



Civil-Military Collaboration to Address Adaptation to Climate Change in South America

MARCELA RAMIREZ AND DR. KENT BUTTS

The economic vitality of the South American region is threatened by the effects of climate change. Successful adaptation measures may require multilateral cooperation to preempt these destabilizing effects before they impact on government legitimacy and threaten regional security. While civilian agencies will normally be the lead for proactively addressing climate change adaptation, they may be insufficient, or absent in distant frontier and border areas where only the military is present. Creating climate change resilience will require interagency cooperation. Thus, climate change adaptation roles and missions reinforce the concept of military support to civilian authority and promote multilateral cooperation. What can regional militaries do to help their countries deal with climate change effects that threaten their security?

Climate change often exacerbates existing environmental crises such as drought, water scarcity and soil degradation, intensify land use conflicts (especially in the Andean and Amazon Regions) and trigger environmentally induced migration. Glaciers are retreating and natural disasters such as floods and earthquakes are becoming more frequent and severe in South America, exacting a heavy toll on the population and the economic infrastructure of the region. Development processes need to include risk mitigation. Increased population growth, the acceleration of urbanization, environmental degradation, and poverty increase economic and political vulnerability. Food, water and energy security are all part of this human security panorama. The inability to manage the access to and quality of water, vulnerability of the territories, climatic variability, and food scarcity are common problems for many of the countries of the region, which are in dire need to improve their capacity to adapt to these changes.

In efforts to address these regional concerns, the U.S. Southern Command (USSOUTHCOM) co-hosted two climate change-related events in South America. The first one in Colombia was focused on climate change adaptation, and the second in Peru was focused on low carbon sustainable economies, both events emphasizing civil-military collaboration on the issues.

COLOMBIA ROUNDTABLE: SECURITY PLANNING AND POLICIES TO MEET THE CHALLENGES OF CLIMATE CHANGE

This roundtable was organized by USSOUTHCOM Command Engineers in conjunction with the British Embassy in Brasilia, Brazil, the Center for Naval Analysis (CNA), and the Center for Strategic Leadership (CSL), United States Army War College. The event, held at the Military School in Bogota, Colombia, July 26-27, 2010, included military and civilian officers from Colombia, Peru and Chile with the express purpose of exploring areas for regional defense cooperation with civil authority or climate change adaptation that effects stabilization or security issues. While climate change effects regional water and food security and may encourage resource conflict they may also serve as confidence building measures (CBMs) that lead to multilateral cooperation and communication.

Dr. Butts is the Director of the National Security Issues Group, Operations and Gaming Division (OGD), Center for Strategic Leadership (CSL), U.S. Army War College (USAWC)

Ms. Ramirez is a Environmental Security Consultant for Latin America and the Caribbean for the CSL, USAWC.

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the 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 the 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 Washington Headquarters Services, Directorate for Information Operations and Reports, 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 a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE MAR 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE Civil-Military Collaboration to Address Adaptation to Climate Change in South America				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army War College,Center for Strategic Leadership,650 Wright Avenue,Carlisle,PA,17013-5049				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 Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 4	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

The event was based on the report, *Impacts of Climate Change on Colombia's Regional and National Security*, commissioned by the United Kingdom and prepared by CNA. According to the report, Colombia is likely to be affected by climate change due to its geographical location, its extensive coastlines and the reliance of its people and industries on river systems and high-altitude water resources. Colombia's neighbors are also likely to suffer dramatic effects from climate change, implicating regional security problems such as: a high demand for international emergency response; large-scale refugee migration; humanitarian and economic crises that foster illicit activities such as trafficking of drugs, humans and other contraband and; increased demand of public resources for response.¹



The Colombia roundtable extended the work of previous regional environmental security conferences that USSOUTHCOM has co-organized with CSL, creating a new trilateral partnership between Colombia, the United Kingdom and the United States to address climate change adaptation. The event brought together representatives from Ministries of Defense, Security, and Environment, academics, and a number of NGOs and IOs who are active in regional climate change adaptation issues. The objectives of the roundtable were to identify the most pressing climate change adaptation issues; share best practices for multilateral procedures, plans, and interoperability techniques for responding to these issues; determine appropriate areas for defense-civilian cooperation in fostering climate change resilience; and strengthen the regional capacity for international cooperation.

The U.S. participant list included Admiral Neil Morisetti, Special Envoy for Climate Change and Security in the United Kingdom; Vice Admiral Dennis McGinn (U.S. Navy, ret.), member of the CNA Military Advisory Board; and Colonel Norberto R. Cintron, Command Engineer, USSOUTHCOM. Representatives from the region included Germán Jimenez, Head of Risk Prevention Group, Colombian Disaster Response; Navy Captain Julian Reyna, Executive Secretary, Colombian Commission for the Ocean; Lieutenant Colonel Jorge Gil Bravo, Chief of the Department of Risk Prevention and Environment, Chilean Army; Navy Captain Osvaldo Langhaus, Chief of Science and Industry Division, Chilean Ministry of Defense; and Mayor General Hernán Valdivia Missad, Educational Director, Joint Command of the Armed Forces in Peru.



Participant comments highlighted the importance of armed forces in identifying their own capacities and needs regarding climate change adaptation, and for the countries to define their capacity for resiliency to climate change effects. In the area of disaster prevention and response, participants made it clear that it is vital to develop risk evaluations and standard operating procedures (SOPs) that are clear and simple. CSL personnel facilitated an open group discussion about best practices for regional coordination, multi-sector thinking and planning for climate change. The group discussion resulted in an “Action Plan for Climate Change Response and Adaptation,” based on three categories:

- AT THE NATIONAL LEVEL: Increase the capacities of the Armed Forces to address climate change issues and include them in their strategic plans
 - Define institutions that will be in charge of the training and identify topics for the curriculum
 - The role of the Armed Forces in addressing climate change issues should be stated in the national strategies

1. Catarius, David and Espach, Ralph. *Impacts of Climate Change on Colombia's National and Regional Security*; Center for Naval Analysis Corporation (CNA); Washington, D.C., 2009.

- **AT THE INTERNATIONAL LEVEL:** Promote inter-institutional and inter-sector collaboration to face challenges posed by climate change
 - Promote dialogue and awareness on climate change tendencies and their impact on national and regional security
 - Strategic guidelines must be clear and should define the need of the Armed Forces to work collaboratively with other institutions
- **TRANSFER OF INFORMATION AND TECHNOLOGY:** Define a regional mechanism to exchange information, transfer technology and promote discussion
 - Identify areas of expertise in each country to be used as a base for regional trainings
 - Create a Regional Training Center specialized in climate change and adaptation issues
 - Promote virtual discussions through existent blogs such as USSOUTHCOM's APAN (All Partners Access Network) Climate Lab

PERU CONFERENCE: CLIMATE CHANGE AND LOW SUSTAINABLE ECONOMIES

The Climate Change and Low Sustainable Economies: Perspectives for South America and Civil-Military Collaboration Conference was co-organized by USSOUTHCOM Partnering Directorate and the State Department Regional Environmental Hub for South America based in Lima, with assistance from USSOUTHCOM Command Engineers and the Center for Strategic Leadership. The event held in Lima, Peru, August 17-18, 2010 included participants from the armed forces and government civilian agencies from Argentina, Brazil, Chile, Colombia, Paraguay, Peru and Uruguay; NGO's from Colombia and regional organizations such as the United Nations Commission for Latin America and the Caribbean (ECLAC). The conference objective was to seek the insights of the region's senior civilian and military leadership to develop follow on activities to build the capacity of the region's military support to civil authority on climate change adaptation initiatives.

The event was divided into thematic panels and working groups. The panel on regional climate change trends identified that the geographic location and accumulated risk of the region make it prone to a significant number of natural disasters such as storms, earthquakes, floods, droughts, landslides, and volcanic eruptions causing serious damage to the population and the economic infrastructure of the region. The Andean region, which possesses 95% of the world's tropical glaciers, has been losing natural resources due to global warming. In the Southern part of the continent, both Chile and Argentina are witnessing the recession of the Patagonian glaciers, which lost 5% of their 17,500 square kilometers in the last 50 years, clearly demonstrating the effects of climate change. Given the region depends heavily on farming, countries such as Chile, Argentina, and Brazil have suffered greatly due to extreme droughts and floods. The current situation in these countries demonstrates a need to specifically focus on a unified regional approach giving priority to the development of coordination and cooperation mechanisms to evolve from theory to practice.

CSL facilitated the civil-military collaboration panel in which Uruguay and Chile provided impressive examples of collaboration through their National System of Response to Climate Change. Their system represented an integrated effort by various Ministries, including Environment, Defense, Planning, Fisheries, Finance, Tourism, Health, Foreign Affairs, plus the National Emergency System. The objective of these multi-sector plans is the coordination of public and private actions to prevent risks and to mitigate and adapt to climate change.

Participants at the conference summarized opportunities for collaboration in the areas of information and technology sharing, preparedness for climate change effects and disaster response, and energy efficiency and alternative energy projects. Representing the country's response to climate change issues, Colombian Environment Vice-Minister Rosario Gomez explained the environmental accounts concept as an analysis platform that associates economic value to one or more components of their natural capital.

FINAL COMMENTS

Climate change is an environmental security issue that has the potential to exacerbate other, often ignored, environmental problems and promote resource conflicts. Because climate change can further affect such environmental issues as water, forests, soil fertility, hunger, disease, health, and sustainable development, it creates an opportunity to focus foreign assistance and military engagement resources, and the attention of host nation governments on issues essential to preventing failed states, components of national security issues that quite often fail to gain governmental priority. Climate change into environmental security strategies should combine adaptation and mitigation measures to reduce vulnerability of the countries and increase their resiliency. There is a need for understanding the relationship between the environmental, social-economic and agricultural issues when planning strategies for the Latin American region and for the military to work jointly with host countries institutions and regional organizations.



Climate Change adaptation is a powerful vehicle for U.S. military engagement in the region. This engagement capitalizes on the strong base of SOUTHCOM environmental security and climate change conferences, workshops and capacity building training activities. It also responds to the growing concern of regional governments over disappearing glaciers, shifting fisheries, Amazon flooding and other climate change effects, and provides a positive legitimacy building role of humanitarian assistance and stability operations for regional militaries.

This and other CSL publications may be accessed for free through the USAWC/CSL web site at: <http://www.csl.army.mil>.

The views expressed in this report are those of the author and do not necessarily reflect official policy or position of the United States Army War College, the Department of the Army, the Department of Defense, or any other Department or Agency within the U.S. Government. This report is cleared for public release; distribution is unlimited.

Civil-Military Collaboration to Address Adaptation to Climate Change in South America

OFFICIAL BUSINESS

U.S. ARMY WAR COLLEGE
Center for Strategic Leadership
650 Wright Avenue
Carlisle, PA 17103-5049