

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE (DD-MM-YYYY) 06-11-2007		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Global Climate Change: Threat Multiplier for AFRICOM? (U)				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Terri A. Yackle, LCDR, USN Paper Advisor (if Any): Professor J. Barker				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the Naval War College faculty in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.					
14. ABSTRACT The recent increased pace in which extreme weather patterns are occurring has received national level attention. Whatever the catalyst for this abrupt speed change, stability for Africa hinges upon mitigating the effects of global climate change to prevent future conflicts such as Darfur, instability that fosters terrorism, and new humanitarian support missions. This paper concludes that AFRICOM must take the initiative to plan for climate change effects now to ensure readiness when dealing with the catastrophic events predicted and further recommends the formation of an interim planning cell - JIAC-Climate Change. This planning cell would guarantee unity of effort and effectively fill the interlude until the Department of Defense is directed to plan for climate change at the operational level.					
15. SUBJECT TERMS Climate Change, Planning, AFRICOM					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 22	19a. NAME OF RESPONSIBLE PERSON Chairman, JMO Dept
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 401-841-3556

NAVAL WAR COLLEGE
Newport, R.I.

Climate Change: Threat Multiplier for AFRICOM?

by

Terri A. Yackle

Lieutenant Commander, United States Navy

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: _____

06 November 2007

Abstract

The recent increased pace in which extreme weather patterns are occurring has received national level attention. Whatever the catalyst for this abrupt speed change, stability for Africa hinges upon mitigating the effects of global climate change to prevent future conflicts such as Darfur, instability that fosters terrorism, and new humanitarian support missions. This paper concludes that AFRICOM must take the initiative to plan for climate change effects now to ensure readiness when dealing with the catastrophic events predicted and further recommends the formation of an interim planning cell – JIAC-Climate Change. This planning cell would guarantee unity of effort and effectively fill the interlude until the Department of Defense is directed to plan for climate change at the operational level.

Table of Contents

Introduction	1
Darfur	3
Stability	5
Humanitarian Assistance	7
Counterargument	10
Rebuttal	12
Recommendations	13
Conclusion	16
Bibliography	17

Introduction

“While uncertainty exists and debate continues regarding the science and future extent of projected climate changes, the trends are clear. The nature and pace of climate changes being observed today and the consequences projected by the consensus scientific opinion are grave and pose equally grave implications for our national security.” - Military Advisory Board¹

At one time it was comforting to cling to the hope that global climate change would be a nebulous worry for future generations, but as severe weather upsets lives all over the planet it is time to address a new and possibly immediate threat multiplier. The headlines scream: 400,000 Indonesians flee flooded homes, Category 5 cyclone packing 180 mph winds explodes through Northern Australia, ice calves the size of American states depart the Arctic and Antarctica, first-ever hurricane in the Southern Atlantic, Hurricane Katrina and Rita devastate New Orleans.² Global climate change is happening now and the world must take notice.

In February 2007, the United Nation’s (UN) Intergovernmental Panel on Climate Change announced that the earth’s climate is warming primarily due to human activities.³ In March, the U.S. Army War College and Triangle Institute for Security Studies hosted a conference titled “The National Security Implications of Global Climate Change”.⁴ This event was closely followed by the release of a Center for Naval Analysis (CNA) eight-month-long study conducted by a panel of eleven retired flag officers that concluded climate

¹ Military Advisory Board, quoted in “Climate Change Poses Serious Threat To U.S. National Security,” *Science Daily.com*, 17 April 2007, <http://www.sciencedaily.com/releases/2007/04/070417092232.html/> (accessed 05 October 2007).

² Jeffrey Kluger, “When a Planet Fights a Fever,” *TIME: Global Warming*, Time Books, Time Inc. Specials, 2007, 14-15.

³ Ibid.

⁴ Juliet Eilperin, “Military Sharpens Focus on Climate Change,” *Washington Post.com*, 15 April 2007, <http://www.washingtonpost.com/wp-dyn/content/article/2007/04/14/AR2007041401209.html/> (accessed 22 September 2007).

change is a national security threat the military needs to plan for.⁵ Days later, the UN Security Council held its first-ever brief addressing climate change as a threat multiplier.⁶ Such significant international attention on climate change is largely due to the phenomenal increase in pace in which extreme weather patterns are occurring thus speeding up the time factor for the projected dire consequences from global warming.

No matter what the real catalyst for this abrupt speed change proves to be, Africa is a strategic and security concern for the United States that is also highly susceptible to the projected effects of global climate change. Africa comprises twenty-five percent of the world's land mass and twenty percent of its coastline⁷. Furthermore, it has twenty-five percent of its population residing within sixty-two miles of the coastline, including six of its ten largest cities.⁸ Should the sea-level rise as predicted, Africa could experience a massive migration and permanently displace much of its population.⁹ Moreover, extreme weather events occurring on a larger magnitude, such as droughts, flooding, fires, desertification, habitat shifts, and widespread life-threatening diseases, are also expected to exert a destabilizing influence upon Africa.¹⁰

The National Security Act of 2010 will formally address climate change and the planning requirement for the threat environment.¹¹ While this strategic process is developing, it would be wise for the new African Combatant Commander (AFRICOM) to

⁵ Ibid.

⁶ Ibid.

⁷ Paterson, "Taking Africa Seriously," *U.S. Naval Institute Proceedings* (October 2007), 37.

⁸ Center for Naval Analysis, *National Security and the Threat of Climate Change*, Arlington, VA, CNA Corporation, April 2007, 27.

⁹ Ibid., 22.

¹⁰ Ibid., 6.

¹¹ Douglas V. Johnson, II, Strategic Studies Institute, U.S. Army War College and Triangle Institute for Security Studies, *Global Climate Change: National Security Implications*, Colloquium Brief, 2007. <http://www.strategicstudiesinstitute.army.mil/Pubs/Display.cfm?pubID=779/> (accessed 30 September 2007).

initiate planning for its Area of Responsibility (AOR) to integrate multinational and multi-agency cooperation to address climate change trends and forecasts. These combined civil and military efforts will need to consider the relationship between the space and time factors to develop an approach to deal with climate change at the operational level. This paper will conduct a closer examination of Darfur as the first war in the era of rapid climate change, review the necessity to plan stability operations for threat multiplier prevention, and examine how profoundly the humanitarian assistance mission may change.

Darfur

“We discuss Darfur in a convenient and military shorthand – an ethnic conflict pitting Arab militias against black rebels and farmers. Look to its roots, though, and you discover a more complex dynamic. Amid the diverse social and political causes, the Darfur conflict began as an ecological crisis, arising at least in part from climate change.” – Ban Ki Moon¹²

Darfur may well be the first test case for the new combatant commander to deal with in order to successfully interact with Africa. Located in southern Sudan, the Darfur region has experienced a forty percent decrease in rainfall since the early 1980s and is steadily losing agricultural production due to the Sahara’s southward expansion.¹³ This desertification turns arable lands into desert by depleting its soil of nutrients.¹⁴ The associated loss of rainwater resource coupled with desertification has changed the dynamics of the local population. Where once non-Arab farmers in the Darfur region peacefully allowed Arab herders from the north to cross their land and share their wells in exchange for

¹² Ban Ki Moon, Secretary General of the United Nations, *A Climate Culprit in Darfur*, In The Washington Post, Washington, DC, Citizens for Global Solutions, 16 June 2007, http://www.globalsolutions.org/issues/darfur/ban_climate_culprit/ (accessed 13 October 2007).

¹³ Ibid.

¹⁴ U.S. Department of State, “Desertification: Earth’s Silent Scourge,” United States Department of State, <http://www.usinfo.state.gov/products/pubs/desertific/> (accessed 28 October 2007).

dairy and meat products, now fences have been built to protect their dwindling resources for crops.¹⁵

The shortage of resources created distrust and desperation. In 2003, competition for food and water devolved into regional conflict.¹⁶ Continuing to escalate into genocide, more than 200,000 people have been killed and 2.5 million refugees displaced.¹⁷ Subsequently, Darfur's internal strife has expanded its reach into nearby states to magnify the impact on this region. Guerada, a refugee camp in neighboring Chad, is experiencing similar turmoil as local farmers are forced to share limited resources with the large influx of refugees, further depleting and exceeding their resource capacity.¹⁸ There is no longer enough water to drink let alone grow crops for food or economic purpose. Moreover, the kinetic aspect of this conflict is destroying water wells and crops.¹⁹ Trees are being burned and the herds are overgrazing land.²⁰ In refugee camps, brick and coal making are also creating an unsustainable demand on local resources.²¹

To provide assistance to this region, AFRICOM will need to participate in a unity of effort with the African Union (AU) and the United Nations supporting the African Union Mission in Sudan (AMIS) as it transitions to the United Nations African Union Mission in Darfur (UNAMID).²² Working closely with the Non-Governmental Organizations (NGOs) and Inter-Governmental Organizations (IGOs) that will provide humanitarian and logistical

¹⁵ Ban Ki Moon, *Climate Culprit in Darfur*.

¹⁶ Ibid.

¹⁷ Alex Perry, "How To Prevent the Next Darfur," *Time*(169), iss.19 (07 May 2007), 39, <http://www.proquest.umi.com/i/pub/28294.gif/> (accessed 16 October 2007).

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

²² William E. Ward, Commander, United States Africa Command. *General Ward's Response to Advance Questions Submitted by the Senate Armed Services Committee*, Washington, DC, Senate Armed Services Committee, 27 September 2007, 29, <http://www.africom.mil/> (accessed 22 October 2007).

assistance, as well as support the diplomatic process, the U.S. must also plan for contingencies to pressure the Sudanese government into accepting the UN peacekeeping force in-country.²³ The combatant commander will most likely need to support the African Union (AU) and UN command and control structure at the operational level in order to provide the Darfur region stability and assist in resolving the conflict that climate change has played a large role in creating.²⁴

Instability

“It’s not hard to make the connection between climate change and instability, or climate change and terrorism.” - General Zinni²⁵

Africa is a volatile region that is already greatly stretched for natural resources and accounts for thirty percent of the world’s refugees.²⁶ Further climate change, to even a small degree, will disastrously increase its instability.²⁷ Since most of Africa is comprised of failing or failed states, it experiences the resultant instability that affords those without peaceful alternatives to find the money associated with terrorism and radical extremism attractive.²⁸ Therefore, after September 11, 2001, the War on Terror led the U.S. to seriously take a look at Africa and the terrorists harbored there.²⁹ After all, the consequences of terrorists using Africa as a jihadist recruit a training ground³⁰ and devolving to a greater violence similar to Darfur is deplorable.

²³ Ibid.

²⁴ Ban Ki Mon, *Climate Culprit in Darfur*.

²⁵ Anthony C. Zinni, former Commander-In-Chief, U.S. Central Command, as quoted in CNA, *Threat of Climate Change*, 31.

²⁶ Ibid., 22.

²⁷ Ibid., 31.

²⁸ Ibid., 20-22.

²⁹ Paterson, “Taking Africa Seriously,” 37.

³⁰ Ibid.

Without external assistance, Africa's outlook is dire. Therefore, the U.S.'s new proactive approach toward stabilizing this continent led to the establishment of the Combined Joint Task Force-Horn of Africa (CJTF-HOA) whose main objective is to prevent conflict and create stability.³¹ Likewise, America's largest anti-terrorism effort outside of the Middle East was also formed, Operation Enduring Freedom-Trans Sahara (OEF-TS).³² Furthermore, in 2006, the Department of Defense released a directive that mandated military stability operations be conducted to maintain order in states and regions.³³ Then, on February 6, 2007, the President authorized the creation of a new combatant command in Africa (AFRICOM).³⁴

This much attention from an external source will be crucial to Africa's future. Experts predict that Africa will experience a population growth from 800 million to 2 billion people by the year 2050; of even greater concern is the fact that over fifty percent of the current population is under the age of fifteen.³⁵ Should their local political leadership be inadequate to provide for them, this large impressionable group will be a target of opportunity for terrorist and radical extremist training. Moreover, the training is likely to find sanctuary in the Africa's vast, mostly uncontrolled, expanse of land.³⁶

Aggravating the situation further, the majority of African livelihoods are centered upon rural pastimes.³⁷ Once the resources for farmers and herders are depleted their children no longer will have the opportunity to learn these peaceful practices or benefit from

³¹ Ibid.

³² Ibid., 39-40.

³³ CNA, *Threat of Climate Change*, 40.

³⁴ Paterson, "Taking Africa Seriously," 37.

³⁵ Ibid., 40.

³⁶ Ibid.

³⁷ Ellen Messner, and Marc J. Cohen, and Thomas Marchione, *Conflict: A Cause and Effect of Hunger*, ECSP Report (7), 4, <http://www.wilsoncenter.org/topics/pubs/ECSP7-featurearticles-1.pdf> (accessed 05 October 2007).

educational activities leading to diversified alternatives.³⁸ Sadly, children who only learn fighting will only be prepared for a life of conflict. Inadequate plans to respond to the effects of climate change: massive migrations, unfulfilled resource demands, and weak leadership unable to provide basic necessities, will increase instability in a growing population with a bleak future.

Justifiably, AFRICOM has a mission to create stability throughout the African Area of Responsibility. National Security Council (NSC) 2006 has inadequately prepared the operational level to plan for the destabilizing effects of climate change.³⁹ Therefore, new planning by the combatant commander is needed to promote regional cooperation and communication to mitigate current African humanitarian catastrophes that will multiply and worsen with climate impact.⁴⁰ Executed properly, such planning will enhance an operational use of the Theater Security Cooperation (TSC) and collaboration with interagency partners to promote stability and peace-building capacity throughout African nations.⁴¹

Humanitarian Assistance

“Responding after the fact with troops – after a crisis occurs – is one kind of response. Working to delay these changes – to accommodate a balance among these staples – is, of course, another way.” - General Kern⁴²

Global warming has the potential to dramatically change the role of AFRICOM's humanitarian assistance. Droughts caused by lack of water, and floods caused by too much

³⁸ Ibid.

³⁹ CNA, *Threat of Climate Change*, 45.

⁴⁰ Charles F. Wald, “New Thinking at USEUCOM: The Phase Zero Campaign,” *Joint Force Quarterly*, no. 43 (Fourth Quarter 2006): 73.

⁴¹ Ibid., 72-73.

⁴² Paul J. Kern, former Commanding General, U.S. Army Material Command, as quoted in CNA, *Threat of Climate Change*, 35.

water, are responsible for more than half of the world's fatalities from natural disaster.⁴³ As more severe storm activity in the form of tropical cyclones not only damages infrastructure, the accompanying rains can also cause widespread agricultural destruction. This is particularly devastating to African regions whose economies are dependent upon agriculture.

An example of this was illustrated when Tropical Cyclone Eline hit Mozambique in 2000.⁴⁴ Rivers that were previously flooded from heavy rainfall earlier in the month again flooded and left more than 500,000 people homeless.⁴⁵ In nearby South Africa, roads, bridges and drainage systems were destroyed, as well as 50 percent of the crops that were to be exported.⁴⁶ Flooding from Eline was labeled the worst flood in 50 years and required some form of humanitarian assistance for 950,000 people.⁴⁷ Unfortunately, severely intensified storms such as Tropical Cyclone Eline are rapidly becoming commonplace and are projected to continue to increase as the climate changes.⁴⁸ Subsequently, impacted countries will most likely request military humanitarian assistance and disaster relief support due to the magnitude of the response effort needed.

Therefore, AFRICOM's headquarters will be a centralized point for Africa's humanitarian assistance and disaster relief efforts.⁴⁹ As such, ensuring food security will alleviate immediate and future conflicts as well as provide stability to the continent. With increased stability, monetary resources can be focused on the peaceful development of agriculture and other resources rather than being diverted to pay the high cost of a national

⁴³ Kelly Knauer, "Heat, Floodwaters and Risk Are Rising," *TIME: Global Warming*, Time Books, Time Inc. Specials, 2007, 8.

⁴⁴ "Tropical Cyclone Eline: February 2000," *South African Weather Service.com*, February 2000, <http://www.weathersa.co.za/Pressroom/2000/2000FebTCEline.jsp/> (accessed 06 October 2007).

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ CNA, *Threat of Climate Change*, 13.

⁴⁹ Paterson, "Taking Africa Seriously," 39.

military employed to enforce its borders.⁵⁰ For example, from 1970-94, the food production in 13 of 14 war-torn countries in the sub-Saharan area was on average 12.3 percent lower during conflict years than during peaceful years.⁵¹ Without war, these populations may have been better able to use their scarce resources to invest in both human development and productivity gains for the farmers.⁵²

Additionally, the combatant commander will need to plan for aid administration and implement new resource technologies to address complex food scarcity problems.⁵³ These concepts will promote peace and sufficiently save aid resources for natural disaster humanitarian assistance.⁵⁴ Moreover, the combatant commander will need to prepare for the projected devastating impacts of climate change by planning extensive humanitarian operations. Thus, the operational factor of space will need to be considered when planning lines of communication (LOC) and logistics movement across such a great distance. Larger quantities of supplies – such as fuel, food, water - will need to be moved - and the evacuation of extensive numbers of people will need to be planned for.⁵⁵ The newly expanded missions will need to be planned for with careful thought as to how to accomplish them without diminishing the capabilities of the existing conventional military force. Availability of additional equipment, personnel and training will also need to be allocated.⁵⁶

Historically, humanitarian assistance has been in response to a natural disaster; Africa will need to practice a proactive approach vice a reactive approach.⁵⁷ The new African

⁵⁰ Messer and Cohen and Marchione, *Conflict and Hunger*, 2.

⁵¹ Ibid.

⁵² Ibid.

⁵³ CNA, *Threat of Climate Change*, 22.

⁵⁴ Ibid.

⁵⁵ “Military Panel: Climate Change Threatens U.S. National Security,” *Environmental News Service.com*, 16 April 2007, 7, <http://www.ens-newswire.com/ens/apr2007/2007-04-16-05.asp/> (accessed 22 September 2007).

⁵⁶ Ibid., 7-8.

⁵⁷ Paterson, “Taking Africa Seriously,” 39.

command will be best suited to synchronize Phase Zero operations that will be required to build and maintain stability in its AOR as global climate change threatens its partners' very existence. These Phase Zero operations must be directed at improving the living conditions and winning the African nations' hearts and minds. The cornerstone of Phase Zero operations will use cultural sensitivity, understanding of local religion and language, and valuable military and governance training to increase partner nation's capacity to respond to large-scale crisis'.⁵⁸

Moreover, the new combatant command will continue to play a supporting role to civilian agencies such as U.S. Agency for International Development (USAID) in the humanitarian assistance mission. Realizing the importance of this relationship, AFRICOM will have USAID staff located within the command.⁵⁹ The unique civilian and military relationship that will be staffed at AFRICOM will help to ensure that humanitarian responses are well planned and executed.⁶⁰

Counter-Argument

“Rational behavior should depend on the size and probability of the risk and on the magnitude of the costs of its avoidance.” – Vaclav Klaus⁶¹

A much less ambitious approach than operational level planning and execution by a combatant commander is to merely adapt to the effects of global climate change.⁶² Through modernization and technical progress, impoverished African countries can implement

⁵⁸ Ibid., 41.

⁵⁹ William E. Ward, *Response to Advance Questions*, 11.

⁶⁰ Ibid.

⁶¹ Vaclav Klaus, President of the Czech Republic, as quoted in *Notes for the speech of the President of the Czech Republic at the UN Climate Change Conference*, New York, NY, 24 September 2007, 1.

⁶² Toni Johnson, *Alternative Views on Climate Change*, Council on Foreign Relations, 28, Sept 2007, 3-4. http://www.cfr.org/publication/14318/alternative_views_on_climate_change.html/ (accessed 28 October 2007).

inexpensive public policies rather than to accept expenses in planning for an event with an unknown timeframe and inconclusive risk of severity.⁶³ They will be able to independently consider which projects and initiatives will work best for their region. Thus, adaptation will favorably increase the current economic picture and enable governments to save for emergency resources needed later. When a problem cannot be confined within country borders, institutions such as the United Nations exist to provide assistance.⁶⁴

Additionally, historical data would imply that water is not the cause of conflict. Between 1945 and 1999, the importance of water led to twice as many instances of cooperation between countries sharing the same water resource, than conflict.⁶⁵ During the “people’s war” in South Africa and civil wars in Mozambique and Angola during the 1970s and 1980s, South African countries coordinated numerous river basin agreements that have outlasted the conflicts.⁶⁶ Water management is a key foundation for cooperation in this geographical area.⁶⁷ For example, farmers and herders are now working together to stop desertification in Nigeria by building water traps to ensure their land remains productive.⁶⁸ Shared regional identities and institutionalized cooperation that forms units such as the Southern African Development Community (SADC) will be the result of countries relying upon their own leadership capacity to foster peaceful dialogue as the climate changes.⁶⁹

⁶³ Vaclav Klaus, UN Climate Change Conference, 2.

⁶⁴ Ibid., 1.

⁶⁵ Aaron T. Wolf, and Annika Kramer, and Alexander Carius, and Geoffrey D. Dabelko, *Water Can Be a Pathway to Peace Not War*, Washington, DC, Woodrow Wilson International Center for Scholars, no.1, 1, <http://www.wilsoncenter.org/topics/pubs/NavigatingPeaceIssue1.pdf> (accessed 05 October 2007).

⁶⁶ Ibid., 3.

⁶⁷ Ibid., 1.

⁶⁸ Tristan McConnell, *CSMonitor: How Tuaregs, Hausas Are Avoiding Another Darfur*, Council on Foreign Relations, 03 October 2007, 1, <http://www.cfr.org/puplication/11469/csmonitor.html/> (accessed 13 October 2007).

⁶⁹ Wolf and Kramer and Carius, *Peace Not War*, 3.

Rebuttal

“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.” - General Zinni⁷⁰

Adaptation is not a proactive approach - it is purely reactive. Should the combatant commander fail to start planning for climate change then the response will continue to be a reactive force vice a proactive force. Africa’s population size produces an unprecedented number of people who are competing for the same basic needs – food, water, and shelter. The availability of these necessities is diminishing due in part to global climate change. When access to water, for example, is becoming so scarce, people’s desperation for survival leads to irrational behavior. Darfur is the first climate change war and should provoke planning to mitigate the risks of similar conflicts.

History sets a foundation for planning; however, as the situation changes, so must the planning. Water scarcity is now being mitigated through the production of fossil aquifers and wastewater reclamation.⁷¹ More and more conflicts are driven by internal and local pressures.⁷² Poverty and instability are changing the national security issues.⁷³ Climate change is presenting a serious threat to resources that create the world-wide balance that we are accustomed to. It will affect an unprecedented number of people simultaneously.⁷⁴ Africa will suffer more than other nations from the effects of climate change, yet it has the least ability to survive by merely adapting.⁷⁵

⁷⁰ Anthony C. Zinni, as quoted in CNA, *Threat of Climate Change*, 31.

⁷¹ Wolf and Kramer and Carius and Dabelko, *Peace Not War*, 5.

⁷² Ibid.

⁷³ Ibid.

⁷⁴ CNA, *Threat of Climate Change*, 14.

⁷⁵ Ibid., 47.

Recommendations

“Climate change could exacerbate current instability in Africa in a number of ways. Droughts, floods, and other effects of climate change could lead to crop failures, massive refugee flows, and significant damage to African economies and societies. The chaos and desperation of these tragedies could help undermine governments, increase civil unrest, and promote extremism in a number of countries.” – General Ward⁷⁶

The expansive impact of climate change in Africa will require multinational and multi-agency cooperation, supported by the military range of operations, on a much broader scale than is currently projected. Previous attention to environmental scarcities has been focused at the tactical level. For instance, CJTF-HOA has been involved in the critical tasks of infrastructure reconstruction, drilling wells for water, building roads and renovating schools, and military training to assist in counterterrorism efforts.⁷⁷ A recent change, illustrated by the UN’s first climate change brief, has moved the discussion to the national and strategic level. As a result, U.S. leaders are now identifying climate change as a global threat multiplier and recognizing the need to protect national interests as well as state stability throughout Africa. Addressing climate change at both the tactical and national levels is crucial for planning to mitigate the effects; however, the geographic combatant commander at the operational level must also be actively involved.

The African commander must be prepared for the predicted changes that will occur as a result of global climate change. The potential for an increased magnitude of humanitarian assistance and disaster relief support is intrinsically linked to controlling instability throughout the region. Environmental scarcity used to be a regional problem; however, the

⁷⁶ William E. Ward, Commander U.S. Africa Command, as quoted in *Response to Advance Questions*, 31.

⁷⁷ Anton Menning, “Horn of Africa Task Force Fights Own War On Terror,” *The Kansas City Channel.com*, 08 August 2006, <http://www.kasc.ku.edu/programs/seminars/2006/Seminar%20on%20Security%20Issues/Articles/Anton's%20articles/CJTFHOACh9.pdf/> (accessed 03 November 2007).

predicted global effects now require it to be considered when planning stability operations. Scarcity also affects the economy and is a source of human migration. A weak government, further weakened into a failed state when unable to cope with climate change effects, will result in regional conflicts and power struggles. Now is the time for AFRICOM to take the initiative and plan for this impending threat.

Subsequently, an interagency response is needed for the operations that shape theaters in order to promote stability and peace – Phase Zero operations.⁷⁸ Fortunately, AFRICOM has a unique command and control structure that will be partially staffed with senior civilian representation providing capability to plan and execute Phase Zero operations effectively. This structure will enable the combatant commander to engage the government, non-government relief agencies, and international assistance agencies to build African government capacity and infrastructure so they will be able to confront global climate change as it occurs.⁷⁹

Also, the interagency response will be more effectual within a new Joint Interagency Coordination Group for Climate Change (JIACG-CC). This internal command JIACG-CC would be comprised of personnel from both the Civil-Military Activities and the Military Operations⁸⁰ components to cultivate a unity of effort. No additional man-power would be required given that the JIAC-CC would be comprised of personnel currently employed at the command.

This new JIAC-CC would be a temporary planning cell formed to fill the void of current direction from a higher authority to plan for climate change. Moreover, this planning

⁷⁸ Charles F. Wald, “New Thinking at USEUCOM,” 73.

⁷⁹ Paterson, “Taking Africa Seriously,” 39.

⁸⁰ David Miller, *A Unified Command for Africa: AFRICOM Transition Team Update*, UNCLASSIFIED Power Point Briefing, European Command Headquarters, Stuttgart, GE, 17 February 2007, slide 9.

will be different in nature to traditional military planning as it does not have a known timeframe. Thus, climate change may happen catastrophically in the short-term or evolve at a more gradual pace. The speed of the change and the extent to which it occurs will necessitate contingencies for both short-range and long-term planning. As such, the planning cell will need to create plans for both timeframes and further define them to separate African geographic regions. Once these plans are created for each region, the planning cell will need continuously update the plans as the onset of climate change dictates. The JIAC-CG will not only prepare AFRICOM but serve as a learning tool for other geographic commands to emulate.

Furthermore, AFRICOM has the opportunity to learn from and use the initiatives that CJTF-HOA has already developed. The CJTF's experience and cultural sensitivity will offer immense benefits for the new African command to garner as it becomes operational in its Area of Responsibility. Should CJTF-HOA remain under the U.S. Central Command structure, a coordination cell between the two combatant commanders will need to be created to streamline the effort between the two commands. Lastly, the combatant commander should take advantage of centers such as the Naval War College's War Gaming Department to exercise the new response plans.

Consequently, the African commander's role in planning for climate change will create a more structured and focused reaction to the effects of climate change. Without prior planning, reactionary chaos will likely be the result and the U.S will have lost a positive step towards acting proactively with its African partner.

Conclusion

Although the African combatant commander does not have the formal tasking to plan for the effects of global climate change, taking the initiative to plan for it now will ensure readiness to deal with the catastrophic events predicted. Stability in Africa is important for protecting U.S. strategic and economic interests. In accessing future threats, environmental scarcities have a role in promoting regional tensions and conflict, such as seen in Darfur, coupled with the exportation of terrorism. Moreover, large population migrations and permanent displacement of people will need to be prevented for both economic and political ramifications. Stability on this continent hinges on mitigating the effects of global climate change. A unity of effort generated within the unique African command structure to create a JIATF-Climate Change would effectively fill the interlude from current lack of directed Department of Defense planning for climate change. Accordingly, not only will the time gap be proactively filled, the effects of this new threat will be mitigated.

Additionally, the JIACG-CC's interim structure would ensure multinational, multi-agency and military efforts in the African Area of Responsibility are synchronized and implemented with utmost efficiency and effectiveness. Immediate planning will allow for more coordinated and proportional responses to the speed and onset of climate change.⁸¹

In conclusion, pessimism when faced with such an enormous problem may overwhelm, but proactive and timely planning to tackle wicked problems will produce manageable solutions. The AFRICOM combatant commander has the opportunity to proactively plan for a threat that demands a military problem-solving-like approach.⁸²

⁸¹ Douglas V. Johnson, II, *Global Climate Change*, 2.

⁸² *Ibid.*, 3.

Bibliography

- Bromwich, Brendan, and Abuelgasim Abdalla Adam, and Abduljabbar Abdulla Fadul, and Florence Chege, and Jim Sweet, and Victor Tanner, and Geoff Wright. *Darfur: Relief in a Vulnerable Environment*. Middlesex, UK: TearFund, March 2007.
- Center for Naval Analysis. *National Security and the Threat of Climate Change*. Arlington, VA: CNA Corporation, April 2007.
- “Climate Change Poses Serious Threat To U.S. National Security.” *Science Daily.com*, 17 April 2007, <http://www.sciencedaily.com/releases/2007/04/070417092232.html> (accessed 05 October 2007).
- Eilperin, Juliet. “Military Sharpens Focus on Climate Change.” *Washington Post.com*, 15 April 2007. <http://www.washingtonpost.com/wp-dyn/content/article/2007/04/14/AR2007041401209.html> (accessed 22 September 2007).
- Johnson, II, Douglas V. Strategic Studies Institute, U.S. Army War College and Triangle Institute for Security Studies. *Global Climate Change: National Security Implications*. Colloquium Brief, 2007. <http://www.strategicstudiesinstitute.army.mil/Pubs/Display.cfm?pubID=779/> (accessed 30 September 2007).
- Johnson, Toni. *Alternative Views on Climate Change*. Council on Foreign Relations, 28 Sept 2007. http://www.cfr.org/publication/14318/alternative_views_on_climate_change.html (accessed 28 October 2007).
- Ki Moon, Ban. *A Climate Culprit in Darfur*. In *The Washington Post*. Washington, DC: Citizens for Global Solutions, 16 June 2007. http://www.globalsolutions.org/issues/darfur/ban_climate_culprit/ (accessed 13 October 2007).
- Klaus, Vaclav, President of the Czech Republic. *Notes for the Speech of the President of the Czech Republic at the UN Climate Change Conference*. New York, NY: 24 September 2007.
- Kluger, Jeffrey. “When a Planet Fights a Fever.” *TIME: Global Warming*, Time Books, Time Inc. Specials, 2007, 14-19.
-

- Knauer, Kelly. "Heat, Floodwaters and Risk Are Rising." *TIME: Global Warming*. Time Books, Time Inc. Specials, 2007, 8.
- McConnell, Tristan. *CSMonitor: How Tuaregs, Hausas Are Avoiding Another Darfur*. Council on Foreign Relations, 03 October 2007.
<http://www.cfr.org/puplication/11469/csmonitor.html/> (accessed 13 October 2007).
- Menning, Anton. "Horn of Africa Task Force Fights Own War On Terror." *The Kansas City Channel.com*, 08 August 2006.
<http://www.kasc.ku.edu/programs/seminars/2006/Seminar%20on%20Security%20Issues/Articles/Anton's%20articles/CJTFOACH9.pdf/> (accessed 03 November 2007).
- Messner, Ellen, and Marc J. Cohen, and Thomas Marchione. *Conflict: A Cause and Effect of Hunger*. ECSP Report (7): 1-16. <http://www.wilsoncenter.org/topics/pubs/ECSP7-featurearticles-1.pdf/> (accessed 05 October 2007).
- "Military Panel: Climate Change Threatens U.S. National Security." *Environmental News Service.com*, 16 April 2007, <http://www.ens-newswire.com/ens/apr2007/2007-04-16-05.asp/> (accessed 22 September 2007).
- Miller, David. *A Unified Command for Africa: AFRICOM Transition Team Update*. UNCLASSIFIED Power Point Briefing. European Command Headquarters, Stuttgart, GE. 17 February 2007.
- Paterson, Pat. "Taking Africa Seriously." *U.S. Naval Institute Proceedings* (October 2007): 36-41.
- Peoples, Sean. *National Security and the Threat of Climate Change*. Washington, DC: Woodrow Wilson International Center for Scholars, 14 May 2007.
<http://www.wilsoncenter.org/index.cfm/> (22 September 2007).
- Perry, Alex. "How To Prevent the Next Darfur." *Time*(169):iss.19 (07 May 2007), 39.
<http://www.proquest.umi.com/i/pub/28294.gif/> (accessed 16 October 2007).
- Ploch, Lauren. *Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*. Washington, DC: Congressional Research Service, 16 May 2007.
- President George W. Bush. *The National Security Strategy of the United States of America*. Washington, DC: The White House, March 2006.
- Still, Douglas R. "Water Scarcity as a Cause of Conflict in the Nile, Euphrates, and Jordan River Basins." Research paper, Newport, RI: U.S. Naval War College, Joint Military Operations Department, 2006.

“Tropical Cyclone Eline: February 2000.” *South African Weather Service.com*, February 2000, <http://www.weathersa.co.za/Pressroom/2000/2000FebTCEline.jsp/> (accessed 06 October 2007).

United States Africa Command, “General Ward Discusses Goals for Africom.” United States Africa Command. <http://www.africom.mil/> (accessed 13 October 2007).

U.S. Department of Defense. DODD 3000.05. *Military Support for Stability, Security, Transition and Reconstruction Operations*, 28 November 2005.

U.S. Department of State. “Desertification: Earth’s Silent Scourge.” United States Department of State. <http://www.usinfo.state.gov/products/pubs/desertific/> (accessed 28 October 2007).

Wald, Charles F. “New Thinking at USEUCOM: The Phase Zero Campaign.” *Joint Force Quarterly*, no. 43 (Fourth Quarter 2006), 72-75.

Ward, William E., Commander, United States Africa Command. *General Ward’s Response to Advance Questions Submitted by the Senate Armed Services Committee*. Washington, DC: Senate Armed Services Committee, 27 September 2007. <http://www.africom.mil/> (accessed 22 October 2007).

Wolf, Aaron T., and Annika Kramer, and Alexander Carius, and Geoffrey D. Dabelko. *Water Can Be a Pathway to Peace Not War*. Washington, DC: Woodrow Wilson International Center for Scholars, no.1. <http://www.wilsoncenter.org/topics/pubs/NavigatingPeaceIssue1.pdf> (accessed 05 October 2007).

Vego, Milan. *Operational Warfare*. Newport, RI: United States Naval War College, 2000.