



Preventing landslides on terraced slopes: A methodological approach in planning and constructing new terraces

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In everyday practice, the construction of terraces does not follow a premade plan. Consequently, poorly designed and maintained terraces are often significant sediment sources induced by terrace collapse. The purpose of a plan for terrace construction is to arrange terraces according to geological, geomechanical, geodetic, agricultural, and other data. It is possible to anticipate the consequences of these arrangements through carefully considered decisions (about the ratio of the terrace slope, the quantity and direction of soil shifted when constructing terraces, fitting the terrace geometry to the terrain geometry, the width and length of terrace plains, the inclinations of terrace plains, the construction of field roads and turning points, the construction of drainage for removing groundwater, and other factors). Such a methodological approach in planning and constructing new terraces ensures greater stability of terraces, the smallest quantity of earth shifted, and the greatest possible area of usable land. Building terraces is a direct method for preventing landslides. Building terraces according to a plan increases the efficiency of this method. Such an approach is even more important in areas where terraces extend from the top to bottom of slopes. Two case studies from the Mediterranean area are presented: old terraces from Brkini area, where terraces and their slopes have preserved the same form for almost two hundred years, and the planning process for newly constructed terraced vineyards in the Gorizia Hills with post-project monitoring.