



Morphology and River Monitoring – Topobathymetry as a new level of monitoring and managing the morphology at the river Isar, Munich after the flood flows 2013

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Topobathymetry is a new approach for the very detailed bathymetric survey of water bodies (rivers, lakes, nearshore) as well as the topographic side in a same resolution. This technique was made possible within the scope of a research project between the University of Innsbruck and Riegl LMS (Horn, Lower Austria). This airborne-operated, water-penetrating laser system capturing both sides of water's edge is considered as a technical revolution for the comprehensive and simultaneous survey and research of our countryside. Monitoring our waters area-wide and with a point density larger 20 points/m² a new data level is reached for managing them and performing research on hydraulics and morphology. By now operating the system over three years and due to the flood flows in Austria and Germany in 2013 a dataset before and after the effects of the flood could be analyzed at the river Isar.

The changes monitored at the river Isar due to the flood flow will be presented as well as the new possibilities in calibrating hydro-morphologic numerical models. The project offers the city of Munich new knowledge and ways in managing inner-city river structures and planning the future of the close-to-nature approaches at the river Isar.