

## **CONTINGENCY PLANNING ORIENTED HAZARD MAPPING**

### **LESSONS LEARNED WITHIN THE MONITOR II PROJECT – SLOVENIAN EXAMPLE**

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#### **INTRODUCTION**

Slovenia has already established a legislative frame in the field of elaboration of contingency planning. It has prescribed who the responsible authorities are and which contents have to be included in protection and rescue plans. Authors of this paper are mainly focusing on floods although we will sometimes speak of natural hazards in general.

#### **SLOVENIAN LEGAL FRAME**

In Slovenia contingency plans and their content is at the moment regulated by the Decree on the contents and drawing up of protection and rescue plans (Official Gazette of RS no.: 3/2002, 17/2002, changes and additions in Official Gazette of RS no.: 17/2006 and 76/2008). In accordance with articles of this Decree the municipalities and the state authorities were obliged to elaborate and adopt the protection and rescue plans until Feb 17th 2007. But some municipalities have not adopted their protection and rescue plans for floods yet.

#### **FLOOD EVENTS IN SLOVENIA AFTER FEBRUARY 2007**

In the recent past Slovenia has experienced two extreme floods. On 18<sup>th</sup> September 2007 a great storm event took place, mainly in the Gorenjska region – heavy rainfall was rapidly followed by flood waves, also landslides occurred. Three years later, from 17<sup>th</sup> till 19<sup>th</sup> September 2010 extensive and heavy rain fell on Slovenia which lead to two extreme flood waves on 18<sup>th</sup> and 19<sup>th</sup> of September – most of Slovenian rivers were flooding. The main difference between the two September flood events was that in 2007 the floods appeared totally unexpectedly while in 2010 the Slovenian Civil Protection units and publicity were informed in advance so they were able to prepare to some extent. Both events were also a test of protection and rescue plans and they offer feedback information for people dealing with contingency planning and protection strategies in general.

#### **LESSONS LEARNED FROM THE FLOOD EVENT**

In the municipalities that have adopted the plans, they were proven to be useful although some deficiencies were recognised. As a good source of information commanders of Civil Protection units found contingency plans' appendixes, respectively the list of people authorised and responsible for certain intervention actions. They also paid great regard to maps in the appendix. On the other hand the most common remark of civil protection commanders was that the protection and rescue plans are widely extended. If the hazardous event develops rapidly, which was the case of the storm event in September 2007, there is no time to carefully read the plan and the abundant amount of text makes it difficult to extract only certain crucial information on time.

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## **BEST PRACTICE OF CONTINGENCY PLANNING RECOGNISED IN THE MONITOR II PROJECT**

Management of natural hazards constitutes a common challenge in the world. Until now, neither hazard mapping nor contingency planning have been transnationally coordinated and defined in a sufficient manner. These gaps will be tackled with the development of a common methodology in the frame of SEE Monitor II project (full title of the project is *Practical Use of MONITORing in Natural Disaster Management*). The partnership combines transnational scientific experts, authorities, public services and end-users. Also two Slovenian institutions, University of Ljubljana (Faculty of Civil and Geodetic Engineering) and Torrent and Erosion Control Service, have joined Monitor II project in order to contribute their knowledge and also obtain new knowledge and experience from other partners. We have heard from many contingency planning experts that when elaborating protection and rescue plans a pragmatic approach should be taken. An exhaustive expertise on a natural hazard is of course welcome in the phase of preparation to natural hazards but contingency plan should be a clear and condensed source of information where the important details can be easily recognised. One must always take into account who is going to be user of the document, what are his tasks and what information does he has to extract from the contingency plan.

### **CURRENT WORK**

One of the main focuses of both Slovenian Monitor II project partners is to develop a new methodology for elaboration of protection and rescue plans in the field of floods and apply it to our test bed. Our knowledge basis for improvement of the approach to elaborate contingency plans are the lessons that Civil Protection units have learned when experiencing the use of protection and rescue plan when flood events actually occurred and the knowledge that foreign contingency planning experts have shared with us. We attend to bring focus from textual parts of current Slovenian protection and rescue plans to a greater importance of maps, operational schemes of measures and pictures with descriptions of measures that have to be taken in case of a flood event. We also intend to reinforce our communication with the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief and also Civil Protection units on the local level within the area of the Slovenian test bed. Comprehension of their needs, knowledge and experience that will be properly included in the Slovenian specific contingency planning methodology will be a good basis for creating new protection and rescue plans with greater practical value.

**Keywords:** contingency planning, hazard mapping, protection strategies, natural hazards, floods, disaster management, protection and rescue plans