

Humanitarian, Peace, and Reconstruction Operations: The More Things Change, the More They Stay the Same

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Experiment, Unified Vision 01 and Millennium Challenge, as well as participating with the U.S. Pacific Command's Virtual Information Center Experiment.

INTRODUCTION

Like the Cornwallis Group, the core research team at Evidence Based Research (EBR) began examining issues related to social conflicts and their resolution about a decade ago. EBR has carried out analyses, sponsored workshops, and published books on humanitarian, peace, and reconstruction operations since 1994. This includes workshops examining basic experiences in peace operations by the United States and other hemispheric nations, in depth analyses of U.S. operations in Haiti, multidimensional analyses of coalition operations in Bosnia and Kosovo, empirical analyses of the conflict during the reconstruction operations in Iraq, retrospective analyses of the lessons learned in Grenada and Panama, and case study analysis of NATO's peacekeeping experience during Task Force Fox in Macedonia.

EBR has also supported lessons learned analyses in media operations in Iraq, conducted workshops to support design, development, and implementation of the Virtual Information Center (VIC) in PACOM, helped assess the "Coalition Village" at CENTCOM, and published two books on coalition media operations. It has also led workshops on Effects Based Operations (EBO) and helped to assess JFCOM and PACOM experiments designed to conduct EBO in both U.S. and coalition operational environments. Most recently, EBR participated in Strong Angel II that was conceived and conducted to address perceived shortfalls in the U.S. Government handling of humanitarian aspects of post-major conflict operations in Iraq.

In this paper, EBR has created an integrated discussion of the enduring principles that underlie successful coalition efforts in humanitarian, peace, and reconstruction operations based on both its own research and the best of the other material that has been created over the past decade. This stresses both generating useful measures that relate to the effects based operations necessary (reaching across the full set of instruments of power and influence), development of appropriate sets of metrics, identifying the conceptual models needed for successful analyses, generating the types of data information necessary, and also specifying the types of tools that can be helpful. This effort looks at conflicts based on ethnicity, religious differences, and ideology.

BACKGROUND

The CCRP (Command and Control Research Program) of the Office of the Assistant Secretary of Defense began research and analysis of humanitarian, peace, and reconstruction operations in 1994. EBR has supported these efforts since their initiation. To date, nearly 30 workshop reports and books have been published by the CCRP on these topics (see text box for titles).¹

¹ These items are available at the CCRP Web site, www.dodccrp.org. Many can be ordered in hard copy at this site.

1. Coalition Command and Control (1994)
2. Command and Control in Peace Operations (Workshops 1, 2, & 3) (1994-1995)
3. Command Arrangements for Peace Operations (1995)
4. What Is Information Age Warfare? (1995)
5. Operations Other Than War: The Technological Dimension (1995)
6. Somalia Operations: Lessons Learned (1995)
7. Humanitarian and Peace Operations: NGOs and the Military in the Interagency Process (1996)
8. Unintended Consequences of the Information Age (1996)
9. Interagency and Political-Military Dimensions of Peace Operations: Haiti—A Case Study (1996)
10. Information Warfare and Deterrence (1996)
11. Humanitarian Assistance and Disaster Relief in the Next Century (1997)
12. Complexity, Global Politics, and National Security (1997)
13. Information Age Anthology, Volume I (1997)
14. Information Warfare and International Law (1998)
15. Coping with the Bounds: Speculations on Nonlinearity in Military Affairs (1998)
16. Target Bosnia: Integrating Information Activities in Peace Operations (1998)
17. Confrontation Analysis: How to Win Operations Other Than War (1999)
18. Network Centric Warfare (1999)
19. Lessons from Bosnia: The IFOR Experience (1999)
20. Doing Windows: Non-Traditional Military Responses to Complex Emergencies (1999)
21. Information Age Anthology: Volume II (2000)
22. Information Campaigns for Peace Operations (2000)
23. Default Operational Representations of Military Organizations (2000)
24. Understanding Information Age Warfare (2001)
25. Information Age Anthology: Volume III (2001)
26. The NATO Code of Best Practice for C2 Assessment (2002)
27. Lessons from Kosovo: The KFOR Experience (2002)
28. The Code of Best Practice for Experimentation (2002)
29. Information Age Transformation: Getting to a 21st Century Military (2002)
30. Power to the Edge (2003)
31. Complexity Theory and Network Centric Warfare (2003)
32. The Big Issue (2003)
33. Effects Based Operations: Applying Network Centric Warfare to Peace, Crisis, and War (2003)
34. "Network Enabled Capability," Journal of Defence Science, Volume 8, Number 3 (2004)
35. Campaigns of Experimentation (2005)
36. The Agile Organization (2005)

As we review nearly a decade of work, it is clear that to *both an exhilarating and a frustrating extent, the issues and solutions documented in this arena remain unchanged over the past decade.* Indeed this fact was underscored in a comment by a participant in the most recent international humanitarian operation, the Southeast Asia Tsunami Relief operation. Reviewing Lesson Learned, CDR Peter Griffiths, Director of the Joint C4ISR Decision Support Center, observed that:

"A number of lessons learned documents out of the recent Tsunami relief operations look remarkably like lessons learned documents from relief operations gone before. I have to ask why we seem to re-learn these lessons over and over again. Certainly there are no easy answers...but we seem to see the same questions again and again."

With this question of re-learning lessons learned again and again in mine, this paper reviews what has been done and calls out the recurring themes and potential solutions. The team adopted a phased approach to the work, looking at our own literature and experience, examining the various seams and boundaries in different cases, distilling the consistent lessons, and postulating the consistent themes. In this process, feedback from participants at the Cornwallis X meeting was a valuable source of peer review.

SELECTED CASES

While covering the large body of relevant CCRP materials on this topic in any detail would be far beyond the scope of this effort, we have included discussions from several of them, and selected a sampling of non-CCRP materials dealing with the same situations, in order to give readers a feel for the type of information on which the findings are based. The selected cases and the year of the most relevant publications are:

- Haiti (1995).
- Humanitarian and Peace Operations: NGOs and the Military in the Interagency Process (1996).
- Bosnia (1998 and 1999).
- Virtual Information Center (based on technical reports from not all formally published, but reflected work from 1996-2000).
- Kosovo (2002).
- Strong Angel II (2004).
- Southeast Asia Tsunami Relief (2005)

HAITI

Between the initial studies of command arrangements in peace operations and the U.S. operation in Haiti in 1994, our understanding of the complexity of the emergency response process matured substantially. In the first place, we began to better understand the nature of the evolution of crises and the nature of actors playing in each phase. Figure 1 depicts the understanding that a humanitarian crisis evolves through three phases: pre-conflict Security Response, relief and stabilization, and return to development and re-construction. We recognized that civilian relief and development organizations were likely present in country long before the military arrived and needed to be engaged prior, during, and after a military operation.

The main question in the military commander's mind at this time was how soon do I exit? Military organizations were reluctant to engage in peace building, and the prevailing

hypothesis was that they would exit rapidly, leaving stabilization and reconstruction to civilians.

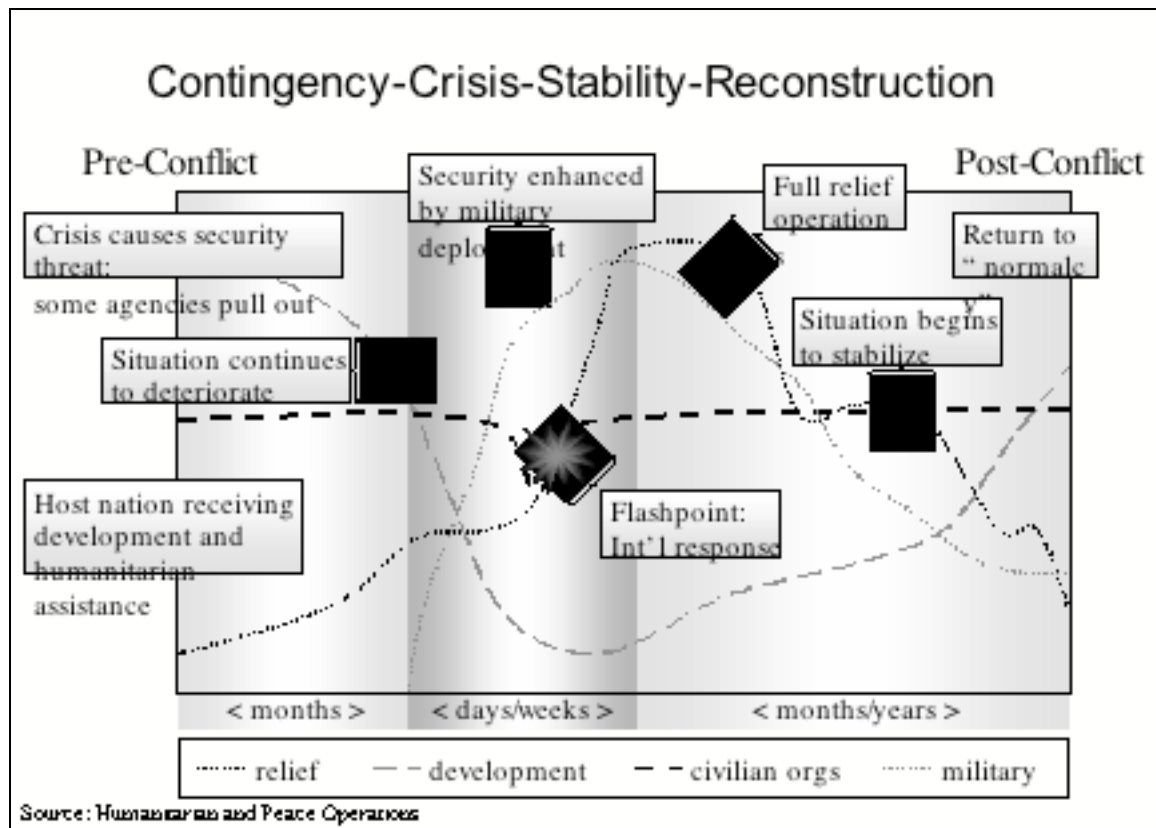


Figure 1: Evolution of a Humanitarian Crisis.

We began to focus also on the complexity of the international response, as depicted in Figure 2. We began to recognize the vast number of players likely present in an international humanitarian response. These would include the national government, other governments, the agencies of each of these governments, the agencies of established international organizations, and non-government organizations with both domestic and international linkages. These organizations would also be involved in development and relief activities simultaneously and would most often not be communicating effectively with one another. Coalitions would form at local, national, and international levels, and around issues of pre-conflict development, crisis response, and post-conflict reconstructions. The absence of effective international command and control arrangements were apparent.

The crisis in Haiti followed the pattern of earlier humanitarian crises. Jean-Bertrand Aristide was elected president of Haiti in December 1990 and took office in February 1991. His government was overthrown by elements of the Haitian army in September, 7 months later. Over the next 2 years, the United States, the UN, and the OAS all focused, on restoring the elected government. Following a meeting in July at Governors Island in New York, of U.S. and UN mediators, Aristide, and the military leaders, it was agreed that the military would step aside and Aristide would be restored to power. That timeline was disrupted when the USS Harlan County, carrying a contingent of U.S. and Canadian military engineers and trainers, was met by violent mobs and denied entry to the docks in Port-au-Prince (12

October 1993).² Following closely on the abrupt U.S. withdrawal from Somalia as a consequence of the Black Hawk Down incident, the withdrawal was taken as lack of U.S. resolve, and, indeed, the U.S. military were on record as reluctant to engage in Haiti. Nevertheless a military planning cell was established at then U.S. Atlantic Command to develop contingency responses.

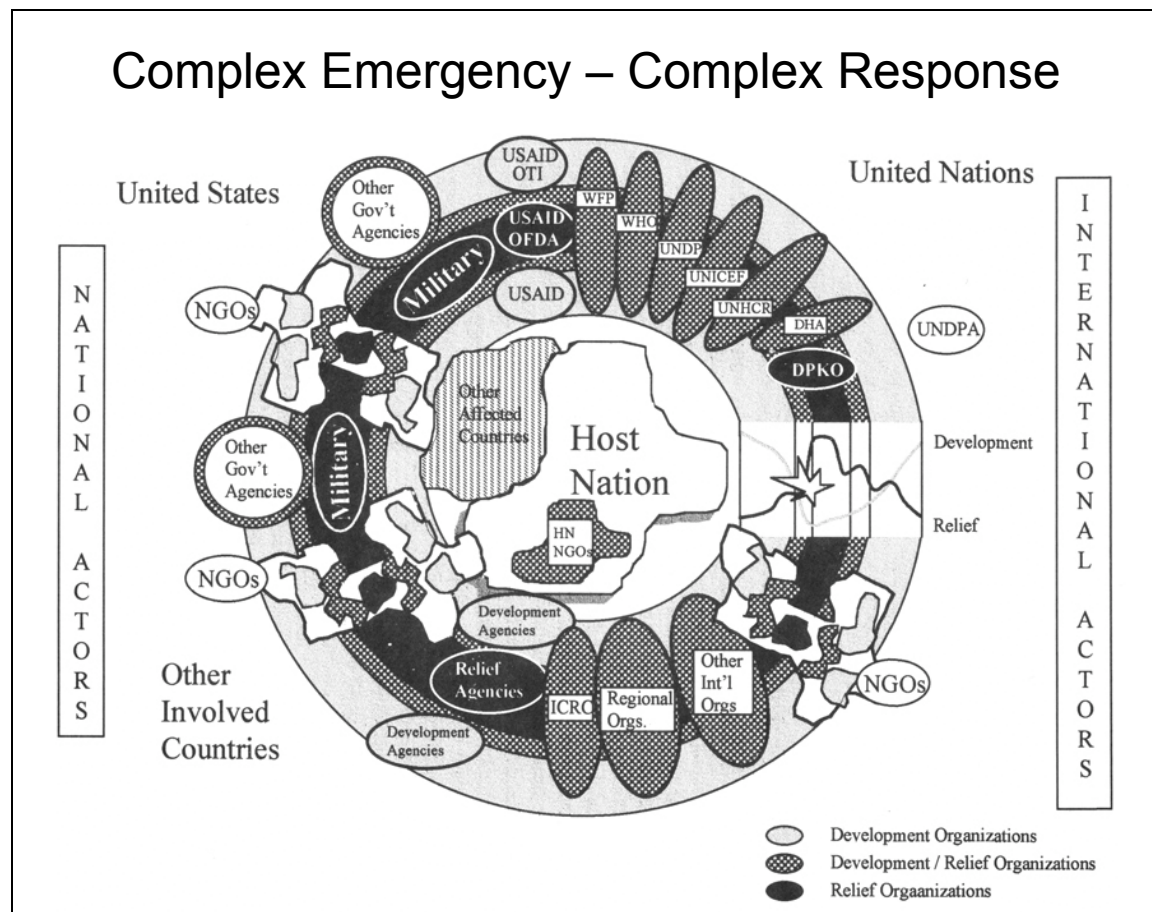


Figure 2: The Complexity of an International Humanitarian Response

Over the spring and summer of 1994, the United Nations continued to press the Haitian military to abide by what they had agreed at Governors Island, but met with intransigence. Simultaneously, the U.S. Congressional Black Caucus and other domestic groups began to criticize the Clinton administration for both returning Haitian refugees and delaying in the restoration of the Aristide government. Tensions continue to mount, and on July 31, 1994, the UN authorized use of “all necessary means” to restore Aristide to his position and authorized the creation of a multinational force to accomplish the mission.

On September 12, USACOM hosted the first inter-agency planning meeting to review progress on the contingency response. The meeting was widely regarded as too large and unfocused, but it highlighted the coordination that remained to be done.³ The National

² This chronology is drawn from Margaret Daly Hayes and Gary F. Wheatley, *Interagency and Political Military Dimensions of Peace Operations: Haiti – A Case Study* (Washington, D.C.: National Defense University, 1995)

³ *Loc.cit.*, 16.

Security Council staff hosted a subsequent, smaller, meeting and resolved some of the confusion. On September 15, President Clinton told the press that “there is no point in continuing with the present policy.” Former President Jimmy Carter, accompanied by former Senator Sam Nunn and Chairman of the Joint Staff Colin Powell departed on the September 16 in a final effort to persuade the Haitian military to step down. At the very last minute they were successful, but not before U.S. forces from Ft. Bragg were airborne en route to Port au Prince. Other U.S. forces had departed aboard ship for Haiti beginning on the September 13. On September 19, these forces disembarked in Haiti. For 2 weeks the U.S. force encountered intermittent resistance, but the Haitian police and military quickly disappeared from the streets and the United States assumed responsibility for security. Aristide returned to Haiti on October 15, and a UN force assumed responsibility from the United States in January 1995. Several Lessons are noted in the Haiti operation.

1. Security on the ground is critical from the very beginning of an operation. An organized police capability, preferable a civilian capability, is necessary.
2. Inter-agency coordination from the start of planning is essential. The Interagency should be involved in both strategic and operational planning.
3. A civilian surge capability is needed for both civilian government personnel and contractors.
4. Political and military authorities on the ground (in the Haiti case, the Ambassador and military commander) need a “combined war room,” where their staffs meet and plan follow-up together. In an operation short of war in an existing state, the Ambassador is the senior authority on the ground. The Ambassador and the military commander must work compatibly together.
5. Planning must encompass the pre-conflict situation, the crisis response, and at least mid-term political stabilization, humanitarian assistance, and economic reconstruction. The State Department needs to play a much stronger, if not a leadership role, in much of this.
6. The military and the humanitarian assistance community (both government donor agencies and NGOs) need to know each other in order to work together effectively.

Many of these lessons have been noted again in more recent reviews of the U.S. responses in peace operations, as well as in criticisms of the preparations for the Iraq operation. They emphasize the need for a robust security on the ground, State Department leadership, the coordination and collaboration with coalition partners, local government elements, UN agencies, IOs, and NGOs. The military, for its part, has learned the need for integration of logistics, communications, and mobility (as mentioned by Sandy Babcock).

As for Haiti, as we write in 2005, the United Nations is supporting its third Haiti mission in 10 years. The Aristide government restored in 1994 was never able to establish effective governance. Elections held in 2000 were widely regarded as fraudulent, and, following months of instability and increasing violence, Aristide was forced from office in February

2004. Municipal, legislative, and presidential elections are scheduled to begin in October 2005,⁴ with serious questions as to whether this will be feasible.⁵ Multilateral donors have pledged some \$1.1 billion in assistance to Haiti, but much of it has not been disbursed because of lack of security on the ground. The UN force, MINUSTAH, led by Brazil, was slow to reach full strength and is generally recognized to be too small to impose order and to be operating under Rules of Engagement that do not permit it to operate effectively to disarm the gangs and militias. The United States, in its third military operation to Haiti, refuses to contribute troops to MINUSTAH. As one officer involved in the planning of the U.S. operation in 2004 that ousted Aristide commented, “This is the third time I’ve planned a Haiti operation. I’m tired of Haiti.” The Haitian National Police force, stood up after *Operation Uphold Democracy*, never achieved adequate mass or leadership and today is effectively outgunned by armed thugs, drug traffickers, and other criminal agents.

Clearly lessons learned in *Uphold Democracy* were not sustained.

BOSNIA

Two important CCRP publications dealt with Bosnia, *Target Bosnia: Integrating Information Activities in Peace Operations*, by Pascale Combelles Siegel, and *Lessons from Bosnia: The IFOR Experience*, by Larry Wentz. Siegel’s work was unique because, as a French national, she was able to hold candid conversations and interviews with Information Operations specialists from France and the other NATO partners engaged in these operations. Her work highlighted the facts that:

- Media reporting played a critical role in determining the success or failure of the peace Operation in Bosnia. This reflects the fact that the attitudes of the local populations are critical to mission success.
- The NATO and national military flows of information proved much slower than those of open sources, particularly media reporting. This created problems for military and political decision makers who found themselves asked, in public forums as well as inquires by reporters, to comment on events before they had received thorough or detailed reports about those events. In some cases, this occurred before they were even aware of the events.
- Major differences existed between the approaches to Information Warfare in the different countries. These differences generated potential for inconsistent or uncoordinated messages to the public.
- Mechanisms for gathering feedback on information operations remained national, not NATO-wide and were also inconsistent. In the case of some of the countries involved, they were all but non-existent.

⁴ Municipal elections are scheduled for October 9, with first round legislative and presidential elections on November 13 and a second round on December 18.

⁵ See Daniel PI Erikson and Adam Minson, “Haiti: Preparing for Elections,” (Washington, D.C.: Inter-American Dialogue, 2005) [http://www.thedialogue.org/publications/2005/summer/haiti_0805.pdf]

- NATO, itself, had only a very rudimentary system for Information Operations, in large measure because the nations felt that these were primarily political, not military affairs. Hence, NATO militaries were primarily focused on war fighting domains such as psychological operations.
- Among the areas that were weakest in Bosnian Information Operations were those requiring cooperation with civilian organizations, particularly those from the international community.

Siegel is ultimately quite critical of U.S. efforts in this area. She stresses that the United States had difficulty in developing constructive relationships with civilian populations within Bosnia. She also reports a strong perception among coalition partners that the United States had difficulty listening to them in this important arena.

In contrast with the sharply focused research of Siegel, Wentz's work on Bosnia focuses broadly across the operation. He had excellent access at all levels, but spent more time with American military organizations and at NATO headquarters than with coalition partners. Nevertheless, he reports strong differences in the approaches of the different members of the coalition. These were most heavily reflected in three arenas:

- As is typical within NATO, the United States brought the vast majority of the sophisticated information systems, particularly ground stations capable of working with satellite communications. This had a strong impact on the speed and pattern of information distribution and, inevitably, impacted that ability to share information and plan across national boundaries within the NATO coalition. Since communications systems at the tactical level are a national responsibility within NATO, this problem proved difficult and expensive for the U.S. forces.
- U.S. policies, and as a result, U.S. commanders, stressed force protection as a core goal of the operation. This resulted in U.S. forces consistently presenting an intimidating (and even hostile) impression on the general population. For example, U.S. forces always moved in armed convoys of three or more vehicles and U.S. personnel were expected to be prepared to fight (helmets, flack vests and weapons) whenever they left their compounds. By contrast, French and British troops, within their sectors, were often free to leave their military compounds when not on duty and often wore fatigue uniforms and soft caps when dealing with members of the general population. Wentz notes that the NATO partners felt that the U.S. approach undercut the messages of trust and normality they felt were essential to mission success.
- NATO used the tools perfected during World War II and the Cold War to organize its forces in Bosnia—separating ground forces and mission by assigning different geographic areas to different nations, exchanging liaison officers between commands that need to cooperate, and assigning missions based on perceived national capabilities. These tools accomplished what they were designed to do—they de-conflicted the efforts of the coalition members. However, they were not agile and often prevented synergistic efforts. The forces from different nations interpreted the NATO charter for Bosnia operations differently and individual countries provided specific, and

sometimes inconsistent, guidance to their forces. The traditional methods for command and control were also much less effective when dealing with non-NATO members of the coalition, particularly Russia.

- Serious problems of communication and coordination with the civilian entities were reported throughout the NATO efforts in Bosnia. Literally hundreds of non-governmental organizations (NGOs) and dozens of different international organizations (IOs) came to Bosnia. Each of them had a specific charter and approach to their specialty, which might include ensuring food, medical services, housing, clean water, or other support for the general public. However, each of these organizations also had an internal culture and many of them were suspicious or fearful of involvement with military forces. Dealing with the number and variety of these entities proved a serious challenge to the coalition in Bosnia.”

THE VIRTUAL INFORMATION CENTER

The Virtual Information Center Experiment grew out of a series of discussions, workshops, discovery experiments, tests and hypothesis testing experiments beginning in the mid-1990s. The U.S. Pacific Command (PACOM), in cooperation with the Hawaii-based Center of Excellence for Disaster Management and Humanitarian Assistance (COE) developed and sponsored the Pacific Complex Humanitarian Emergency Support Test (PAC CHEST) in September and October 1997 with three primary objectives:

- To validate the PACOM Political-Military Anchor Desk (PMAD)-PDMIN (COE Web site) connectivity;
- To verify the utility of PMAD and PDMIN information to commanders; and
- To identify crisis staffing requirements.

The Political-Military Anchor Desk was an experimental PACOM staff research organization in the J-5 (Plans) Directorate that used Internet search engines and other reference material to research requests for information received from the USCINCPAC staff and to provide responses based on information gained from open sources. PMAD was initiated as a 6.3 (initial application) research project in 1994 with limited development funding from PACOM. PMAD information sources consisted of the following:

- Hard Copy books, publications, etc.
- Interviews with various people as necessary.
- World Wide Web.
- Dialog Information Service.
- Intelligence Community—Rich Open Source Environment (IC-ROSE).

- Various Compact Disks.
- PACOM internal information on shared drives.
- Electronic Collateral Support System (ELCCS).
- Command and Control Support System (C2S2).
- Local (tailored) PMAD Databases.

PAC CHEST was conducted using reserve officers to man the research positions of the PMAD and use of Subject Matter Experts (SMEs) to provide appropriate staff and player inputs / requests for information. The SMEs also evaluated the usefulness and timeliness of the responses provided by the researchers. A scenario centered on a disaster in Burma was developed. However, at the beginning of the test real-world events in Indonesia provided an opportunity to use a nonfictitious scenario and to provide inputs to a PACOM Crisis Action Team (CAT) that was activated to deal with an Indonesian fires situation. The PACOM CAT did not actively seek information from PMAD. However, PMAD ascertained the type of info needed during personal discussions, and provided inputs to the CAT that were subsequently used in developing options and included in briefings to the CinC.

Initial conclusions at the completion of the test were:

- PMAD provides good information faster that would otherwise be available.
- Utility is highest for long-range, big picture information.
- Much important background info can be collected before a crisis or emergency.
- Interfaces between questioner, analyst and researcher are critical.

The important insight here was that open-source efforts could augment traditional intelligence efforts usefully and cost effectively.

As a result of the encouraging PAC CHEST results coupled with discussions in the 1998 Military Operations Research Society (MORS) Conference, The Department of Defense C4ISR Cooperative Research Program under Dr. David S. Alberts, and the U.S. Pacific Command PMAD Organization under Mr. David Haut, jointly sponsored the Humanitarian Assistance/Disaster Relief in the Next Century Concept Development Workshop which was held 28-30 October in Vienna, Virginia.⁶ There were six working groups:

- Organization and Procedures.
- Information Architectures.
- Sensing and Fusion of Diverse Sources.

⁶ *Humanitarian Assistance and Disaster Relief in the Next Century Workshop Report*, Department of Defense C4ISR Cooperative Research Program and United States Pacific Command, undated.

- Data Transformation.
- Modeling for Anticipation, Prediction and Detection of Change.
- Resource coordination with total asset visibility.

Each working group was challenged to produce a candidate test or experiment that had the potential for accomplishment in the Feb-Mar 98 timeframe. The Virtual Information Center (VIC) Experiment grew from the results of that workshop. The purpose of the VIC experiment was to evaluate emerging concepts for managing the acquisition, processing, analysis and presentation of information to the CINC and CJTF during Humanitarian Assistance/ Disaster Relief (HA/DR) operations. The United States Pacific Command (PACOM) was particularly interested in assessing the role of the military during Military Operations Other Than War (OOTW) in HA/DR Operations in support of Joint Vision 2010. The Virtual Information Center was conceived to allow collection of critical information outside of traditional information channels for the faster deployment of relief personnel to troubled areas. The VIC intended to:

- Support the CINC/ CJTF during HA/DR Operations.
- Use new approaches to accessing non-traditional sources of information and new concepts for managing the acquisition, processing, analysis and presentation of this information in a HA/DR operational environment to support the CINC/CJTF decision making process.
- Integrate new information sources and fusion centers with operational commanders in order for them to better prepare for deployment into HA/DR situations.
- Provide a basis for improving military-civilian dialogue and for sharing of unclassified information in a manner acceptable to both military and humanitarian aid personnel.

The VIC experiment was conducted 20-24 April 1998. The assessment took place at two (2) primary sites:

- Joint C4ISR Battle Center (JBC), Suffolk, Virginia.
- US PACOM, Camp H.M. Smith, Honolulu, Hawaii.

Additional cells were located at the Army War College, Carlisle, Pennsylvania, and in the Washington D.C./Northern Virginia area.

The VIC experiment met the goals and objectives set by PACOM. A means was established by which a CINC and/or CJTF could acquire additional information concerning a probable deployment area outside of the traditional information gathering means. The use of individual cells to provide assistance and recommendations to the VIC was judged a successful concept.

- The Predictive Modeling Cell provided insight on the utility of various tools in a HA/DR situation. The Consequences Assessment Tool Set (CATS) and the Preventive Medicine Planning Tool (PMPT) were utilized in the experiment. Both of these tools appear to have merit in HA/DR planning and operations.
- The Business Cell was tasked with investigating that one source of useful information could reside within the U.S. and the International Business Community. While this concept showed potential, it was realized that a significant amount of work still lay ahead. Constraints to the acquisition of information from this source were identified, with the understanding that these constraints must be examined and resolved prior to this capability being rated as a fully useful element of VIC.
- The Non-Governmental and International Organizations (NGO/IO) Cell was used as a role player to provide insights into the type, quantity and availability of information that could be shared among various organizations involved in HA/DR efforts. Results from this experiment revealed that information sharing can be accomplished at a basic level. However, further mutual work remained to overcome political, organizational and technical obstacles.
- The Remote Sensing Cell appeared to hold promise. However, policies, technologies and other barriers to "near-term" utility prevented any significant contribution to the experiment.
- The CINC/CJTF Cells created for this experiment were successful in as far as their size limitation allowed them to be. The lack of a fully robust staff proved to be the limiting factor here and this in turn influenced the results of the experiment to some degree.

Upon review of the VIC experiment findings, Commander, U.S. Pacific Command directed that actions be taken to establish the VIC as a staff element and to integrate it into the Pacific Command structure. By August 2000, the VIC mission had evolved to: "Provide USCINCPAC situational awareness through timely and focused identification, retrieval and integration of open-source information." It is noted that the interaction with NGOs/PVOs/IOs and others was not specified in this version. Nevertheless, the Center of Excellence in Disaster Management and Humanitarian Assistance (COE) and the Pacific Disaster Center (PDC) remained partners in addressing regional humanitarian needs. They, however are not included them in the VIC, nor are the details of contribution of the COE—NGO relationship addressed as a VIC objective.

The VIC Experiment, its predecessors, workshops, and subsequent operations, all clearly recorded the difficulty of cooperating and collaborating between U.S. military, interagency, and nongovernmental organizations in situations where it would seem important to provide consolidated action. Despite these "lessons," there was little action to further address those shortfalls. While the VIC became an important element for coordination and information sharing within the U.S. PACOM staff, the civil-military relationships it postulated were dropped from the program. Additional studies and research needed in that area were not pursued.

KOSOVO (2002)

Like the experience in Bosnia, operations in Kosovo were important sources of insight and issues in a variety of CCRP workshops. Larry Wentz also contributed a separate book on the topic, *Lessons from Kosovo: The KFOR Experience*, published in 2002. While Kosovo was NATO's second major operation dealing with both humanitarian and security issues, the experience appears to be remarkably similar when viewed through Wentz's lens.

Once again, the U.S. military brought the vast majority of communications equipment and capability to the operation. While communications dealing with intelligence were greatly improved because of richer networks involving the close allies, tactical communications were again pretty well fragmented, which distorted information sharing and collaboration efforts at that level. Communications with NGOs and IOs remained difficult, with human interfaces and techniques to work around gaps and barriers being the order of the day. In particular, sharing information with those outside the military remained a major challenge. One response was a detectable tendency to use the internet as a tool. The need for information was at least as great as during the Bosnia operation, with a great deal of uncertainty making planning and organizing security and humanitarian efforts very difficult.

Wentz also reports an increasing recognition that social networks are important. Of course, this raises the issue of language barriers and the fact that U.S. and NATO forces had serious shortages of linguists and translators. This was a specific problem in dealing with local media and the media representing home countries for the forces within the operations. Ultimately, interpersonal skills proved critical, from the top of the chain of command down to the tactical units and logistics personnel dealing with refugees, host government personnel, NGOs and IOs. Most command arrangements outside the military were really efforts at collaboration and coordination. Since the civilian actors were providing crucial services and the media were ubiquitous during the operation, new ways of doing business proved essential. Given the very large number of actors and their great variety, the need for communities of interest can readily be seen in his report.

As in operations dating back to Haiti, observers reported that the civilians involved in the Kosovo operations had little experience and almost no systematic approaches to planning. The perceived differences in cultures between the military, on one hand, and the NGOs and IOs on another, made it difficult to build the trust and shared situational understanding necessary for synergistic operations. Many of the NGOs continued to operate autonomously and lacked accountability to anyone except their own organizational leadership and sponsors. In some cases, this resulted in competition for providing specific services, in other cases it simply made them difficult to coordinate.

STRONG ANGEL II (2004)

Strong Angel II was an Assistant Secretary of Defense Networks and Information Infrastructure ASD(NII) demonstration subtitled "Designing the Edge" conducted in July 2004. The purpose of the demonstration was to explore technological solutions, procedural options, and cultural considerations that could aid in establishing cooperation and coordination among and between the organizational entities involved in humanitarian

operations by mitigating barriers frequently experienced between humanitarian aid workers, the U.S. military providing support to humanitarian operations, and the civilians receiving the aid. Strong Angel II was structured around the accomplishment of approximately 83 separate tasks developed by a diverse group of people with experience in real world events. These tasks were considered items that seemed to offer the prospect that clear technological or organizational solutions could be brought to bear in the near term. Major areas of examination included:

- Translation.
- Collaboration.
- Communications.
- Cultural awareness/Community.
- Sustainable footprint.
- Civil-Military relationship.
- Assessment indicators.

Initial findings from Strong Angel II, as seen by one of its proponents, include:⁷

- Establishing an *open* communications system is a primary requirement for providing effective support for those responding to provide humanitarian aid within an affected region. Having adequate communication enables the required informatics to be nimble, shared, more complex, and eventually a permanent gift to foster a more rapid recovery within the region.
- The Strong Angel model has aid workers, affected members of the community, military support staff, and a dispassionate ethical advisor co-located under one roof in habitation designed to be self-sustaining, environmentally and culturally appropriate, and in a manner which minimizes local area impact. That proved highly effective in consolidating task management, retaining focus, and improving civil-military synergy.
- Translation services are clearly enhanced by having both machine translation and human translation operating together. Technology is now such that each improves the other.
- Having culturally-centered media available in translation improves force protection, cultural understanding, community responsiveness, and task performance when the local community or culture is a factor within the tasks. Also, political decisions become more intelligent when local population perspectives are recognized through an understanding of local media.

⁷ Strong Angel II: Designing the Edge Preliminary Overview with Early Results and Selected Findings, Produced for OSD(NII) by Dexter Chan, Chan Solutions LLC, August 2004

- Culturally-sensitive habitation, with a clear emphasis on integration and ecological awareness, stimulated conversation with the local population and probably defused tension, though this is difficult to quantify. It also served as a reassuring behavioral model to the population served.
- Having the very best people available assigned to issues likely to affect the local population improves task yield and avoids regrettable errors that may have irremediable consequences. Quality in staffing (education, experience, attitude) matters, and seniority does not. Within the military we have occasionally been choosing any warm body for tasks that really require training, experience, and a certain aptitude. That short-term decision has been sub-optimal and probably damaging over the longer term to a depth we cannot clearly ascertain.
- There is software available that provides a very high level of functionality, with less cost, more features, and greater ease-of-use than software choices currently within the attending organizations. That is also true of hardware associated with information sharing of all types. Better is available.
- Military classification schemes no longer reflect the realities within which we often find ourselves. Strong Angel participants could easily name occasions when instances of outmoded and inappropriate information classification may have caused unnecessary deaths by, for example, the withholding of information classified only by the system it resided on.
- Integrating civilian and military staff in the earliest development of a civil-military exercise provides significant dividends. We have been delaying integration until too late. The non-military organizations need to be at the initial military planning conference and at every subsequent planning meeting. The military needs to pay for them to be there, and then integrate their suggestions at every reasonable opportunity. And that participation and integration must be driven by the most senior possible leadership.
- The new class of collaboration software provides task-specific cooperation across civil-military boundaries in ways never possible before. The particular software used within Strong Angel was almost universally admired, despite participants having been minimally trained due to logistics constraints. Training in the use of collaborative solutions should be a top priority in the future. From our perspective, secure, transparent, peer-to-peer collaboration tools would improve civil-military integration, and even military-to-military integration, and save significant time, energy, cost and annoyance, while minimizing lost opportunities.
- A common Web site is necessary and was not accomplished. An internal site was needed for informing all participants and outside interested parties of the events of the day and the plans ahead.

The roles of the military and the NGOs are unique during humanitarian aid operations. Their respective strengths should be recognized by each culture and trusted to provide the balance required to deliver an effective response. Because the military spends a majority of

its time and resources planning, training, and preparing to deploy manpower and resources while the NGOs spend the majority of their time in the field providing direct humanitarian aid, practices that allow them to leverage their respective strengths to the benefit of the other should be explored more deeply and implemented wherever appropriate once understood. Since the military will be providing support to NGOs performing humanitarian aid (and should *not* be providing the aid directly if it can possibly be delivered another way), it should be the military that captures the training requirements for both groups to perform this function and help train NGOs on collaborative solutions and procedures. The civilian side, both UN and NGOs, in turn, need to be open to having the military collect the information necessary to create the training materials and trust them to help train their organizations and implement the recommended solutions.

Needless to say, adopting the approach recommended by the developers of Strong Angel II would represent major changes in almost every aspect of military operations in support of humanitarian assistance missions. Hence, these conclusions and recommendations are unlikely to be adopted wholesale or embraced enthusiastically by military organizations. However, they do represent a transformational approach to the challenges experienced in exercises, experiments, and operations during the post-Cold War period.

SOUTHEAST ASIA TSUNAMI RELIEF (2005)

On December 26, 2004, a magnitude 8.9 earthquake took place off the coast of Sumatra and as a result a tsunami spanned out wreaking devastation on the coastal countries in the Indian Ocean region. Of those countries in the stricken region Indonesia, India, Thailand, and Sri Lanka suffered the worst devastation due to their locations. With destruction and death on a mass scale, the humanitarian response from the international community was the largest ever. The effort was composed of goods, funds, and services provided by various governments (GOV), non-governmental organizations (NGO), the United Nations, and numerous international organizations (UN/IO), as well as ordinary citizens, which channeled their way into the devastated regions at an unprecedented rate. To a greater degree than in earlier disasters, Information Age technology was used to increase the effectiveness by promoting information sharing and collaboration amongst the numerous NGOs, GOVs, and UN/IOs that were providing services.

In order to learn from this event the CCRP initiated an investigation into the implementation and use of collaborative technologies.

The CCRP tsunami investigation included an open information sources search, discussions, and insight gained from colleagues involved in the relief operation, review of both open and limited access sites, and a Link analysis of the participating organizations and their services provided in each of the four countries.

The investigation revealed:

- Most Web-based sites and portals serve as information repositories, not collaborative sites.

- There are operational/leadership transitions, both on the micro and macro level, that require the tools to be flexible and adaptable.
- Collaborative tools are hampered by too conservative and too liberal invitation processes.
- Collaboration can be encouraged by providing additional participant information. This will permit the participants to construct a social or mental framework in which the entire effort is being conducted and may be a matter of trust.
- Most collaboration was done at the local level by scheduled meetings. This may be due to the lack of infrastructure that exists in the local area.
- Speed of informal network development is extremely rapid. Blogs sprung up immediately after the disaster, some trying to help relief, others providing a locator service.
- More attention must be devoted to the development of hastily formed networks in order to benefit from the lessons learned.

Recommendations included:

1. Flexibility and Adaptability. Collaboration tools (Groove, eRoom, etc.) need to be flexible and adaptable enough in order to cope with leadership/operational shifts without disrupting the OPTEMPO or coordinated efforts that have already been established. In Sri Lanka, various organizations were operating in the tsunami stricken regions prior to the disaster. These organizations mobilized and began delivering services immediately; however, there was a period of delay prior to the government effectively leading and/or delivering services. This leadership transition may have serious effects on the already established collaboration or self-synchronization. An adaptable or flexible tool may be able to reduce some of the difficulties and likelihood of the tool itself becoming antiquated. Furthermore, if it is flexible and adaptable enough, it may permit the transition period to be smoother than past transitional experiences.
2. Identification of Participants, collaborative tools, and the invitation process. Participants in both the eRoom and the Groove space were not reflective of those actively engaged in the relief operation. If identification prior to the disaster cannot be established, then the invitation process may need to be tailored. In the case of the Groove space, there was a degree of freedom in which a participant could identify another participant/contributor/supporter and invite them to the space. However, if the space is centrally managed, as in the case of the eRoom, potential participants may be excluded during critical periods or may not be involved at all if the invitation process is not responsive in a timely fashion. There needs to be a medium in which both chords can be struck creating a balance during the development phase of such networks. This is especially true in the case of avoiding undesirables or “dead weight” that cannot contribute to the effort effectively.

3. Involved Participants, Resources, and Capabilities. In order to encourage collaboration or increase the speed of the operation, it may be beneficial to require the participants to identify their organization, resources, capabilities, and area of operation. This may reduce the time or “fishing” effect it takes to initiate the collaboration; however, caution must be used so as to maintain transparency to other participants and reduce the likelihood of stovepiping the information. Additionally, a picture of each of the participants humanizes the environment in which they operate, allowing the participants to develop social and mental constructs of the operation(s).
4. Bandwidth Limitations. Bandwidth is a consideration for all technologically based organizations and is of paramount importance to those who routinely operate in austere environments. Although a comparative technical study of the bandwidth utilized by the eRoom and the VEOC was not conducted, it is anticipated that a significant difference exists since the Groove technology which underlies VEOC uses a peer-to-peer architecture and accomplishes updates through the transmission of differentials vice entire replacement packages. As many of the humanitarian workers are forced to work under difficult circumstances, and with less than desirable technology, there should be further investigations bearing on technical suitability.

It is interesting to note that approximately 6 months after Strong Angel II, a major humanitarian disaster, the Southeast Asian tsunami of December 2005, sparked a world-wide humanitarian relief effort. A few of the concepts and technology demonstrated in Strong Angel II were used during that event. Those initiatives that were brought to bear did not appear to get the widespread adoption needed to prove them, nor to significantly increase the effectiveness of the humanitarian response.

RECURRING THEMES

Seven recurring themes are repeated throughout this selection of case studies.

1. The unanticipated variety of actors involved in bringing about a solution to the crisis is not adequately understood in initial planning. Actors include the military (or militaries), local and participating government agencies, UN agencies and NGOs. The United States tends to want to dominate this diverse group and often is perceived to fail to listen to, or hear, clear signals of trouble pending.
2. Planning must encompass the full spectrum of the operation, including entry, military response, stabilization and longer-term reconstruction. Inter-agency coordination from the start of planning is essential. The Interagency should be involved in both strategic and operational planning. Planning must encompass the pre-conflict situation, the crisis response, and at least mid-term political stabilization, humanitarian assistance and economic reconstruction. The State Department needs to play a much stronger, if not a leadership role in much of this. A civilian surge capability is needed for both civilian government personnel and contractors.

3. Security on the ground is critical from the very beginning of an operation. Security is essential for almost all non-military aspects of the solution. An organized police capability, preferable a civilian capability, is necessary.
4. Communications among and between the various actors is essential and one or more venues where staffs can meet and plan follow-up together are essential.
5. Media relations are critical and must be managed to reach different audiences in the host country, in the donor or force-sending countries and in the wider political-diplomatic elsewhere. Media managers need to be attentive to national differences and target their messages accordingly. Information operations must clearly distinguish between psychological operations, public diplomacy and influence operations.⁸
6. A correct balance between force protection and local community relations must be sought as soon as possible. In Bosnia, while French and British forces were free to socialize with locals in the village, U.S. force protection policies kept personnel confined to base or unable to move among the population without heavy, threatening, armed guard. This inhibited building the sense of trust needed.
7. A local face for stabilization and reconstruction activities should be established as soon as possible. Responsible (and accountable) local authorities should be identified quickly and organized to execute
8. The military needs to recognize that neither interagency nor international (NGO, PVO, IO) partners have real surge capacity, very limited capacity for detailed planning of the type the military values, and very different charters and responsibilities. Hence, working with them will require more flexibility and agility. However, they also bring valuable information, experience and local contacts, which makes the extra effort worthwhile.

CONCLUSIONS

The review of the case studies reveals consistent patterns that reflect on key themes of Command and Control in network-centric operations. There are lessons to be learned in each of the NCO domains: Physical, Informational, Cognitive and Social.

- In the Physical Domain, the existence of adequate networks and supporting collaborative systems is key to facilitating a high degree of interconnectedness that can positively affect the sharing of information and timely interactions leading to an outstandingly effective response to the situation at hand. In cases such as Haiti, Bosnia, and Kosovo, the disparity between the capability of

⁸ The importance of effective communications to different audiences has been raised by Gen.(Ret.) Barry M McCaffrey in testimony to Congress regarding the situation in Iraq (See xxx) and earlier by the Defense Science Board in its Report of the DSB Task Force on Strategic Communication, (September 2004). See http://www.acq.osd.mil/dsb/reports/2004-09-Strategic_Communication.pdf.

military, NATO, NGO and other participants was clear. This is exacerbated by restrictive policies which impede the sharing of capabilities and equipment in order to facilitate interactions. In the case of tsunami relief and other natural disaster responses, the lack or incapacity of supporting infrastructure exacerbates the problem.

- In the Information Domain, poor establishment and use of networks and a restricted flow of information within participating organizations were noted in the case studies. Establishing strong interconnected and open networks to support collaboration and sharing of information was a key objective of the Strong Angel II demonstration. The capability to improve in this arena was highlighted by the linking of all participants into a common network using readily available collaborative tools. Nevertheless, even in this controlled environment, disparities were noted and not all participants were able to easily access relevant information.
- The Social/Organizational Domain encompasses sharing of information, synchronization of actions among participants and all relevant supporting organizations, and cross-organizational operational planning. The recurring suboptimal sharing of information and synchronization of actions is found in all the cases cited, most clearly illustrated by operations in Bosnia and Kosovo and the response to the Southeast Asia tsunami. The barriers to improved information sharing and awareness were examined during Strong Angel II, but the small strides forward in that short demonstration were not widely adopted in response to the tsunami only 6 months later.
- Suboptimal achievement of shared awareness and shared sensemaking results from failure to perform well in the Cognitive Domain. The varying goals and objectives of the many participants in Kosovo, Bosnia, and in humanitarian relief operations such as the Southeast Asia tsunami are well documented and are a recurring theme throughout the cases studied.

In sum, elements throughout the cases studied appear to remain constant difficulties in military responses, despite repeated attempts to correct them and to develop shared approaches to meeting these challenges. Improving the relationships and operations in military and humanitarian operations needs to be given higher priority and attention so that we do not continue to approach each instance on an ad hoc basis and so that we can improve the effectiveness and efficiency of the international community in responding to human needs.