SPATIAL DATA INFRASTRUCTURE TO ENHANCE EFFICIENCY OF THE EMERGENCY MAPPING TEAMS

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Abstract: Natural disasters have seriously threatened and impacted the well-being of the society in different aspects. The geographic information and spatial related technologies have been widely used to support decision-making in disaster management and response activities. Traditionally, these information and technology are held by different government agencies. On the other hand, due to the severity of the impact of some natural disasters in recent years, private companies, NGO, independent volunteers and international organizations have also been supporting in the collection and distribution of geographic information activities after a natural disaster strikes. These jointly collaborative efforts of technology, institutions and knowledge to support mapping activities after natural disasters have been recently known as Emergency Mapping Team (EMT). Nevertheless, despite the important contribution the EMT can bring on the table of the natural disaster managers and general public to reduce the impact of the natural disaster, there is still a lack of study about how this collaborative effort between the EMTs and the government agencies can be further improved. For instance, what can be prepared beforehand to make it more effective and efficient. Herein this research, we propose a linking mechanism between the essential component of the Spatial Data Infrastructure (SDI) in order to meet the EMT requirements in terms of data, technology and institutional arrangements. The user requirement analysis will be based on role the EMTs have been playing in previous experiences in different countries. This study also wants to demonstrate that the existing resources in a healthy SDI can help to make the work much easier to be accomplished by the disaster managers and the EMT members, reducing time effort and improving interoperability among the stakeholders involved.

KEY WORDS: Natural Disasters, Geographic Information, SDI, Emergency Mapping Team.