

Editorial

Welcome to the second issue of the 30th volume of The International Hydrographic Review (IHR).

The current issue comprises a comprehensive and diverse range of topics related to the field of hydrography and associated disciplines. We will begin with the latest developments in key hydrographic topics, including data acquisition and processing, before moving on to present advanced work from navigation, oceanography, geology and, followed by community and social relevance topics such as a project through the International Hydrographic Organization (IHO) Capacity Building Programme and the Mapping the Plastic in the Sea initiative of the International Federation of Surveyors (FIG).

The first four of the eight scientific peer-reviewed articles in this issue address the provision of bathymetric information of the seabed from disparate perspectives: Peter Grabbert et al. have developed an innovative approach for extracting spatiotemporal-resolved bathymetry from satellite imagery using *AI-based optical hydrography*, offering a powerful tool for the adaptive planning of hydrographic resources (pp. 12–29). In their research, Mona Reithmeier et al. present a fully automatic, scalable, and globally applicable workflow for the provision of *coastal bathymetry from ocean surface wave kinematics* derived from satellite data. (pp. 30–43). Patrick Debrousse & Brian Miles introduce an *open-source software tool* designed to assess the quality of *volunteered bathymetric data*, which could serve as a crucial element in the process of incorporating such data into nautical charts, bathymetric models, survey planning, and decision-making tools (pp. 44–55). The latest version of a *digital bathymetric model for Danish waters*, offering a grid resolution of 50 metres, integrates hundreds of survey datasets, including both modern and historical sources, as well as bathymetric data derived from satellite imagery and crowdsourced sources (Giuseppe Masetti et al., pp. 56–69).

The following two scientific peer-reviewed articles address significant issues in the field of marine geodesy: Gilad Even-Tzur et al. enhance and refine the *Israeli geoid undulation model in the coastal zone* through the utilisation of nautical and shipborne GNSS observations (pp. 70–80). The potential for satellite navigation interference by jamming or spoofing the GNSS signal is investigated by Thiago Azevedo de Vasconcelos et al. in the Baltic and North Seas (pp. 82–97).

In one of the last two scientific peer-reviewed articles, Jan Rhomberg-Kauert et al. employ photogrammetric methods and techniques of high-dimensional data analysis to investigate submerged ecosystems, with a particular focus on the *detection of macrophytes using bathymetric LiDAR* (pp. 98–115). Finally, Yerinelys Santos Barrera et al. present a new approach to the structural and morphological model on the continental margin of the Colombian Caribbean using recent hydrographic data and bathymetric analysis techniques (pp. 116–126).

An eight-part series of notes / technical reports presents a synthesis of recent insights drawn from a variety of disciplinary perspectives: The *analysis of sedimentation* through the utilisation of hydrographic surveys (Harold Rojas Macías et al., pp. 128–135); the potential of neural networks in understanding the complex *hydrodynamic processes in the Black Sea* (Emre Gülher, pp. 134–145); a concise, chronological account of the *150-year history of the Hydrographic and Oceanographic Service of the Chilean Navy* (Hugo Gorziglia, pp. 148–159); an overview of the IHO-Nippon Foundation *Geospatial Marine Analysis and Cartography project* (Masan-



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ao Sumiyoshi et al., pp. 160–168); the necessity of *environmental and hydrospatial monitoring systems* exemplified by the UK Hydrographic Office Marine Environmental Monitoring Stations Framework (Becky Conway, pp. 170–173); the provision of community support by *mapping the plastic debris in coastal margins* from drones (Simon Ironside et al., pp. 174–181); the utilisation of *crowd-sourced bathymetry* for the purposes of *post-disaster analysis* (Shaul Solomon et al., pp. 182–189); the investigations on the increase in the number of *marine accidents* (BK Ramprasad, pp. 190–197).

The continued success of a peer-reviewed journal is contingent upon the willingness of reviewers to dedicate their time and provide constructive feedback to enhance the quality of submitted manuscripts. These endeavours are undertaken behind the scenes and are frequently not acknowledged. While ultimate responsibility for decision-making resides with the editorial team, the input of reviewers, who possess a wealth of technical expertise and scientific insights, an understanding of the social, environmental and economic implications of the material under consideration, as well as a keen passion for their subject matter, is of significant benefit to the editorial process. In recognition of the contributions made by our peer reviewers, we, the IHO Secretariat and the IHR Editorial Board, would like to express our profound gratitude and publicly acknowledge our peer reviewers. Henceforth, the names of these individuals will be published annually in the November issue of the IHR (pp. 198–199).

This issue includes a review of the recently published book *Legal and regulatory aspects of telecommunication submarine cables* by Andrés Figoli Pacheco (Aldo Monaca & Gioia Alessia Chiara Grazia Indelicato, pp. 200–202). The book addresses a number of legal and regulatory issues pertaining to submarine cables, encompassing a diverse array of legal topics related to the ownership, installation, operation, and maintenance of submarine telecommunications cables.

The current issue concludes with an obituary for Jean-Nicolas Pasquay (Gilles Bessero, pp. 204–205).

On behalf of the Editorial Board, I hope that you will enjoy reading this new issue of the IHR!



Dr Patrick Westfeld
Chief Editor, IHR