



International Hydrographic Organization

3rd MEETING BETWEEN IHO AND EUROPEAN COMMISSION

Saint-Mandé, France, 25 June 2013

Tidal and Water Level Issues

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On behalf of:

IHO Tidal and Water Level Working Group

Tidal Working Group of the North Sea Hydrographic Commission

Background

- 2nd EC-IHO Meeting, Brussels, 5 April 2013

A common vertical reference in European waters would be beneficial

Action: IHB will invite the IHO Tidal and Water Level Working Group to develop a proposal for building up a common European vertical reference surface

- Preparation of a joint request by IHB & Chair of the North Sea Hydrographic Commission



Background

- Joint request from IHB & NSHC Chair: TWLWG invited to:
 - a. **assess** progress in defining and implementing coastal vertical reference frameworks at the national, regional, interregional and international level,
 - b. **identify** additional work required to establish and maintain regional and international vertical reference frameworks for high resolution bathymetric surfaces,
 - c. **identify** tasks, if any, which could benefit from external support, including EU funding, and draft the associated statements of requirements,
 - d. **consider** and propose the relevant elements, with associated timelines, to be inserted in its work plan and in the work plans of any other bodies concerned.



Progress report

- Request reviewed by
 - 5th Meeting of the IHO Tidal and Water Level Working Group (TWLWG), Helsinki, Finland, 13-17 May 2013
 - 19th Meeting of the NSHC Tidal Working Group, Stavanger, Norway, 4-5 June 2013
- UK tasked to draft a response
- Summary of the (preliminary) response
 - Requirement - what do we want to achieve
 - Roadmap to achieve it
 - Funding for further work



Progress report

■ Requirement:

- Establish coastal vertical reference frameworks for use with high resolution bathymetric surfaces at the following scales:
 - Regional (e.g. basin-scale)
 - Inter-regional (e.g. transatlantic scale)
 - International (e.g. global scale)
- The most demanding scale is at the regional level (prevalence of shallow water areas and impact of water level fluctuation on navigable depth)



Progress report

■ Roadmap (preliminary):

- Continue developing a Coastal Vertical Reference Framework for the entire North Sea (NSHC Tidal Working Group)
 - Follow-up Project to the BLAST project
 - *Extension to the Channel and North Eastern Atlantic?*
- Investigate what work is necessary in other European basins (Baltic, Mediterranean and Black Seas) which have a non-tidal character
- Consider the development of a Global Vertical Offshore Reference Framework (VORF) based on satellite altimetry and tidal model



Progress report

- Funding for further work (preliminary):
 - Funding for BLAST follow-up project
 - Acquire long series of good quality GNSS and tidal observations
 - Develop an accurate geoid
 - Develop offshore and coastal modeling based on satellite altimetry, hydrodynamic methods and tidal observations
 - Funding for investigating non-tidal basins
 - ...
 - Funding for investigating global solutions
 - ...



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