Information Gap Analysis: near real-time evaluation of disaster response

Trevor Girard

Geophysical Institute, Karlsruhe Institute of Technology, Karlsruhe, Germany (trevor.girard@kit.edu)

Disasters, such as major storm events or earthquakes, trigger an immediate response by the disaster management system of the nation in question. The quality of this response is a large factor in its ability to limit the impacts on the local population. Improving the quality of disaster response therefore reduces disaster impacts. Studying past disasters is a valuable exercise to understand what went wrong, identify measures which could have mitigated these issues, and make recommendations to improve future disaster planning and response. While such ex post evaluations can lead to improvements in the disaster management system, there are limitations. The main limitation that has influenced this research is that ex post evaluations do not have the ability to inform the disaster response being assessed for the obvious reason that they are carried out long after the response phase is over. The result is that lessons learned can only be applied to future disasters. In the field of humanitarian relief, this limitation has led to the development of real time evaluations. The key aspect of real time humanitarian evaluations is that they are completed while the operation is still underway. This results in findings being delivered at a time when they can still make a difference to the humanitarian response. Applying such an approach to the immediate disaster response phase requires an even shorter time-frame, as well as a shift in focus from international actors to the nation in question's government. As such, a pilot study was started and methodology developed, to analyze disaster response in near real-time. The analysis uses the information provided by the disaster management system within the first 0 – 5 days of the response. The data is collected from publicly available sources such as ReliefWeb and sorted under various categories which represent each aspect of disaster response. This process was carried out for 12 disasters. The quantity and timeliness of information produced under each category was then compared to establish best practices. Thus, the information produced by a disaster management system following a major disaster can be compared to these best practices within days of the disaster. The resulting "information gap analysis" can help identify areas of the response that may need to be improved and raise questions as to why critical information is lacking or delayed. This information gap analysis therefore complements ex post evaluations and can help lead to improvements in the immediate response and subsequently reduce disaster impacts on the population. The methodology has already been applied in the Center for Disaster Management and Risk Reduction Technology's (CEDIM) Forensic Disaster Analysis (FDA) activities following tropical cyclone Phailin in India, and the Bohol Earthquake and Typhoon Haiyan in the Philippines.