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# KOSOVO BRIEF: INFORMATION MANAGEMENT OFFERS A NEW OPPORTUNITY FOR COOPERATION BETWEEN CIVILIAN AND MILITARY ENTITIES

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This paper is based on a presentation made at a seminar sponsored by the United States Institute of Peace at the 1999 International Studies Association annual meeting in February, 1999.

## Introduction

Recent innovations in computer-based information management have created a significant opportunity for more effective cooperation between military and civilian organizations involved in peace missions and humanitarian relief operations, or "complex contingencies." Technological advancements in the collection, analysis, and

dissemination of crisis relevant information, however, are only one aspect of a larger international challenge to improve humanitarian crisis preparedness and response.

Cooperation between civilian and military entities has been an essential, yet frustratingly elusive, requirement for success in post-Cold War peace operations. Although collaboration will always be imperfect, it can be significantly improved by exploiting information technology to support advanced planning, cooperative execution, and feedback on the effectiveness of international efforts to provide relief for humanitarian disasters and reconstruct war-torn societies. Kosovo has been a fertile proving ground for the operational concepts and organizational adaptations required to institutionalize such an information-sharing regime in support of complex contingencies. This Kosovo experience unfolded in the context of international efforts to prevent the expulsion of Kosovar Albanians and subsequently to facilitate their safe return and reconstruction of their homeland. The establishment of a Humanitarian Community Information Center (HCIC) to assist UN-led repatriation support efforts was a major break through in an evolving information-sharing regime.<sup>1</sup>The lessons from that experience are provided below with the intent to improve cooperation between civilian and military organizations as they plan and implement responses to both natural disasters and man-made crises. Full exploitation of information technologies and associated operational and organizational changes could have far-reaching implications for future civilian and military cooperation.

## Sharing Geographic Information

Both civilian and military organizations involved in a peace operation or in a response to a major disaster require

current information and maps. By integrating current information and maps, geographic information system (GIS) software can assist with information sharing, advance planning, operational cooperation, and evaluation of progress toward complementary goals. GIS-based data can now be distributed instantly around the world using new "Internet map server" software.

GIS provides a cohesive framework for collecting, organizing, and exploiting location-based information. The software can display various types of data overlaid on digital maps. Terrain features (mountains or streams), natural events (earthquakes or floods), and human activities are associated with a specific location on or near the earth's surface and can be displayed in any combination desired. An effective GIS-based information-sharing network can, thus, combine digital base maps, imagery from remote-sensing platforms, and input from field workers to provide accurate, timely, and easily shared information for responding to complex contingencies.

Perhaps the most valuable feature of GIS is the capacity to combine data sets across functional areas (e.g., humanitarian relief and economic reconstruction) to provide an integrated view of the operational environment and hence a basis for cooperation. There is a strong inducement to do this because civilian organizations routinely gather and maintain a range of information of relevance to such operations, while the military contingent is the most likely source for information relating to security and availability of support -- information essential to the safety of their civilian counterparts.

## Phase One: Development of a Prototype

Since October 1998, Kosovo has served as a testing ground for the concept of GIS-based crisis information sharing. The foundation for use of GIS was the construction of an "electronic base map" with multiple data layers (topography, roads, place names, administrative units, etc.) by the U.S. National Imagery and Mapping Agency (NIMA). This included the painstaking work of building an electronic gazetteer of over 1,500 place names (in both Serbo-Croatian and Albanian) along with their coordinates. The NIMA base map and gazetteer in effect created a spatial framework for collecting data about the unfolding humanitarian tragedy. One prominent GIS product was a "humanitarian planning map" distributed by the Office of Foreign Disaster Assistance (OFDA) of the U.S. Agency for International Development (USAID). This map was distributed in paper to many relief agencies working in Kosovo.

After an agreement between U.S. Envoy Richard Holbrooke and Yugoslav President Slobodan Milosevic established the Kosovo Verification Mission (KVM), under the Organization of Security and Cooperation in Europe (OSCE), a GIS was used to enable the KVM and the United Nations High Commissioner for Refugees (UNHCR) to work more effectively together in that volatile environment.<sup>2</sup> The KVM employed GIS to show the location of reported land mines, booby traps, and checkpoints; and UNHCR used it to survey housing damage and the location of internally displaced persons.<sup>3</sup> While this prototype showed promise, escalating violence in early 1999 precluded further development.

## Phase Two: The HCIC

After Milosevic launched his offensive against Kosovo's ethnic Albanian population in March 1999, over 600,000 refugees fled to Macedonia and Albania. This set the stage for the second phase of the Kosovo GIS project. The UNHCR established a GIS unit in Pristina that served as a precursor to the HCIC. This development had been nurtured by a multiagency Geographic Information Support Team (GIST) composed of key UN agencies and OFDA.<sup>4</sup> Working with the non-governmental organization (NGO) community, UNHCR also devised a common rapid village assessment form that was subsequently used both by civilian relief workers and the multinational Kosovo Force (KFOR) to gather information about the extent of destruction.<sup>5</sup>

In early June 1999, the State Department deployed a Kosovo Repatriation Information Support (KRIS) team to Macedonia with laptops loaded with GIS software and updated foundation data from NIMA. Its purpose was to continue providing support to UNHCR and begin developing data sets that would assist in planning and executing the repatriation process. The most notable contribution was the field use of U-2 imagery depicting damage to dwellings in Kosovo, which was obtained by NATO in early June 1999. U.S. Army Civil Affairs computer specialists joined the team to work with the UNHCR to program an interactive database to handle data derived from the rapid village

assessments.

The spontaneous return of refugees took place while the KRIS database was under development, precluding its use for advanced planning but making it an even more important tool for coordinating repatriation activities. These efforts contributed to the first authoritative survey by UNHCR of destruction in the province within weeks after Serb withdrawal. This phase demonstrated the value of GIS as a means of promoting information exchange between civilian and military organizations to support humanitarian relief.

## Phase Three: Coordination of KFOR, UN, OSCE, and European Union (EU) Activity in the Field

As the focus in Kosovo shifted from refugee repatriation to subsequent tasks, the challenge became the transformation of the HCIC to serve the other major mission elements of the UN Interim Administrative Mission in Kosovo (UNMIK).<sup>6</sup> The theoretical relief-to-development continuum was put into practice as the functions of the HCIC evolved to support reconstruction planning and budgeting by the EU. Additionally, the OSCE formed a unit within the HCIC to support election planning, with an emphasis on ensuring that data gathered during the civil registration process could also aid voter registration.<sup>7</sup> GIS is well suited, moreover, to facilitate Pillar Two, civil administration, by helping to organize data related to local government functions.

The HCIC has established common standards for coding data and other protocols so that data can be shared more readily. The potential thus exists for UNMIK to build upon this foundation as it discharges its responsibilities to "ensure a coordinated and integrated approach by all the Mission's four components."<sup>8</sup> A comprehensive information-sharing regime will also enable KFOR, and especially its Civil Affairs or Civilian-Military Cooperation Center (CIMIC) personnel, to collaborate more effectively with civilian counterparts.

## Phase Four: Institutionalizing Information Sharing

The process of expanding upon the HCIC concept to develop a more systematic information-sharing regime for future complex contingencies has begun to gather momentum. The first priority is to help the humanitarian community capability to mobilize and deploy GIS-enhanced data and tools in a timely manner. This has been significantly advanced by the dissemination of a draft information plan by the GIST.<sup>9</sup> The second priority is to ensure that military contingents will be able to integrate effectively with an HCIC-like information-sharing mechanism when they assist in relief operations or when a humanitarian mission also requires a complementary peace operation. UN officials from the Department of Peacekeeping Operations and the Office for the Coordination of Humanitarian Assistance (OCHA) have indicated an interest in pursuing this concept. OCHA was a prominent participant in an April 2000 international conference cosponsored by the United States Institute of Peace and U.S. Army Civil Affairs on the use of information sharing to support advanced planning and operational cooperation. Also participating were representatives from the EU, the International Committee of the Red Cross, and a significant cross-section of NGOs. The result was a solid endorsement of the HCIC model as a vehicle to help organizations with their planning efforts and subsequently to facilitate cooperation in the field. A report on the discussion and recommendations by conference participants suggest a variety of ways to institutionalize the HCIC model in response to future complex contingencies.<sup>10</sup>

## Lessons Learned from Kosovo

In Kosovo, much has been learned about the use of information technology to promote cooperation between civilian and military entities in complex contingencies. Some of these lessons have greater relevance for national-level policymakers, while others will be of primary concern for practitioners in the field.

- Use of GIS alone does not mean there is an information-sharing regime. An information strategy needs to be developed involving all major participating organizations addressing issues such as the following:
  1. Data Requirements: The information needs of both strategic planners and the disparate field missions should be identified and addressed. The lack of city maps in Kosovo, for example, has been a significant barrier to the use of GIS for assistance efforts there. Planning should be done to meet evolving requirements. One of the more beneficial aspects of an information-sharing regime would be

a "Who's Doing What Where" database. Even though some organizations may not wish to participate, this would nevertheless yield immediate benefits to senior decision makers and could assist donors by enhancing mission transparency and budget accountability.

2. Information Security: Military and intelligence agencies are not accustomed to sharing data with international organizations and NGOs, and vice versa. Effective working relationships and mechanisms for identifying relevant data for full or partial dissemination should be established in advance of the crisis phase. A multitiered access system may be required to address security concerns.
  3. Field Constraints: The emphasis must be on simplicity and off-the-shelf applications. Information systems must be designed to function in low-tech and chaotic field environments. Planners should assume that there are serious problems with indigenous telecommunications, electric power, and transportation.
- Each organization should be responsible for developing and maintaining its own data sets. The resulting data will only be sharable, however, if common standards and definitions are used when data are gathered and a common system is established for referencing place names and other locational information.
  - Preparing a digital GIS "foundation map" can be a labor-intensive and time-consuming undertaking. Such information usually does not exist at an appropriate scale for contingency operations, especially in remote areas, where these crises often erupt. This function must be performed by a qualified technical agency such as NIMA. Senior policymakers will need to anticipate future complex contingencies and requirements for GIS-based information. Interagency exercises, such as those to train decision-makers in political-military planning pursuant to Presidential Decision Directive 56, may provide a mechanism for doing this anticipatory work.
  - Major international relief organizations need to develop emergency response capabilities with the necessary GIS expertise, hardware, and communications equipment to facilitate the rapid establishment of information-sharing networks in the field.

## Endnotes

1. The counterpart for the HCIC within the military structures is the Civil-Military Cooperation Center (CIMICs), if NATO has received a mandate to conduct the operation, as is the case in Kosovo. In other operations, the function is performed by Civil-Military Operations Centers (CMOCs).
2. The KVM was responsible for monitoring human rights violations, with an emphasis on limiting hostilities between Yugoslav forces and the Kosovo Liberation Army. UNHCR had responsibility for coordinating the relief activities of over 40 international and nongovernmental organizations that collectively delivered food, built shelters, and provided other services to meet the needs of some 250,000 displaced persons.
3. Specialists from the Office of the Geographer and Global Issues at the State Department helped personnel in both organizations develop GIS-based data sets that could be shared electronically.
4. Participants are the U.S. Office of Foreign Disaster Assistance, UNHCR, UNICEF, the World Food Program, the Office for Coordination of Humanitarian Affairs, and the Food and Agriculture Organization.
5. Bouchardy, Jean-Yves, "Winning the Peace in Kosovo," *GEOEurope*, July 2000, pp. 36-41.
6. Pillar One is humanitarian relief, with UNHCR as the lead; Pillar Two is civil administration under UN leadership; Pillar Three is institution building under the OSCE; and Pillar Four is reconstruction, which the EU is overseeing.
7. Other organizations that have GIS capabilities in Kosovo are the Mine Action Center, the International Criminal Tribunal for the Former Yugoslavia, and the Multinational Specialized Unit within KFOR.
8. "Report of the Secretary-General on the United Nations Interim Administration Mission in Kosovo," S/1999/779, July 12, 1999, p. 8.
9. Dilley, Maxx, "Structured Humanitarian Assistance Reporting (SHARE): Description and Requirements for Georeferenced Data Collection Mapping to Support Humanitarian Assistance Operations" U. S. Agency for International Development, Office of Foreign Disaster Assistance, December 23, 1999.

10. U.S. Institute of Peace, "Taking it to the Next Level: Civilian-Military Cooperation in Complex Emergencies, A Conference Report," Virtual Diplomacy Series, September 2000.

## About the Report

In 1996 the United States Institute of Peace organized a conference with the National Defense University entitled "Managing Communications: Lessons from Interventions in Africa," in order to examine how the new information and communications technologies (ICTs) could facilitate civilian-military cooperation in complex humanitarian emergencies and peace operations. Since then while the humanitarian relief organizations and military peacekeepers have become increasingly familiar with each other in the field, the need for better, more reliable, and effective communication and information-sharing mechanisms has also grown. Solutions, however, remain ad hoc and subject to specific conditions.

In this report, two experts, one military and one civilian, recommend an information system that could serve both groups, individually, as well as being part of the larger response to a crisis. They describe how a geographic information system (GIS) in Kosovo allowed civilians and the military to share geographic information to create better conditions for their activities as they assisted in repopulating and rebuilding post-crisis Kosovo.

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