The role of SAMBRO as Cross-Agency Situational-Awareness Platform for Disaster Risk Management

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SUMMARY

Philippines, Maldives and Myanmar have lot of coastal area and are vulnerable to natural disasters. The major challenge for the government is to maintain an effective coordination and cooperation among different governmental and non-governmental organisation. The problem is heightened by the fact that different organisation has different warning systems in place. The Sendai Framework advocates the implementation of Early Warning System in place in order to reduce the risk. Cross-Agency Situational Awareness platforms and the ITU-T X.1303 Common Alerting Protocol (CAP) inter-operable data standards and various ICT are presenting themselves as a solution to this complex problem.

Sahana Alerting and Messaging Broker (SAMBRO) is designed to increase the coordination among different organisation and act as a warning broker to bridge the gap. SAMBRO implements CAP as a data standard, as a result of which it is capable of communicating with disparate systems of different autonomous organisations implementing CAP. The advantage of this technology is that the alerts issued by Meteorology and Hydrology Department at the central level of country can be received by Civil Authority at the local level and they can relay the warnings to the public including the detailed descriptions of the event and providing the instructions and contact to follow up, through various available medium like Email, SMS, RSS Feeds, FTP, Mobile Push Notification, Social Media like Facebook, Twitter, TV Scrolling etc. Of course, SAMBRO has capability to include other stakeholders in between. SAMBRO provides a Common Operating Picture (COP) for all the stakeholders to visualize the alerts according to the risk level. A color coded polygon where color implying the risk level associated with an area provide visual impressions to brain.

To this end, the CAP-on-a-MAP project, which was made possible by the UNESCAP Tsunami Trust Fund Grant, is implementing SAMBRO in Philippines, Maldives and Myanmar. The project

applies Agile SCRUM methodology for system development involving end-user in designing, building, testing, and rebuilding and iterating through the process until desired solution is met. The paper discuss about intricacies of applying the Early Warning System in place, various challenges that are encountered along the way and discuss different strategies applied which could be used as a reference for the future early warning designers and overcoming similar challenges. Some analysis with the data collected from implementation, drills and simulations are also presented.