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A comment on the availability of debris-flow data

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Community comment on "Debris-flow surges of a very active alpine torrent: a field database" by Suzanne Lapillonne et al., EGU sphere,
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I have enjoyed reading this nice paper and I agree with the authors about the importance of sharing debris-flow data in open databases. This comment aims at providing information on the availability of measurements from two sites (Gadria and Moscardo catchments) instrumented for debris-flow monitoring in Italy.

Regarding the Gadria catchment, the paper under discussion mentions early observations on two debris flows (Comiti et al., 2014) and two more events that were used to compare the results of large scale particle image velocimetry (Theule et al., 2018). A recent paper (Coviello et al., 2021) has extended the dataset by presenting data (flow velocity and bulk volume, separated in surges) from nine debris flows recorded between 2011 and 2017. More data on six debris flows that occurred between 2018 and 2020 will be reported in a contribution accepted for the forthcoming DFHM8 Conference (Torino, June 2023).

Debris-flow data recorded between 1990 and 2019 in the Moscardo Torrent have been published in the repository PANGAEA: <https://doi.pangaea.de/10.1594/PANGAEA.919707>. In this time interval, 30 debris flows occurred, and 26 of them were monitored by sensors installed on the channel, while four were only documented through post-event observations. The catalog includes flow depth data, measured utilizing ultrasonic sensors, and rainfall. A paper published in NHESS (Marchi et al., 2021) describes the debris-flow dataset of the Moscardo Torrent and presents summary data (event date, number of surges per event, bulk volume, mean velocity, and peak discharge of the main surge). Data from 62 surges, i.e., on average approximately two surges per debris-flow event, were extracted from the records of the flow stage; their analysis enabled describing the shape of the hydrographs.

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