Gi4DM—Geo-information for Disaster Management—Torino, February 2010

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Geomatics techniques can support management and recovery activities in the aftermath of man-made and natural disasters. However, disaster management also poses big challenges related to every stage of the geo-information cycle, i.e., data acquisition, processing, management, and distribution.

The sixth edition of the International Symposium on Geo-information for Disaster Management (Gi4DM) did bring together—for the sixth time—researchers, developers, data providers, and users from all over the world to discuss these challenges.

Gi4DM 2010 was jointly organized by ASITA (Federazione Italiana delle Associazioni Scientifiche per le Informazioni Territoriali e Ambientali) and ISPRS (International Society for Photogrammetry and Remote Sensing). ASITA is the Italian Federation of the Scientific Associations devoted to environmental information. The federation is composed of four different associations that are involved in acquisition, processing, management, and visualization of geospatial data. Specifically, the aforementioned associations are: SIFET, Società Italiana di Fotogrammetria e Topografia (photogrammetry and topography), AIC, Associazione Italiana di Cartografia (mapping), AIT, Associazione Italiana di Telerilevamento (remote sensing), AM/FM/GIS Italia, Automated Mapping/Facilities Management/Geographic Information Systems/Italia (GIS). ISPRS is an international NGO devoted to the development of international cooperation for the advancement

of knowledge, research, development, and education in the photogrammetry, remote sensing, and spatial information sciences. It aims to contribute to the well-being of humanity and sustainability of the environment especially by means of integration and application of geomatics techniques.

As far as the Gi4DM conference is concerned, the program was arranged as follows:

- 5 plenary sessions: Opening Session, The International Organization Approach to Disaster Management, GIS Solutions for Emergency Response and Preparedness, New Perspectives in Satellite and Aerial Data Acquisition, Public and Private Programs in the Field of Emergency Response;
- 14 oral parallel sessions: Climate Change, Coastal and Water Analysis, Data Acquisition for Early Impact Stage, Drought Early Warning Systems, Early Warning and Impact Tools for Floods, Earthquake Early Impact, Fires and Technological Hazards Global SDI, Landslide Monitoring and Data Processing, Monitoring and Processing, Thematic and National SDI, Urban Analysis, User Requirements, Web/GIS Applications;
- 2 poster sessions: Emergency Preparedness and Response, Early Warning and Impact Systems.

The conference attendees were from more than 30 countries worldwide and a broad discussion did raise especially on early warning systems and rapid impact assessment methodologies, the benefits deriving from Spatial Data Infrastructures (SDI) and the potential role of collaborative approach to disaster management. Specifically, representatives from two of the main operational UN Agencies (UNWFP and UNOOSA) described their approach to emergency management and presented their experience in projects focused on response coordination (UN-Spider, SpaceAid, GMES/Safer). Data providers and software ven-

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dors (E-GEOS, ESRI, and Integraph) highlighted the main features of their data and the capabilities of the proposed hardware/software solutions. At the same time, google presented the MapMaker initiative devoted to a volunteer approach to map creation and updating.

In the framework, the conference was also organized a cartographic session titled “Maps created by the international community for the earthquake that occurred in Haiti on January 12th, 2010”, that resulted to be a successful initiative that was replicated, on specific request, in other conferences. More than 50 different maps produced by several institutions were displayed and specific considerations related to the map product quality and effectiveness were remarked, with a specific focus on the user perspective.

This special issue of *Applied Geomatics* is made of scientific papers selected by an international evaluation committee and afterwards revised by means of a thorough peer review system. The specific goal of the special issue is to present the actual trend of applied research in the field of disaster management, encouraging a technical discussion on relevant topics such as:

1. The need for standard operational procedures (SOP) both in terms of data (completeness, availability, and metadata) and of methodologies, considering that tools and systems adopting a global approach should be encouraged (UN agencies requirement);
2. The lack of fully automated methodologies aimed at extracting value added information. The availability of a comprehensive and complete dataset, to be delivered free-of-charge to concerned researchers and practitioners, could be an effective way to develop more reliable automatic procedures validated by means of ground truth ancillary data (Haiti emergency was definitely considered the most reliable example);
3. The coordination issues during emergencies, causing redundancies both in the data acquisition stage and in the data processing one, with the risk to provide misleading information to concerned organizations;
4. The importance of data sharing, a crucial requirement especially when a participatory and voluntary effort is needed;
5. The increasing demand for a more effective collaboration between international organizations, national research centers and governmental bodies that should be encouraged in all the disaster management cycle phases (including preparedness, early warning, response, and recovery).

Hoping that this special issue will contribute to a more effective discussion related to appropriate technologies suitable for disaster management, I would like to acknowledge the international evaluation committee and all the involved reviewers.