Coping with Disaster

Writing the second edition of our GIS and Science textbook with three colleagues made me acutely aware of two very different approaches to exploiting GIS when we suffer major disasters: differences in approach that have big potential impacts on the nature of national (or multinational) Spatial Data Infrastructures.

Consider first the recent devastating tsunami in Southeast Asia. The role of GI and GIS in the aftermath of the tsunami remains to be described and analysed in detail. But the high-resolution satellite images at least (for example, see www.digitalglobe.com) helped aid workers plan and guide their response. The sharing of Geographic Information (GI) facilitated collaboration between aid teams from different nations, and between military and civilian bodies. So far as I know, no one individual or organisation was in charge of the relief efforts. In this sense, partnership was voluntary, albeit with some co-ordination and collaboration structures in place. It was, in effect, a partnership of the sort traditionally espoused by proponents of NSDIs â€" especially by the US federal government.

Now consider manmade disasters. The growth of terrorism, notably manifested in the events of 9/11 in the USA but replicated in many ways in other countries as far afield as Colombia, India and Russia, has triggered a sharp focus on â€˜Homeland Securityâ€™ and military campaigns such as those in Afghanistan and Iraq. Immediately after 9/11 there was a flurry of activity in removing GI from websites so as to minimise aid to terrorists; various studies subsequently concluded that GI and GIS were probably not major factors facilitating terrorist planning (see www.rand.org/publications/ MG/MG142). The situation is certainly different, however, on the other side: GI can make major contributions to those dealing with terrorist acts. All five stages in any major disaster - risk assessment, preparedness, mitigation, response and recovery - inherently involve use of geographic information and GIS. But, as any reading of the US Homeland Security website or conversations with employees of that agency will make clear, there is definitely someone in charge. A military-style command structure operates whenever there is a perceived threat, and information is commandeered immediately from whatever source holds it and without the negotiation of longwinded protocols.

Viewed from the Homeland Security perspective, traditional NSDIs are â€˜on the radar screenâ€™ because they facilitate access to information by â€˜good guysâ€™ and â€˜bad guysâ€™ alike. But they have the crippling disadvantages of operating through altruistic motivation over relaxed timescales and having multiple, sometimes conflicting, objectives. If good information â€" and often that is Geographic Information â€" is the key resource in battling terrorism, we may have to get used to being told what to make available and restrictions on who can have access to some information. The consequences for our traditional model of NSDIs could be serious. And how we get information sharing between civilian and military organisations in any future multinational disaster created by terrorist act needs to be thought through now.

https://www.gim-international.com/content/article/coping-with-disaster