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Economic Landslide Susceptibility under a socio-economic perspective: an application to Umbria Region (Central Italy)

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An accurate understanding of physical and economic effects of landslides is fundamental to develop more refined risk management, mitigation strategies and land use policies. We develop a measure to consider the interconnection between physical and economic exposure, e.g. what we call the economic landslide susceptibility, namely the probability of landslide occurrence in an area weighted for its socio-economic exposure. The economic landslide susceptibility is estimated through a pixel-based method designed for large areas. The method makes use of landslide susceptibility maps and a real estate market value maps for any given areas under analysis. We apply this methodology to the Umbria Region (Central Italy). The innovative concept of economic landslide susceptibility (that is *de facto* an *ex ante* landslide cost assessment) may be interpreted as the potential loss that an area might suffer in terms of its propensity for landslides. Useful applications of the proposed method lie in a better territorial management and in the land use planning.