In natural hazard management and disaster risk reduction worldwide, but especially in the Alpine Space, forests are increasingly considered equal to technical or civil engineering measures.

**ROCK the ALPS** ([www.alpine-space.eu/rockthealps](http://www.alpine-space.eu/rockthealps)) is an Interreg Alpine Space dedicated to the enhancement of rockfall protection forest ecosystems service in risk management and prevention policy. Based on the capitalization of the current knowledge and the development of innovative concepts, tools and methodologies, the project consortium will provide the first Alpine Space regional rockfall risk zoning tool, as well as the first Alpine Space wide harmonized map protective forests against rockfall risks.

These innovative tools and maps will contribute to enhance the improvement of rockfall risk management with a realistic account taken of the mitigation effects provided by forest ecosystems.
A forest has a protective function only if it protects society and facilities from hazards. Stemming from this, the 3 most important topics for protection forest mapping are: hazards, human infrastructure (at risk) and forests. The general principle for mapping this forest ecosystem service is the same in all the alpine countries and based on answering the following questions:

1. Where are the release areas?
2. What is the maximum propagation area envelope?
3. Is any human infrastructure located in the propagation area and if so, is it endangered?
4. Are any forest stands located in the release area and/or in the propagation area above the human infrastructure endangered?

The advantage of the regional scale is that the only input data needed are a digital elevation model (DEM) and land cover uses. So, the data used are: the European DEM (EU-DEM v1.1) with a resolution of 25*25m, Corine Land Cover 2012 V18.5.

The release areas are defined using a slope threshold angle. It has been defined using the slope angle distribution in each nuts3 regions. A statistical analysis of theses distributions according to the main geomorphological landscape units has been conducted for defining the unit corresponding to the potential release areas. The model ROCK-EU map has been then used for mapping the probable maximum propagation envelop from each release areas. This map has been crossed with Google street map and Corine Land Cover to identify firstly the potential issues endangered and finally the forest with a potential protective function.

The first mapping has been provided in 3 weeks for the 187 nuts regions – 37.95 million hectares of the Alpine Space!
NEWS HIGHLIGHTS
The ROCK-EU methodology and the operational version of the associated models have been achieved and successfully tested.

The first version of the entire Alpine Space map of protective forests against rockfall has been produced. Its validation phase is currently under process.

The 63rd edition of the Italian Society of Photogrammetry and Topography (SIFET) annual congress will be held from the 20th to the 22nd June 2018 in Gaeta (Italy) The RockTheAlps partners Politecnico di Torino, Università di Padova and ERSAF will participateto the congress with the contribution “DTM/DSM generation in Alpine Space through UAV-RTK photogrammetry: limits and potentiality”.

On the 20th and 21st of June 2018, the project will be presented to the members of the International EcorisQ Association during its fifth general assembly in Norway. http://www.ecorisq.org/about-us

The project national and international midterm conferences will be held from October to December 2018. The international midterm conference will be part during the open day) of the ISSW 2018 (International Snow Science Workshop 2018) to be held in Innsbruck 07-12 October 2018 (www.issw2018.com).

The next newsletter will be dedicated to the presentation of the tool box TORRID: don’t miss it!
ROCK the ALPS
Alpine Forests are Rock Stars!

SHARE & CONNECT
The first version of the map of the protective forests against rockfall is available here:  

This map will be updated according to the results of its validation phase, the updating of the project events data base and of the model ROCK-EU map.

The project past events database contains now 8911 records corresponding to 3670 events: an updating of 1042 past events in 6 months!

Don’t forget: what about an international rockfall past events database?

We have to share our data for improving the knowledge and developing harmonized models. There is so a need to develop an international network and cooperation for building up an international rockfall past events data base.

We need you!

If you are interested please contact us.

For more information on the project please visit our web site www.alpine-space.eu/rockthealps and/or contact the project Leadpartner: frederic.berger@irstea.fr.

If you want to share your knowledges and data with us pleas get in contact with the project leadpartner.

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