

Supporting development of the Blue Economy through use of automation and AI in hydrographic software

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SUMMARY

Modern hydrographic software has revolutionised the field of hydrography by enabling more precise, efficient, and comprehensive data collection and analysis. Along with advancements in sensors, software has been pivotal in facilitating the exploration of our oceans and seas, supporting the blue economy, and addressing challenges associated with establishing or recovering hydrographic datums in remote areas.

□ Hydrographic data is essential for various sectors, including fisheries, aquaculture, offshore energy, and maritime transportation. Enhanced data collection and analysis capabilities support greater understanding of the marine environment and subsequent policy development, ensuring sustainable management and exploitation of marine resources. By providing reliable and comprehensive data, hydrographic software underpins the sustainable growth of the blue economy. □ Increasingly hydrographic software leverages advanced technologies such as uncrewed surface vehicles (USVs), multibeam echosounders, and automated data collection and processing algorithms to enhance the accuracy and scope of high-resolution hydrographic surveys. This automation reduces human error, enhances data quality, and ensures that data and products is consistent and accurate across various applications. Additionally, software tools for quality control and chart adequacy assessment further improve the accuracy and usability of hydrographic data. □ This paper will show how hydrographic software plays a crucial role in advancing the field of hydrography and mitigating issues related to hydrographic datums and reference frameworks. It will demonstrate that how by leveraging cutting-edge technologies and data processing capabilities such as automation and AI, that software solutions enable more precise and comprehensive hydrographic surveys, ensure the accuracy and consistency of hydrographic data and enable more efficient use of personnel on quality control and assurance resulting in products that support sustainable marine resource management. □

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