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Conference papers: invited papers on recent developments in geospatial information management in addressing national, regional and global issues

Emerging issues using geospatial initiatives in the societal context of disaster management

Note by the Secretariat

The Secretariat has the honour to bring to the attention of the Tenth United Nations Regional Cartographic Conference for the Americas a technical paper on emerging issues using geospatial initiatives in the societal context of disaster management.[1] The technical paper is available in the language of submission only from the website of the Conference (http://unstats.un.org/unsd/geoinfo/RCC/unrcca10.html). The Conference is invited to take note of the technical paper.

Summary of the technical paper

The technical paper indicates that current achievements in collecting and sharing geospatial information and images provide consistent support to the issue of disaster management. The characteristics of contemporary society enable residents at the local level and volunteers in remote areas to participate in the process of producing new geographic data, augmenting the attributes of existing geographic information and sharing such data and information within spatial data infrastructures and "cloud" geospatial services. It is important to mention that the quickness of the response and the effectiveness of the measures taken in disaster management are greatly enhanced by spatial data infrastructures that are already in place since they are part of what has been dubbed "the Internet of things".

On the one hand, while the availability of adequate geographic information remains a challenge for developing States and subnational areas, Member States are

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[1] Prepared by Mauro Salvemini, European Umbrella Organization for Geographic Information (EUROGI) and Rome University, La Sapienza.

being called to manage the geographical data obtained on a volunteer basis and to set up validation procedures to manage the geographic information and attributes not produced by national map agencies.

On the other hand, there is likely to remain a set of reference datasets that it is both economically and socially sensible for Governments to produce and maintain, in order to establish a common base and reference that can be used many times.

It has been already widely recognized that risk management and disaster management are strictly dependent upon available geographic information and spatial data infrastructures. Recent catastrophic events demonstrate that their management and mitigation are also directly influenced by volunteered geographic information and data produced by local communities. In that context, ad hoc mechanisms and resources for properly managing geospatial information are needed at the national and regional levels. Disaster prediction is an important phase of risk and disaster management, and updated geospatial information and data attributes are therefore needed to facilitate the activity.

The technical paper demonstrates that the effectiveness of risk management, disaster management and the recovery process are strictly related to societal resilience within those contexts and that such resilience benefits from geospatial initiatives. In terms of managing the impact on society, it is important to note that there is a substantial need for awareness-raising and capacity-building regarding the ways in which geospatial information can be used and how the economic and social benefits of such use may be promoted worldwide. The technical paper contains draft conclusions that consider ways in which concepts regarding disaster response, together with disaster predication and alerting systems can be developed through the intelligent and sustainable use of reliable geospatial information, spatial data infrastructures and geospatial initiatives at the governmental and non-governmental levels.

The technical paper includes a brief discussion on a few case studies, including in respect of France and the Emilia-Romagna region of Italy.