

Fugro's Bathymetric Lidar Improves Hydrographic Data Collection in Australia and Pacific Region



Fugro has successfully trialed a major upgrade to its Fugro LADS airborne lidar bathymetry (ALB) system. The enhanced LADS HD+ technology was developed in Fugro's laser laboratory in Adelaide, Australia, and is a sophisticated hydrographic mapping system that accurately measures water depth in both the marine and coastal zone environments.

The new advances to the system have doubled the laser speed and the swath width and improved the object detection of the system, greatly increasing data collection efficiency for nautical charting. The system builds on the proven Australian-developed LADS technology and has been designed for safe, high-speed and cost-effective surveys of clean, shallow coastal areas in depths up to 80m. ALB can be integrated with traditional

hydrographic survey methods using acoustics, such as [multibeam echosounders](#) (MBES), to support nautical charting and coastal zone management. This development will also complement Fugro's lightweight Rapid Airborne Multibeam Mapping System (RAMMS), which can be operated from small aircraft or from an unmanned aerial vehicle (UAV).

Enhanced Survey Coverage and Object Detection

Mark Sinclair, Fugro's director of hydrography in Asia-Pacific, said: "This innovation will deliver enhanced survey coverage and object detection to improve our nautical charts, which are critical to our maritime trade. These data collection enhancements are also supported by more efficient data processing with Fugro's Australian-developed Pyxis cloud-based processing, which combines artificial intelligence and machine learning."

The [Fugro LADS HD+](#) system will now be deployed to Papua New Guinea for nautical charting projects, continuing Fugro's work in the Pacific Small Island Developing States supporting the safety of navigation and climate change adaption.

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