## A DEVICE FOR PREVENTIVE TRIGGERING OF AVALANCHES ON AN INTERNATIONAL AXIS

DIR Sud-Ouest – MEDDE, France dir-sud-ouest@developpement-durable.gouv.fr

## **ABSTRACT**

The Direction Interdépartementale des Routes Sud-Ouest (DIR Sud-Ouest) manages 950 km of national roads in the south-west of France.

The DIR Sud-Ouest is in particular responsible for the winter maintenance of the axis E9 Amsterdam-Barcelona when crossing of the Pyrenees (RN 20, which rises to 1550 m), and of the french access to the Principality of Andorra (RN22, which culminates at 2100m). It also ensures the winter service of the RN 320 via the Puymorens pass (1920 m) and the RN 116 between Perpignan and Bourg-Madame (Spanish border).

In such an environment, the route of the road crosses zones impacted by corridors of recurring avalanches.

Rather than to undergo the risk, the DIR Sud-Ouest opted for a device which consists in provoking preventively snowslides, in sprays or massively, before their potential volume reaches a threshold which would impact significantly the road.

The device set up by the DIR, under the authority of the prefectures of Ariège and Pyrénées-Orientales, and with the support of the referent state services (RTM) within the framework of an agreement, is formalized by three plans of intervention for triggering avalanche (Plans d'Intervention pour le Déclenchement d'Avalanche : PIDA).

It concerns five avalanche corridors equipped with means of artificial triggering and overhanging the national roads of the mountain sector.