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DHS Science and Technology Directorate Crisis Information Management Framework for Regional Disaster Resiliency

The Regional Resilience Imperative

Every year, dozens of natural disasters take place throughout the world that affect large regions. In the United States alone, billion-dollar disasters account for roughly 80 percent of the total losses for all weather related disasters according to National Oceanic and Atmospheric Administration. These regional disasters know no borders. Few resilience research efforts have focused on the development and application of solutions that measurably improve resilience at a regional level, yet a majority of the most devastating and disruptive disasters are those that have had a regional impact. The most effective way for communities to measurably improve disaster resilience is through disaster preparedness activities. Developing information management capabilities is a cross-cutting preparedness activity that greatly affects a community's readiness and ability to work together in times of crisis.

A Framework to Enhance Capabilities

As part of the Flood Apex Program, the U.S. Department of Homeland Security Science and Technology Directorate (S&T) awarded SPIN Global LLC, a small start-up company, to develop, test, and transition a model crisis management information sharing framework designed to measurably improve community resilience to regional and multi-jurisdictional disruptions. The framework will include a repeatable process whereby communities can plan, implement, and evaluate progress of crisis management information sharing capabilities. The end state will include an online "do-it-yourself" training and implementation toolkit.

The program will build upon existing S&T models, including examples provided through the Canada-U.S. Enhanced Resiliency Experiment Series (CAUSE). CAUSE is a collaborative effort between Defense Research & Development Canada Centre for Security Science, Public Safety Canada, and the S&T First Responders Group that aims to improve binational disaster response coordination between the Canada and U.S. nations.

Improves Capability Maturity

The framework and corresponding toolkit are designed to help organizations facilitate improvements to regional information sharing, especially as it relates to cross-border and/or multi-national coordination.

The framework and toolkit will assist efforts to assess, train, and measurably improve incident management information sharing capability maturity of organizations, regions, and nations over a period of two to five years. As a result of implementation, communities will be postured to jointly plan, coordinate, and manage incidents, provide more precise mission support, and reduce response and recovery costs. Lessons learned, emerging models, process improvements, and technology enhancements derived from international research efforts will be observed, packaged, and shared with the American responder community.



Pilot participants include civil emergency protection agencies in Bosnia & Herzegovina, Croatia, Macedonia, and Montenegro.

Milestones

The program includes three phases of work to be performed over 30 months. The program milestones include:

- Framework Proof of Concept Documentation
- Model Experiment Plan
- Capability Maturity Assessment Summary Report
- Advanced Regional Civil Emergency Coordination Pilot Exercise & Report
- Post-Exercise Assessment Report
- Framework Training & Implementation Toolkit

Participants

Program Performer: SPIN Global www.spinglobal.co

Program Sponsor: S&T

Partners: NATO Science for Peace and Security; Massachusetts Institute for Technology, Lincoln Laboratory; and participating countries.



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To learn more about the Enhanced Resiliency Experiment Framework, contact First Responders Group at first.responder@hq.dhs.gov.