



## **EUROBLOCv2: METHODOLOGY FOR THE STUDY OF ROCKFALLS**

Joan TORREBADELLA (1), Joan ALTIMIR (2), Carles LOPEZ (3), Jordi AMIGÓ (4), and Pau FERRER (4)

(1) EUROCONSULT, NATURAL HAZARDS, ANDORRA LA VELLA, Andorra (torrebadella@euroconsult.ad), TEL.00376800251, (2) EUROCONSULT, GENERAL MANAGER, ANDORRA LA VELLA, Andorra (jaltimir@euroconsult.ad), (3) EUROGEOTECNICA, GENERAL MANAGER, SANT CUGAT DEL VALLÈS, Spain (carles.lopez@eurogeotecnica.com), (4) EUROGEOTECNICA, NATURAL HAZARDS, SANT CUGAT DEL VALLÈS, Spain (jordi.amigo@eurogeotecnica.com), TEL.0034935830484

For studies of falling rocks, Euroconsult (Andorra) and Eurogeotecnica (Catalonia) developed in 1998 the methodology known as EUROBLOC. Having worked with it for over 10 years, and having done numerous studies both in the Principality of Andorra and Spain, it was considered appropriate to undertake an enhanced version of the methodology (EUROBLOCv2), in order to adapt it to the technological advances carried out in recent years on passive protection techniques, (it should be remembered that in 2000 there was only dynamic barriers with a retaining capacity of 1.000 kJ and nowadays there are already approved barriers up to 8.000 kJ and it is expected to reach 10.000 kJ in the near future, embankments, reinforced earth walls, etc.) and also in active protection systems (direct stabilization of the slope in base of wire mesh or wire mesh combined with high strength anchors).

The EUROBLOCv2 methodology (which was first used in 2012 in order to incorporate all the improvements in the field of protection) consists of two distinct parts, which are firstly, the analysis of rock falls and secondly determining the degree of protection afforded by the protection.

So today, we can use a pioneering technique in the field of rocky landslides in which we consider all possible kinds of protection that are on the market, based on both passive protection and active protection. The new methodology also allows work with the simulation of 20m<sup>3</sup> rock fall volume, instead on 10m<sup>3</sup>, maximum considered to date.