10-2010

Cuba’s Role in Venezuela’s Control of the Internet and Online Social Networks

Erich de la Fuente

Applied Research Center

Follow this and additional works at: http://digitalcommons.fiu.edu/whemsac

Recommended Citation

de la Fuente, Erich, "Cuba’s Role in Venezuela’s Control of the Internet and Online Social Networks" (2010). Western Hemisphere Security Analysis Center. 14.

http://digitalcommons.fiu.edu/whemsac/14

This work is brought to you for free and open access by the College of Arts, Sciences & Education at FIU Digital Commons. It has been accepted for inclusion in Western Hemisphere Security Analysis Center by an authorized administrator of FIU Digital Commons. For more information, please contact dcc@fiu.edu.
Cuba’s Role in Venezuela’s Control of the Internet and Online Social Networks

Erich de la Fuente
Applied Research Center

October 2010
THE WESTERN HEMISPHERIC SECURITY ANALYSIS CENTER

WHEMSAC brings together a versatile and important Latin American network of traditional and non-traditional security experts from academia, business sectors, government ministries and private organizations. Its research capabilities provide Western Hemispheric leaders with a unique, real-time research and analysis on current issues. WHEMSAC is an innovative institutional model for conducting professional qualitative and quantitative research throughout the Americas at the national, regional and international levels within an open, independent, multi-disciplinary, and collaborative academic environment. The fusion of open source political, economic, and social expertise allows WHEMSAC to provide an exceptional, qualified approach to regional security insight with traditional intra-governmental analysis.

Applied Research Center
Florida International University
10555 W Flagler Street
Miami, FL 33174
whemsac.fiu.edu
Cuba’s Role in Venezuela’s Control of the Internet and Online Social Networks

Erich de la Fuente
Applied Research Center

October 2010

The views expressed in this research paper are those of the author and do not necessarily reflect the official policy or position of the US Government, Department of Defense, US Southern Command or Florida International University
The arrival of Cuba’s Information Technology (IT) and Communications Minister Ramiro Valdés to Venezuela in the Spring of 2010 to serve as a ‘consultant’ to the Venezuelan government awakened a new reality in that country. Rampant with deep economic troubles, escalating crime, a murder rate that has doubled since Chávez took over in 1999, and an opposition movement led by university students and other activists who use the Internet as their primary weapon, Venezuela has resorted to Cuba for help.

In a country where in large part traditional media outlets have been censored or are government-controlled, the Internet and its online social networks have become the place to obtain, as well as disseminate, unfiltered information. As such, Internet growth and use of its social networks has skyrocketed in Venezuela, making it one of Latin America’s highest Web users. Because of its increased use to spark political debate among Venezuelans and publish information that differs with the official government line, Chávez has declared the need to rein in the Internet. Simultaneously, Chávez has embarked on an initiative to bring the Internet to the poor and others who would otherwise not have access, by establishing government-sponsored Internet Info Centers throughout the country, to disseminate information to his followers.

With the help of Cuban advisors, who for years have been a part of Venezuela’s defense, education, and health care initiatives, Chávez has apparently taken to adapting Cuba’s methodology for the control of information. He has begun to take special steps toward also controlling the type of information flowing through the country’s online social networks, considering the implementation of a government-controlled single Internet access point in Venezuela. Simultaneously, in adapting to Venezuela’s Internet reality,
Chávez has engaged online by creating his own Twitter account in an attempt to influence public opinion, primarily of those who browse the Web. With a rapidly growing following that may soon reach one million subscribers, Chávez claims to have set up his own online trench to wage cyber space battle.

RECOMMENDATIONS

1. As the topic of Venezuela’s increased use of the Internet and online social networks continues to evolve and gain influence forming public opinion, USG should closely monitor those online social networks, particularly as they relate to providing an unfiltered view of the country’s current social reality.
2. USG should track developments in the telecommunications sector as they pertain to the government’s possible attempts to increase the state’s control of the country’s Internet and the information that flows through it, i.e. implementation of a government-controlled single Internet access point for the country.
3. Cuba’s ongoing and increasing role in Venezuela should be tracked as it relates to the fueling of resignations of high-ranking government/military officials and/or their public criticisms of Cuban influence in the country.
**INTRODUCTION**

From its onset, the government of Hugo Chávez in Venezuela has carried out a steady increase in limiting Venezuela’s flow of information to manipulate public opinion. This is nothing new for the Chávez government which has consistently attempted during more than 11 years in power to obtain greater control over the avenues of communication. What is new is Venezuela’s recent move towards increasing control of information flowing through the Web, particularly the country’s online social networks.

This paper looks briefly at the steps Venezuela has taken in this area, addressing the influence exerted by Cuban advisors, and why Chávez has had to address the country’s online social networks phenomenon. It argues that the increased role the Internet is playing in Venezuelan political life coupled with recent domestic events, may have left Chávez feeling challenged, resulting in the government’s increased efforts towards controlling information to maintain power.

**A REGIME UNDER SIEGE**

As Latin America has begun to recover from global economic turmoil, Venezuela continues to wane in one crisis after another, perhaps indicating Chávez’s popularity may not be as strong as it once was. A recent survey revealed 55 percent of the people in Venezuela reject Chávez, compared with 39 percent approval.\(^1\) While other Latin American economies are growing, Venezuela’s has continued to

---

The significant increase in crime, the deterioration of public services, and an economic crisis during a period of oil wealth, have led to increased public protests, particularly by university students. The ongoing critical energy shortages that have resulted in rolling blackouts in some areas of a country in which the greatest resource is energy, has prompted experts to warn Venezuela faces a complete electric collapse. Chávez has attributed the energy crisis to a drought Venezuela endured, but experts have cited the main reason being the lack of investment in the electrical grid. Inflation has also hit the country hard. With the highest inflation rate in the region, Morgan Stanley has projected it will rise to 45 percent this year alone.

Along with ongoing economic and public utility challenges, Venezuela has become one of the murder capitals of the world. Figures published by various sources indicate that 150,000 people in the last decade have been killed by criminal gangs, with 80,000 of those deaths having occurred in Caracas alone. The crime rate has more than doubled since Chávez took power in 1999; Venezuela’s own statistics agency and police have reported there were close to 14,000 murders in 2009 compared with almost 6,000 in 1999. In Iraq, which has about the same population as Venezuela, there were 4,644 civilian deaths from violence in 2009.

---


4 Casto Ocando, opp. cit February 7, 2010.


compared to Venezuela’s over 16,000, according to unofficial statistics.⁸ Even Mexico and Colombia, despite ongoing drug wars and a ten year insurgent guerilla war, have had fewer deaths.⁹

As a result of the increasing crime and murder rates and of other domestic disputes, including the suspension of broadcasters, Chavez’s Administration has confronted “many days of protests and marches, organized in part online through social networking sites.”¹⁰ Aware of this, Chávez has classified the activity of spreading criticism against the government through the Internet as “terrorism” and has begun to respond in kind.¹¹

INTERNET GROWTH AND ONLINE SOCIAL NETWORKS

Internet penetration has boomed in Venezuela over the last few years. Through the second trimester of 2010, the number of subscribers to Internet providers grew 43.1 percent from 2009 to 2010, according to statistics published by the National Commission on Telecommunications (CONATEL). This translates to an increase of 2.4 million users during the period. The government agency also estimates the total number of people with access to the Internet in Venezuela to be at 9.7 million, a number that increased 22.9 percent from 2009 to 2010.¹² But more than just accessing the worldwide Web, Venezuelans are quickly moving up the ranks among users of online social networks. Recent findings by comScore, a digital market analysis firm, show Venezuela

---

⁹ Ibid.
¹¹ Ibid.
has the world's third highest percentage of Twitter users relative to other Internet-connected populations with a 19 percent penetration rate, only trailing Indonesia and Brazil.\textsuperscript{13}

As of July (2010), the overall number of Twitter subscribers in Venezuela was at about 1,705,202 ranking third in Latin America behind Brazil and Mexico.\textsuperscript{14}

As the Chávez government has exerted pressure on traditional media outlets not in line with it politically, as demonstrated by closing newspapers, radio and television stations, the Internet became one of Venezuelans’ primary venues for obtaining information. It has also turned into a vital tool for the dissemination of information for both the Venezuela’s government and its opponents. The social media boom has impacted the dynamics of Venezuela’s political life as word alerting the public rallies and images for and against the government quickly spread through a variety of online social networks.

Venezuela has become highly politicized. This is expressed in its use of online social tools as half of the country’s top 10 Twitter accounts are news- or politics-related.\textsuperscript{15} To that end, a variety of Twitter and Facebook groups across the political spectrum have emerged, particularly by the opposition regarding the actions the government has taken against traditional media outlets.\textsuperscript{16}

\begin{itemize}
\item \textsuperscript{13} comScore, Inc., “Indonesia, Brazil and Venezuela Lead Global Surge in Twitter Usage, \textit{Global Audience to Twitter.com Doubles in Past Year, as Latin American Audience Grows Fourfold},” August 11, 2010.
\item \textsuperscript{14} http://www.comscore.com/Press_Events/Press_Releases/2010/8/Indonesia_Brazil_Venezuela_Lead_Global_Surge_in_Twitter_Usage
\item \textsuperscript{16} Groups such as ‘\textit{Voluntad Popular}’ (Popular Will); ‘\textit{Contra la Nueva Ley de educacion en Venezuela}’ (Against Venezuela’s new Education law); and
\end{itemize}
The use of the Internet to criticize government has been defined by Venezuelan authorities as an act of “terrorism”, particularly because of the highly effective use that university students and other political and social activists in Venezuela have given to online social networks. To counter this effect, Chávez, like in other occasions, turned to Havana for advice; only this time the guidance on the ground came directly from the highest echelons of the Cuban government.

CUBANS ARE THE EXPERTS

The Cuban government has supported President Chávez since its inception. “It is no secret Cubans are imbedded within Venezuela’s defense and communication systems to the point they would know how to run both in a crises,” argues Antonio Rivero, a former Venezuelan brigadier general who has broken ranks with Chávez.17 Cuba’s influence in Chávez’s Venezuela goes as far back as October 2000, when the Chávez and Castro signed a cooperation agreement for Venezuela to provide Cuba with oil in exchange for technical support in the areas of health care, education, sports, and science and technology.

In addition to the estimated 40,000 Cuban teachers, doctors, and athletic coaches currently in Venezuela as exchange for massive oil subsidies, there has been a steady increase of Cuban advisors who are helping to manage – or control – key branches of the armed forces, police agencies, presidential

security guard, telecommunications, ports and airports, and national identification and public registries. Cuba has helped Venezuela to develop improved intelligence capability and undermine political opposition. However, the recent presence in Caracas of Cuba’s Vice President of the Council State and Minister of Information Technology (IT) and Communications, Ramiro Valdés, leads to question Chávez’s intention to take Cuban influence in Venezuela to a higher degree, as he understands the predicament of the social and political pressures he is facing is very serious.

The invitation of Ramiro Valdés by the Venezuelan government as a consultant to help end the energy crisis seems questionable as Valdés lacks energy sector experience, but is very well-versed in repressive and control tactics. He is a veteran of the 1959 Cuban Revolution who fought in the Sierra Maestra mountains alongside Fidel and Raúl Castro, and Ernesto “Ché” Guevara. Considered the No. 3 man in the Cuban hierarchy and “an expert in managing the repressive organs of a police state,” Valdés served as Cuba’s Interior Minister several times over 50 years. Always considered one of the most hard-line officials in Castro’s government, he was the creator of Cuba’s security apparatus that forged closed links with the Soviet KGB and the German Stasi secret services.

Known historically for his repressive tactics, Valdés has refined his control methods by adapting to the times. Referred to as “El gran censor del Internet” (The Great Internet Censor), he is credited as the main architect for developing strategies to ensure most Cubans don’t have

---

18 Jaime Daremb lum, opp. cit. March 8, 2010)
access to the Internet.\(^{20}\) As IT Minister, Valdés oversees the ‘*Universidad de Ciencias Informáticas* (University of Information Sciences--*UCI*’), an elite academic institution which aims to form professional personnel to administer, protect and secure Cuba’s online networks, along with designing and maintaining Internet sites and creating commercial software. Having opened its doors in 2003, the UCI has approximately over 40,000 students, the majority of which are located at its main campus in Havana. UCI also serves as a recruiting ground for the Ministries of the Interior and the Armed Forces, as its top students go on to become a vital component of their cybernetic and information war. Its students are selected for their high IQs and their political trustworthiness, about 80 percent of which are members of the Communist Youth.\(^{21}\) Additionally, at least over 300 graduates to date from the UCI have been sent to work as information specialists at Venezuela’s Integral Diagnostics Centers.\(^{22}\)

**EXPORTING METHODOLOGY**

Internet control measures taken by the Venezuelan government appear to be coming from the Cuban advisory team led by Ramiro Valdés. Shortly after Valdés’ arrival in Caracas, Venezuela’s Attorney General called on the National Assembly to enact legislation regulating the Internet, arguing “it cannot be a space free from law, all activities that occur in this national territory must be subject

---


\(^{22}\) Information was provided during a University graduation speech by Melchor Gil Morrell, the UCI’s rector, where Ramiro Valdes was present. http://www.uci.cu/?q=node/342
to legal regulation.”

This occurred only two days after Chávez publicly declared at a United Socialist Party of Venezuela gathering that “the Internet cannot be something open where anything is said and done. Every country has to apply its own rules and norms.”

There already has been proposed legislation providing the means by which the Venezuelan government could block Internet content they dislike; such as the new proposed Telecommunications, Informatics and Postal Service Organic Law (Ley Orgánica de Telecomunicaciones, Informática y Servicios Postales), which would give the Venezuelan government authority to institute and control a single Internet access point, leading to all messages sent via the Web to pass through a government filter.

In fact, Franco Silva, the president of the state-owned telephone company CANTV, announced this past March (2010) they were already working on the implementation of a single Internet access point, arguing it will lead to improved connectivity for the country’s over nine million Internet users. However, a recent study conducted by the Latin American School of Networks (Escuela Latinoamericana de Redes - EsLaRed) and the Networks and Development Foundation (Fundación Redes y Desarrollo - Funredes), points to the high risks implied by such a

---

23 Tamara Pearson, “Venezuelan Government Responds to Internet Censorship Accusations,” Venezuela Analysis, March 17, 2010. (Venezuelanalysis.com is an independent website produced by individuals who dedicated to disseminating news and analysis about the current political situation in Venezuela.)

http://www.reuters.com/article/idUSTRE62D05I20100314


measure, especially when the controlling entity is the government. “It is very important to note that it is not just a single Network Access Point (NAP), but rather a NAP controlled by the State. This leads to a national cause for concern, given that in the international arena, NAPs are traditionally managed by the private sector.”27

Eugenio Yáñez, political analyst and editor of Cubanálisis mentioned that this policy “is a photocopy of the road travelled by Cuba to control the Internet,” 28 adding that the one-single Internet access point has been used by Cuba to control Internet information on the island. Macky Arenas, a Venezuelan sociologist and journalist, also believes that the Venezuelan government also aims to control Internet mediums, stating that Chavez wants to implement similar methods as those carried out in Cuba, China, Iran and Burma. That vision is further strengthened by Chávez himself, not only for his verbal attacks against the Internet and online social networks, but also by applauding Iranian President Mahmoud Ahmadinejad’s decision to block the Internet to prevent the world from seeing the opposition protests in the Islamic nation. 29

ADAPTING TO THE VENEZUELAN REALITY

As argued in the previous section, several reports indicate Chávez favors a strong state control of the Internet, and is relying on Cuban methodology in his attempts to achieve that objective. He is also adapting concepts of Cuba’s

27 This Study was conducted by the Latin American School of Networks (Escuela Latinoamericana de Redes - EsLaRed) and the Networks and Development Foundation (Fundación Redes y Desarrollo -Funredes), both members of the Venezuelan Association for Progressive Communications in June 2009. http://www.apc.org/es/system/files/CILACIncidenciaNacionalVenezuela_20090630.pdf
28 Cubanálisis is an online Think Tank which analyzes Cuba’s current and potential future problems.
information control model to influence public opinion and applying it to Venezuela’s Internet reality, while simultaneously carrying out efforts to exert greater state control of the Internet. Chávez, however, has also taken concrete steps to engage in the country’s increased use of online social networks.

While on the one hand publicly attacking Twitter for being “a tool of oligarchs and terrorists who use it to spread false information and conspire against his government,” Chávez has also created his own Twitter account, using it as a means to disseminate information.30 His Twitter account, @Chávezcandanga (‘candanga’ means naughty or wild) boasts over 800,000 subscribers to date.31 However, his opening of a Twitter account is not simply to engage in an open online dialogue, but rather, as he himself has stated, “to have my online trench from the palace to wage the battle.”32

The government has also taken significant steps to promote Internet use in general among the poor. In addition to setting up public Internet Info Centers in libraries, shopping centers and government buildings, it has also set up high-speed Internet access centers in poor neighborhoods, totaling over 600 centers to date.33 By making accessible to the country’s poor a service that has traditionally been out of reach for them, Chávez has achieved to increase the number of followers that comprise the rank and file of his public opinion battle online.

31 http://twitter.com/Chávezcandanga
Following the traditional Latin American populist style, Chávez has bypassed state institutions engaging the masses directly and appearing to be helping them to resolve their problems, while furthering a personal bond with a sector of the population. Following that populous path since having taken power, his initiative to fully engage in online social networks is a new “technological twist” that follows that same populist strategy.\(^{34}\) According to Carlos Romero, a political analyst at the Central University of Venezuela, “Twitter has become a fundamental instrument for Chávez. It has tremendous propaganda value and is part of his charisma mechanism.”\(^{35}\) Chávez himself has stated his Twitter account is “another mechanism for contact with the public, to evaluate things and to help many people.”\(^{36}\) Claiming to have a rapid response team of about 200 people to process and respond to complaints and requests from the citizenry received via his Twitter account, Chávez states he has received “over 287,921 pleas for help, including 19,000 for a job, 17,000 for a house, 12,000 for credit and 7,000 for legal aid.”\(^{37}\)

In addition to utilizing it as a tool for rapid dissemination of information and as a way for citizens to connect directly with him, Chávez has taken Twitter’s two way communications capability to another level. He has asked citizens to use it to carry out their national watchdog duties. Having signed a tough new currency law last May (2010), Chávez announced police raids on illegal brokerages. As he took to the airwaves, he asked his supporters to turn in currency speculators and to do so by sending the information via his Twitter account.\(^{38}\) Evidence also suggests the government’s

\(^{34}\) Rory Carroll, opp cit. August 10, 2010. 
http://www.guardian.co.uk/world/2010/aug/10/hugo-Chávez-twitter-venezuela

\(^{35}\) Ibid.

\(^{36}\) Ibid.

\(^{37}\) Ibid.

\(^{38}\) Associated Press, “Hugo Chávez Asks Citizens To Use Twitter to Blow the Whistle on Currency Speculators,” (Caracas, Venezuela: 6 May 2010)
involvement in the world of online social networks includes monitoring and controlling individual views that differ from the official line, with the recent detention of individuals who have engaged in anti-Chávez behavior online.\textsuperscript{39}

\textsuperscript{39} Associated Press, Venezuelan release after arrest for Twitter post,” (Caracas, Venezuela: 10 September 2010).
CONCLUSION

Unlike other countries, where the Internet is utilized as just another means to communicate; Venezuela’s online social network boom and its current politicization illustrate this viable communications tool has become the principle medium where political and social debate are taking place in that country. In part a result of the apparent control exerted by the government over traditional media outlets, there has been a surge of online users, particularly from university students and other activists. This has led Chávez to both criticize its use for anti-government action as “terrorism” while simultaneously engaging in the establishment of a Twitter account, with over 800,000 subscribers to date.

Coupled with the arrival of Cuba’s IT and Communications Minister, Ramiro Valdés, which has raised eyebrows, not only amongst the Venezuelan opposition and media outlets around the world, but in particular among Chávez’s own hierarchy, the government has also begun to take steps to exert greater control over online social networks and the Internet in general. Among those who have openly criticized Cuba’s influence in Venezuelan communication affairs are some of Chavez’s former comrades. Just a few months back, Venezuelan Brigadier General Antonio Rivero resigned his post in protest of the role of Cuban advisers in Venezuela.

Since taking power, Chávez has relied on the support and advice of Cuba to tackle a variety of issues relating to defense, education, and health care, among others. Now that online social networks and Internet use have become one of his premier challenges to maintaining power, he is once again turning to Havana for their know-how. Despite Chávez maintaining considerable public support in the country, Venezuelans have repeatedly questioned and opposed their
country becoming another Cuba.\textsuperscript{40} The success of exerting influence over the country’s online social networks through the use of Cuba’s experts and methodology remains to be seen. What is undeniable is that Venezuela’s continued involvement with regard to the Internet, and in particular its online social networks, has unveiled the reality that this is the primary forum for political discourse and debate in the country and as such, it should be followed closely.

WORK CITED


_____. “Aid or undue influence? Cuba sends Venezuela experts to train military, work on security,” (Caracas, Venezuela: 31 May 2010)

_____. “Venezuelan release after arrest for Twitter post,” (Caracas, Venezuela: 10 September 2010).


http://twitter.com/Chavezcandanga

http://www.twitter-venezuela.com

http://www.uci.cu/?q=node/342


http://marketplace.publicradio.org/display/web/2010/05/17/pm-venezuelan-politics-hot-on-internet/


http://www.elnuevoherald.com/2010/03/15/676095/Chavez-a-punto-de-censurar-la.html


http://www.reuters.com/article/idUSTRE62D05I20100314


ABOUT THE AUTHOR

Erich de la Fuente is a Research Scientist at ARC/FIU. He is an expert on strategic communications and public affairs, counseling organizations operating in the U.S., Latin America, Africa, the Middle East and the former Soviet Republics. Mr. de la Fuente has led proactive international public awareness campaigns, developed crisis management plans and designed comprehensive communication strategies and internal communications programs for a variety of clients around the world. He has also been a lead communications consultant for a variety of anti-corruption, good governance and rule-of-law projects in various countries around the world, including Armenia, Georgia, Ukraine, Colombia, El Salvador, Paraguay, Jordan, and Rwanda. Mr. de la Fuente holds a Master’s in Latin American Studies from Georgetown University (Washington, D.C.) and a Bachelor’s Degree in International Relations from Florida International University (Miami, FL). Mr. de la Fuente is fluent in English, Spanish, Portuguese and Italian, and proficient in Russian.
PHASE II

Marifeli Perez-Stable, “Raul Castro’s Government Recent Economic Reforms and Some Political Considerations.” October 2010

Iñigo Guevara Moyano, “Defense Expenditures: Central America and Dominican Republic.” September 2010


Kristina Mani, “Military Entrepreneurship in Latin America: A Brief Overview.” June 2010


Phase I


WESTERN HEMISPHERIC SECURITY ANALYSIS CENTER SPONSORS

The Applied Research Center advances the research and academic mission of Florida International University. ARC’s focus is to solve real-world problems through multi-disciplinary research collaborations within the University's increasingly talented applied and basic research units. It is uniquely structured and staffed to allow for free-flowing exchange of ideas between the University's applied researchers, academia, government, private sector and industry partners. The ARC's vision is to be the leading international university-based applied research institution providing value-driven, real-world solutions, which will enable FIU to acquire, manage, and execute educationally relevant and economically sound research programs. That vision is based on the Center's core values of respect for the environment, health and safety of all individuals, creativity and innovation, service excellence, and leadership and accountability. The Applied Research Center is organized into three core research units: Environment; Energy, and Security and Development. Under the leadership of its Executive Director, the Center reports to FIU’s Office of Sponsored Research Administration. An External Advisory Board, encompassing leaders from the private and public sectors, participates actively in the Center's growth and development. The Florida International University Applied Research Council, a team of University deans, executives and faculty guide the development of the Center's programs.

Florida International University is Miami’s first and only four-year public research university with a student body of more than 40,000. It is one of the 25 largest universities in the nation. FIU’s colleges and schools offer nearly 200 bachelor’s, master’s and doctoral programs in fields such as international relations, law and engineering. As one of South Florida’s anchor institutions, FIU has been locally and globally engaged for more than four decades finding solutions to the most challenging problems of our time. FIU emphasizes research as a major component of its mission. The opening of the Herbert Wertheim College of Medicine in August 2009 has enhanced the university’s ability to create lasting change through its research initiatives. Overall, sponsored research funding for the university (grants and contracts) from external sources for the year 2008-2009 totaled approximately $101 million.

The United States Southern Command (USSOUTHCOM) is one of ten unified Combatant Commands (COCOMs) in the Department of Defense. It is responsible for providing contingency planning, operations, and security cooperation for Central and South America, the Caribbean, and their territorial waters; as well as for the force protection of U.S. military resources at these locations.

The National Defense Center for Energy and the Environment (NDCEE) provides reliable and sustainable solutions to the US Department of Defense in areas ranging from contingency operations to global climate change and greenhouse gas reduction to safety and occupational health. These solutions increase mission readiness and improve the health and safety of our Armed Forces both at home and abroad. The NDCEE provides project management and technical support to the WHEMSAC Program.