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Mapping with the use of uas. Project planning and adjustment: the case of Mersinidi landslides (Chios Island, NE Aegean)

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This project aims at the use of Unmanned Aircraft Systems (UAS) applications for mapping. Geomorphological mapping of features and changes with the use of UAS, in cases of floods, landslides, stream flows, etc. has been growing rapidly in recent years. It is combined with traditional mapping methods as well as modern technologies such as Geographic Information System (GIS). Our work concerns landslide hazard in the study area of Chios, in particular along the Chios - Kardamila road in the Mersinidi - Miliga region with a record of landslides and particular geological interest. During the field survey a) three-dimensional model of the slope was made across the road using UAS and the appropriate software, b) point cloud, c) a mosaic orthophotomap and d) a Digital Surface Model (DSM). After the data collection components material we followed detailed geological and tectonic mapping with enormous accuracy because the innovative technologies provided us multiple data compared to older methodologies. The exploitation of the Structure from Motion provided us with information of the inaccessible parts of the study area.