

## **Good fire and bad fire: the science of fire and the traditional knowledge of scrub burning**

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Fire has always been considered the most threatening enemy of forests. In the early 20<sup>th</sup> century, Portuguese forestry and agricultural experts and technicians repeatedly regarded shepherds and farmers as responsible for forest fires. Scrub burning (*queimadas*), used to provide better grazing and promote grassland renewal for flocks or to increase the extent of agricultural area and prepare and fertilize the land for the following growing season, was pointed out as frequently degenerating into wildfires. In addition, the consecutive burning over the years destroyed the spontaneous vegetation, leaving vast mountain exposed to floods and winds. Burning was pictured as a “shepherd’s addiction” with severe consequences for agriculture and forestry.

After years of criticism for the damage caused to the forestry sector, the consequent suppression of scrub and grassland burning for agriculture and livestock raising has apparently resulted in increased fire danger over the mountainous territories. Forestation policies excluded rural communities from fallow land. Grazing was severely limited. Thus, the accumulation of flammable material promoted the occurrence of large fires. In this context, in the late 1970s, the multiple functionalities of fire were acknowledged, as well as the vital role of rural communities, as essential actors in the ecosystem, fundamental in reducing inflammable material and forest management. The science of fire, which was developing in Portugal, has also reframed the use of fire by recognizing its involvement in creating good conditions for hunting, pasture maintenance and forest exploitation.

As a contribution to historically acknowledging the various agencies of fire, we intend to discuss if and how the knowledge and practices of farmers and shepherds have been incorporated by technicians and experts in agriculture and forestry, challenging standing paradigms in agricultural and forestry planning in Portugal.