Simulation and modelling tool to help decision makers involved in large-scale crisis management

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Crisis managers and key decision makers routinely face situations that exceed the capacity of local response networks. Furthermore, natural and man-made disasters often do not respect regional or national boundaries, spilling out across borders and creating new unforeseen problems. For these reasons, decision makers need the tools to better understand crisis impacts and have immediate access to multi-organisational and multi-national expertise if and when required.

The EU-funded CRISMA project sought to address this pressing need through the development of an adaptable online simulation tool. This tool helps policy makers and those directly involved in crisis management to prepare for events by visualising complex crisis scenarios, which often require the integration of expertise from multiple sectors and can involve significant financial and ethical concerns.

End uses include land-use and infrastructure planning on a long-term basis, the optimisation of operational crisis management plans and support for the preparation, execution and assessment of field exercises. The project consortium also believes that potential exists for the private sector to use the simulation model.

The CRISMA framework has been specifically designed to enable end users to build up their own crisis scenarios and then integrate both new and legacy models and tools into one simulation system. The adaptability of this architecture was achieved by following an open approach; much of the core framework functionality is served by open source software, which can easily be replaced if and when necessary.

Furthermore, the CRISMA framework anticipates future technological changes and can accommodate several types of web services. The modular design allows future developers to add new building blocks when needed, either in open source or closed source, in line with the end user's own business model. Crisis managers and other decision makers can combine models, data and expertise from different sources in order to create a wider perception of crisis scenarios.

During the project, a number of pilot schemes were set up to cover a range of different crises. These included a winter storm event in northern Finland; the submersion of coastal defences in western France; an accidental container spillage off the coast of Israel; an earthquake and forest fire in Italy; and a multi-hazard mass casualty incident in

Germany. Workshops with potential end users were organised to illustrate pilot scheme results and to highlight the potential of the new tool.

The long term sustainability and uptake of the CRISMA results will be assured through recommendations from decision makers and external high-level experts in the CRISMA advisory board. The project was officially completed at the end of August 2015. A report on CRISMA's final results was published in September 2015, while key successes were shared at the project's final conference in June 2015.

More information: For further information, please visit the CRISMA project website: www.crismaproject.eu/

Provided by CORDIS

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