

Practicing for the Real Thing: Exercise Khichadi and ICTs on a Mountain Ridge

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This article was published in the December 2007 edition of *PeaceIT*, a journal published by the [Crisis Management Initiative](#). An expanded version of this article, as well as the team blog, photos, and exercise reports, may be found at www.humaninet.org.

The not-very-new SUV truck, loaded to maximum capacity with people and equipment, bounced slowly along a precipitous mountain road. The wheels were a half meter from the edge, which dropped off abruptly down a very steep slope. Looking from the right side window, one had a view from the ridge top into a canyon, the terraced slopes scarred by landslides old and new. The team members riding with me were quiet, fully aware that this was not a classroom or tabletop exercise.



The author (at laptop) demonstrates a GIS application to ADRA and Caritas team members. Broadband connectivity is wireless over a Hughes BGAN terminal, which is on top of the truck and powered by the solar blanket in the foreground. Service was donated by Inmarsat for Exercise Khichadi.

Welcome to Nepal and Exercise Khichadi, planned and hosted by the Asia regional office of the Adventist Development and Relief Agency (ADRA Asia) in partnership with Caritas Australia, a member of Caritas Internationalis.¹ For the next four days, the ADRA and Caritas teams would work, live, and solve problems together in an austere, challenging, and realistic environment in the rugged mountains east of Kathmandu .

Participating in the pioneering joint training and emergency field simulation exercise were experienced staff members from Australia, Bangladesh, India, Nepal, Pakistan, and Sri Lanka . Representatives of UN OCHA, the World Food Programme, the Nepalese police and army, and local government also participated in supporting roles. In the true spirit of Nepali generosity and hospitality, local leaders and citizens of the community of Ravi Opi cheerfully cooperated to provide a real-life village setting.

The four-day exercise simulated a scenario of several continuous days of heavy rain, which resulted in a major landslide in the village of Ravi Opi in the Kavre district of Nepal, resulting in casualties and evacuation. Exercise Khichadi built upon the lessons learned during Exercise JavaLava, the first such field exercise of its type, conducted by ADRA in 2006 in Indonesia .

¹ Caritas is the aid and development agency of the Catholic church.

More disasters, greater human impact. All participants recognized that the increasing number of large impact disasters in Asia will continue to challenge the capacity of aid organizations like ADRA and Caritas. Predicted trends indicate that increasing numbers of people are being adversely affected by natural disasters due to population growth, urbanization, climate change, poor governance and other factors.



Heidi Straw of ADRA Sri Lanka uses Skype for voice over wireless and a BGAN satellite connection.

ADRA and Caritas managers have drawn four significant conclusions from these trends:

1. Training of field teams, especially for rapid response to emergencies, must be more realistic and more frequent.
2. For teams to be responsive to local contexts (culture, government, economy, and more), training should provide exposure to local realities.
3. Smooth inter-agency collaboration is vital. Teams must learn how to work together in joint field operations.
4. To improve preparedness and inter-agency collaboration, teams must have hands-on training in ICTs, in a realistic field environment.

The overall goals of Exercise Khichadi were emergency response capacity building and the strengthening of local response networks. To improve ICT preparedness, two of the key training objectives were to:

- Increase the ability of disaster response personnel to use emergency communication equipment and global positioning systems.
- Research and identify options for mapping resources relevant to disaster response.



Members of the ADRA and Caritas teams practice using the BGAN satellite terminal (in foreground) for Internet and email access. The BGAN (Broadband Global Area Network) provided excellent Internet access, including the use of sophisticated mapping applications.

A team-oriented approach. The planning team² accomplished these objectives by rigorously integrating teams through inter-agency collaboration and by challenging the participants to work together. This

² Robert Patton, Chris Olafson, and Ashok Shrestha of ADRA; Melville Fernandez and Jenny Wells of Caritas Australia; Arpana Karki of Caritas Nepal ; Steve Glassey of the Emergency Management Academy of New Zealand; and Gregg Swanson of HumaniNet.

cooperative team approach was emphasized during two days of pre-exercise classroom training in Kathmandu and then practiced during initial "hands on" assignments with radios, satphones, and GPS units outdoors.

The team spirit, trust, and mutual understanding generated during the joint training carried over to the field simulation, which began on November 4. During the exercise, all debriefings were held jointly with all agencies participating. A small team of monitors observed all exercise events and held in-depth debriefings in the evening.

The ICTs incorporated in the exercise scenario included:

- Satellite phones, including the new ISAT satellite phone provided by Inmarsat.
- A BGAN (broadband global area network) satellite terminal, with services donated by Inmarsat and supported by Vizada.
- VHF handheld radios for intra-team short range communications.
- GPS units to record latitude and longitude data for specific points, such as locations of landslides, road blockages, etc.
- GIS (geospatial information services) situational awareness tools developed by ESRI and IDV Solutions to post and display operational information on dynamic digital maps.



Robert Patton of ADRA Asia, who directed Exercise Khichadi planning and field activity, makes a point to ADRA and Caritas members following an exercise event.

The ADRA and Caritas teams operated as separate units but shared ICT assets (e.g. BGAN terminal and donated bandwidth) coordinated tasks, and compared learnings throughout the day.

Findings. Five general findings on ICTs emerged during Exercise Khichadi and at the subsequent debriefing:

1. Reliable voice and data communications, regularly tested and exercised, are absolutely essential to successful field operations. While voice communications are indispensable from the beginning of the response, email and Internet capabilities (optimally from "Day One") are tremendously valuable as relief teams begin work.
2. It was clear early in the exercise that the **processes** and operator capability for planning and implementation, including the use of ICTs, were vital for effective operations. Checklists, plans, and templates will be of little use if the staff have not utilized them in a reasonably realistic situation.

3. Classroom and "parking lot" training is not sufficient for relief teams and individuals to gain full proficiency. A field simulation presents compound problems to solve in a realistic and demanding environment that effectively applies and reinforces classroom training.

4. Managers need to be familiar, and in some cases proficient, with ICTs, to include current technology developments. It is no longer advisable, if it ever was, to delegate full responsibility for ICTs in the field to a technical specialist.

5. The potential of GIS for situational awareness and operational planning, employed in combination with good GPS field practices, is enormous. However, there is a long learning curve and considerable process development required before a GIS solution is operational. The umbrella issue is information management; GIS is one way to organize and deliver information in trusted networks to managers, partners, and donors. The teams learned a great deal about GIS through two excellent Web-based demo applications prepared for the exercise by ESRI and IDV Solutions.

The bigger picture. In closing, I would like to emphasize that ICT training in simulations should not focus strictly on the technology, which can obscure organizational and process factors. ICT is not an end in itself but must be seen as a means to support strong and capable organizations which provide the best possible assistance to people in need.



BGAN on a haystack in Ravi Opi.

The foundation of effective ICT employment in the field is built upon a number of process building blocks. We believe that the field simulation concept, designed and tested by the Exercise Khichadi partners, is an important first step toward a more ambitious framework, in which international and government agencies, private sector partners, and NGO participants collaborate in large-scale exercises over a week or more.

It is a credit to the design team and all participants that so much was gained over a short, intense, but exciting ten days, especially since the ADRA-Caritas partnership was a new one. The team spirit and collaborative approach will certainly carry over to future exercises and – doubtlessly soon – in actual responses throughout Asia .

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The author wishes to thank Jenny Wells, Group Leader for Humanitarian Response at Caritas Australia; Robert Patton, Regional Coordinator for Emergency Management at ADRA Asia; and Mike Wenger of HumaniNet for their valuable contributions, thoughtful comments, and generous cooperation in drafting this article.