and militaries worldwide
    - Increasing the demand for humanitarian assistance or disaster response
        - Both of which will require pro-active engagement with countries affected, to build trust and develop effective response capacity
- Climate change will impact US facilities and military capabilities (85)
    - Create challenges for protecting US extensive coastal infrastructure
- Commitment to fostering efforts to assess, adapt to, and mitigate impacts of climate change within DoD (86)
- Climate change will affect the current DoD approach to the Arctic—creating an opportunity to engage multilaterally on Arctic issues
    - DoD supports accession to the United Nations Convention on the Law of the Sea
- Need to incorporate geostrategic and operational energy considerations into force planning, requirements development, acquisition processes (87)
    - Reducing emissions and increasing the use of renewable energy supplies are priorities

Department of Homeland Security. "Quadrennial Homeland Security Review Report: A Strategic Framework for a Secure Homeland." United States: February 2010.
http://www.dhs.gov/xlibrary/assets/qhsr_report.pdf

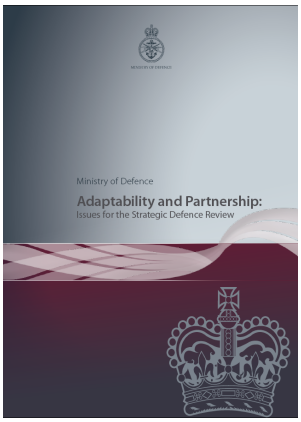


- One of the "threats and hazards" challenging US interests from a security perspective is "Dependence on fossil fuels and the threat of global climate change" (7)
    - Particular concern regarding
        - Disruption and manipulation of energy supplies
        - Changes to the natural environment on an unprecedented scale
        - Social and political destabilization

        - International conflict or mass migration on international scale
- "Assumptions regarding the security environment...climate change will increase the severity and frequency of weather-related hazards such as extreme storms, high rainfalls, floods, droughts, and heat waves" (9)

United Kingdom

Ministry of Defence Green Paper. "Adaptability and Partnership: Issues for the Strategic Defence Review." Presented to Parliament by the Secretary of State for Defence: February 2010.
http://www.mod.uk/NR/rdonlyres/790C77EC-550B-4AE8-B227-14DA412FC9BA/0/defence_green_paper_cm7794.pdf



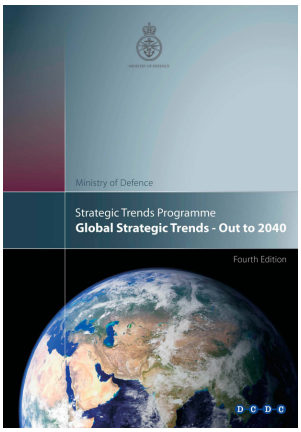
- "The next decade will see the development of a number of major trends, including…climate change (12)
    - May produce a wider range of potential threats to stability than previously faced
    - Difficulty in prediction will create an uncertain future international context
- "We believe five major trends will impact on the international context for defence in the coming decades" (13)
    - Climate change as one of these trends: "impact is likely to be most severe where it coincides with other stresses such as poverty, demographic growth and resource shortages"

Ministry of Defence. "Strategic Trends Programme: Future Character of Conflict." Development, Concepts and Doctrine Centre (DCDC): February 2010
http://www.mod.uk/NR/rdonlyres/3E38C6EC-4A76-402F-9E28-C571EAB9929F/0/fcoc_final_revised_12Feb10.pdf

- Dominant threat drivers to 2029: Climate Change (5)
    - May create instability in states already vulnerable to other pressures
    - UK Armed Forces may need to operate in areas of climatic extremes
- "The period around 2020 may see the convergence of a number of ongoing strategic trends…The most significant of these trends is climate change"(29)
    - Unless significant measures are achieved before then, climate change impacts may be impossible to contain
- Climate change may create potential for instability, particularly in areas experiencing resource shortages (31)
- Climate Change as a threat driver with regard to the future character of conflict (A1)
    - Two major impacts

- Changing the operating environment through increased desertification, melting ice caps, reduced water run-offs, higher ambient temperatures, more severe weather events
- Effect on large numbers of people living in states/regions with limited capability to adapt: can lead to instability

Ministry of Defense: "Strategic Trends Programme: Global Strategic Trends—out to 2040" Fourth Edition, January 12, 2010.
http://www.mod.uk/NR/rdonlyres/38651ACB-D9A9-4494-98AA-1C86433BB673/0/gst4_update9_Feb10.pdf



- From the present to 2040 will be a period of transition—climate change, global inequality, population growth, resource scarcity and shift of power from west to east will transform the strategic context (2)
  - This will bring non-linear change and persistent, complex challenges
- Identifying and interpreting the likely pattern of change over the next 30 years (7)
  - Four "Ring Road" issues—climate change, globalization, global inequality, innovation
- Climate change will amplify existing stresses and shift the tipping point at which conflict occurs (rather than directly causing it) (11/16)
  - Effects of greenhouse gas emissions (i.e. temperature increases) are likely to be unevenly distributed
- Climate change combined with other pressures is likely to lead to greater instability and possible increase in armed conflict (14)
  - Therefore: "few convincing reasons to suggest that the world *will* become more peaceful"
- Climate change is likely to increase the frequency, scale, and duration of humanitarian crises as well as change patterns of migration and create problems for border security (especially in the developing world) (16)
- There is a scientific consensus about the process of climate change and human contribution to it (21)
  - But still uncertainty about the rate and magnitude of change, making the future impact unpredictable
  - Future mitigation strategies are vital to limit impacts after 2040
  - These agreements will be highly politicized; especially given their effect on the relationship between developed and developing economies
  - Includes a long list of possible impacts/effects and indicates that these may be caused by progressive evolution or sudden instabilities
- Addressing climate change will require innovative technology and organizational solutions (24)
  - Will have an impact on society: people are the most important driver of change
  - Drivers (i.e. trends including climate change) will be interlinked and intense, shaping behaviour and development out to 2040

- Climate change combined with increased demand for food production—"likely to alter the productivity and distribution of the world's 'bread-basket' regions and accelerate soil degradation in previously fertile areas" (26)
- Mitigation efforts will have a significant impact on development of societal norms by 2040, such as the cost and use of energy and economic development strategies (26)
- Agreements to limit further temperature increases will be made eventually, but possibly only after a period of discord between nations over the right approach (26)
    - Need to switch from maximizing growth to sustaining growth: need policies and norms based on sustainability
    - Will exacerbate resource scarcity—will impact food security and agricultural adaptation
    - May lead to uncontrolled migration
    - May lead states to seek increased international humanitarian assistance on a larger scale
- Climate change is likely to continue to dominate the political agenda—especially in developed world, as it moves to a focus on sustainability (27)
    - The developing world will continue to try to maximize economic growth, while taking advantage of new kinds of technologies
- Regions suffering from high levels of inequality and poverty are likely to experience increased risk of humanitarian disasters (30)
    - May be increased incentive to enact humanitarian intervention norms
- Technology is only a partial solution for balancing energy needs with climate-friendly solutions (33)
    - Unlikely that the majority of energy demand will be met by new technologies before 2040
    - However, price of fossil fuels will likely rise, stimulating investment in cleaner and renewable energy sources
- Processes of global governance will need to evolve over time to deal with collective challenges like climate change (38-39)
    - Likely to be crisis-induced change, rather than proactive and pre-emptive change
    - Leading to a perception of an enduring crisis of global governance, particularly when agreements that are reached over a long span of time are not effectively implemented
- Climate change will exacerbate governance, human security, and development problems in many regions including sub-Saharan Africa (58)
    - Given Africa's limited capacity for resilience, many states may fail due to the instability created by global trends (61)
- Climate change coupled with technological advances will facilitate economic exploitation in the Arctic (63)
- Climate change may threaten state ability to provide for populations leading to greater emphasis on defence forces to provide security for and defend access to the physical necessities of survival (76)
    - Not entirely the role of military; however, focus may shift back from human security toward more traditional national and international security
- Trends/combined impacts of processes like climate change mean that national security will no longer be able to be fully secured through unilateral means—multilateral coordination and reliance on alliances will become more important (86)
- Climate change will drive urbanization (99)
- Climate change may weaken states; hinder governance capacities (106)

- Climate change may lead to mass population displacements, creating instability in border regions (114)
- Rapid climate change may shrink the global economy (120)
    - Mitigation and adaptation measures may become extremely expensive and difficult to implement
- Climate change is likely to put environmental issues into the global political consciousness, increasing the influence of environmental groups and possibly leading to political agitation and/or violence (134)