

Fugro unveils next-generation coastal mapping system



Fugro recently introduced its next-generation coastal mapping system, the Rapid Airborne Multibeam Mapping System (RAMMS 2.0), at the Hydro 2023 conference in Genoa, Italy. RAMMS 2.0, the world's only airborne Lidar system capable of delivering both full water column imaging and high-resolution bathymetry, is designed for precise mapping, monitoring and modelling of

coastal environments. This information plays a critical role in coastal hazard assessment and mitigation, marine resource management, coastal engineering and navigation safety.

The new sensor builds on the success of Fugro's original RAMMS, co-developed with technology partner Areté in response to client needs for more robust geospatial data delivered faster and more sustainably. Since its launch in 2018, Fugro has utilized RAMMS to map over 50,000km² in the Americas and Europe, meeting international accuracy standards while reducing carbon emissions by up to 80%.

Dual-laser capability

The key enhancement in RAMMS 2.0 is its dual-laser capability, which, combined with machine learning, not only enhances data accuracy but also expedites project delivery. This advanced hardware-software integration was recently tested in Portugal, where RAMMS 2.0 was deployed from an uncrewed aerial vehicle (UAV), successfully mapping an area of a challenging surf zone.

"The dual-laser, full water column capability of RAMMS 2.0 is a game-changer for coastal resilience," said Mark MacDonald, hydrography director for Fugro in the Americas and global product owner for Fugro RAMMS. "We're excited to present this innovation at Hydro 2023 as it empowers users to unlock the full potential of a single dataset to characterize the water column, map the seafloor, understand habitats and make informed decisions about coastal management."

MacDonald presented the new system during a talk entitled 'Fugro RAMMS Lidar Unveiled: Leading the Way in Coastal Ecosystem Discovery'. He was joined by Fugro's global geospatial lead, Pooja Mahapatra, and coastal resilience manager for Europe and Africa, Benoit Cajelot.



Fugro RAMMS 2.0 deployed on a Schiebel CAMCOPTER S-100. (Image courtesy: Schiebel)