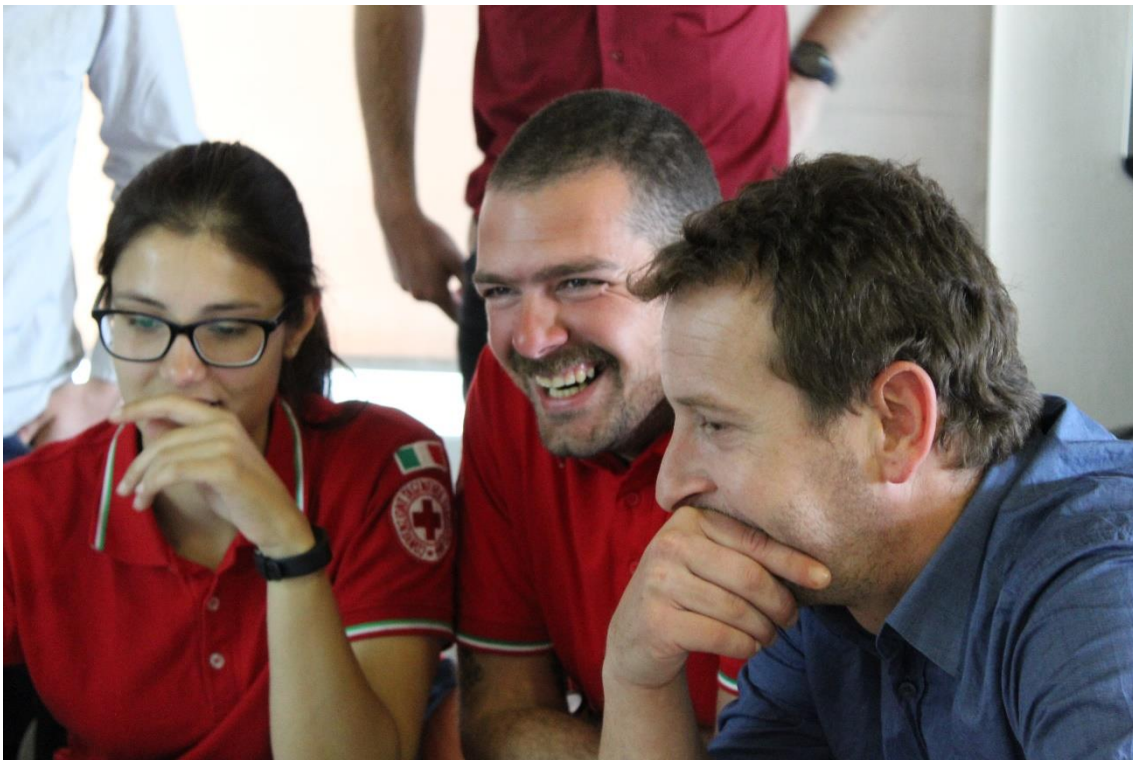


END USERS TESTED FOR THE SECOND TIME HEIMDALL SOFTWARE

This time the first responders used the new HEIMDALL functionalities applied to the landslides

Savona | Landslides

HEIMDALL Team met in Savona (Italy) last April to deploy the second demonstration of the project to test new HEIMDALL functionalities available as part of the Release B. In order to do that, experts prepared a Story with diverse actors who are usually present in an emergency. After the IT technicians established the lines of action and defined objectives, the Story was presented to the end users on April 16th in CIMA headquarters, located at the University of Savona (Italy)



End Users testing HEIMDALL new functionalities in Savona

Within this context, the partner responsible for evaluating the ethics (EKUT) of the project, distributed surveys to the end users after they tested the software to ensure that the procedures were in accordance with their ethical guidelines. The Release B of the Project was based on:

- The context of the end-users and the environment in which they operate
- The objective of the exercise
- Physical drivers – i.e., natural hazards
- Incorporation of damage and losses in a possibly realistic way

- Flow of response planning / preparedness activities in the end-users reference workflow
- Availability of functionality in the integrated system for Release A supporting the story (and also in stand-alone tool implementation if necessary to evaluate)

In general, the demonstration was really enriching, for both the end users and technicians, to get to know the real needs of the first responders. The cooperation among them is essential to create an efficient tool.

Monesi Case Study

The second demonstration was organized in two exercises or stories, that represented the actions carried out for the preparedness and response phases in order to manage a landslide event occurred on November 24th 2016 in Monesi di Mendatica, a village in the Imperia province in the alpine area of the Liguria Region.



Monesi di Mendatica (Liguria,

The event

The Monesi landslides occurred after heavy rainfalls had woken up a paleofrana causing large terrain movements. Everything started in the morning, where the pre-alert phase was activated due to the heavy rainfalls, and continued to the emergency response phase.

The road between San Bernardo and Monesi was completely covered by the terrain and therefore Monesi remained isolated from the rest of the area. One house was completely

destroyed while 25% of houses were condemned and several others heavily damaged. There were no human casualties as a result of the landslide, but the majority of people living in Monesi had to be rescued from their houses and evacuated in safe areas.

The first exercise and story represented the preparedness phase for Monesi di Mendatica landslide. The aims of the actions within this preparedness phase are “to be prepared” and ready against future events, avoiding reactive responses and fostering pro-active decisions by knowing in advance the potential affectations.

Since no in-situ sensors were available for Monesi di Mendatica landslide, some actions included in the story referred to Barberà de la Conca site. Barberà de la Conca is a village in Catalonia (Spain) that is affected by a terrain movement and is being monitored with a monitoring system consisting in in-situ hydrological and geotechnical sensors and periodic GB-SAR campaigns, owned by ICGC (Catalan Institute for Geologic and Carthograph.)

The story within the first exercise collected the actions performed by civil protection operators, the red cross operators, the local police in the period before the event, which resulted in a set of preparedness actions, such as the creation and publication of the hydrogeological risk management plan (including both flood and landslide risk in the area surrounding Monesi di Mendatica), the elaboration of a plan for raising population awareness on this type of risks and the identification of lessons learned during previous landslides, as well as a set of training activities.



Barberà de la Conca (Catalonia, Spain)

The second exercise and story represented the response phase to the Monesi landslide event. The story starts in the morning, where the pre-alert phase was activated due to the heavy rainfalls, and continues to the actual emergency response phase.

The Regional Control Room of the Liguria Region was informed by the Local Control Room that the local emergency response plan was activated to rescue potentially affected persons. Operators from the civil protection, the Italian Red Cross, Vigili del Fuoco, and Local Police were deployed on site, a helicopter was dispatched as well as two excavators and two ambulances.

According estimations, this event moved 60000 to 80000 cubic meters of material from the ancient landslide. The mobilized material involved a layer of 10-15 m of thickness. The event occurred is a translational-rotational landslide, probably caused by the erosion of the Tanarello river and the phreatic level. The triggering mechanism could be related to the presence of a clayey silt layer. Although precise data of phreatic level is not available from this event, thanks to field observations and the interpretation of the oscillations after the event, it was estimated at about 30 m depth in the upper part, and almost at the surface at the foot of the slope.