



United Kingdom
Hydrographic Office

7th TWLWG (1st TWCWG) Meeting

NOAA, Silver Spring, USA 21 – 24 April 2015

***IHO North Sea Hydrographic Commission
Tidal Working Group (NSHC TWG)
Status & Update***

Chris Jones, UKHO




United Kingdom
Hydrographic Office

IHO Structure

Website

<http://www.iho.int>

- Committees and Working Groups
- Inter-Regional Coordination Committee (IRCC)




International Hydrographic Organization
Organisation Hydrographique Internationale

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North Sea Hydrographic Commission (NSHC) *Commission hydrographique de la mer du Nord (CHMN)*



Members Associate Members Observers

Chair: Marc van der DONCK (Netherlands)
Vice-Chair: Michael PURCELL (Ireland)

Members: Belgium, Denmark, France, Germany, Iceland, Ireland, Netherlands, Norway, Sweden, UK.

IHB Representatives:
Director Gilles BESSERO
Assistant Director David WYATT

Brief History

The North Sea Hydrographic Commission was established in The Hague, The Netherlands on 10 January 1962, at the initiative of Denmark, the Federal Republic of Germany, The Netherlands, Norway, Sweden and the United Kingdom. The first meeting was chaired by The Netherlands. Later France, Belgium, Iceland and, more recently, Ireland joined the Commission. The Commission's first activities included agreeing on the publication of fisheries charts and the need for surveys outside territorial waters.

Statutes
Original: The Hague, 10 January 1963
Amended: (1) Stockholm, 7 September 1963; (2) London, 29 January 1965; (3) Hårnösand, 13 September 1973; (4) London, 25 April 1975; (5) Oslo, 2 June 1981; (6) Stavanger, September 1994; and (7) Brest, September 2010.

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Structure for National Reports

Président: Marc van der DONCK (Pays-Bas)
Vice-Président: Michael PURCELL (Irlande)

Membres: Allemagne, Belgique, Danemark, France, Irlande, Islande, Norvège, Pays-Bas, RU, Suède.

Représentants du BHI:
Directeur Gilles BESSERO
Adjoint au Directeur David WYATT

Brève histoire

La commission hydrographique de la mer du Nord fut créée à La Haye, Pays-Bas, le 10 janvier 1962, à l'initiative du Danemark, de la République fédérale allemande, des Pays-Bas, de la Norvège, de la Suède et du Royaume-Uni. La première réunion fut présidée par les Pays-Bas. La France, la Belgique, l'Islande et plus récemment l'Irlande ont, par la suite, rejoint la commission. Les premières activités de la commission ont inclus des décisions sur la publication de cartes de pêche et sur la nécessité d'exécuter des levés à l'extérieur des eaux territoriales.

Statuts
Originaux: La Haye, 10 janvier 1963
Amendés: (1) Stockholm, 7 septembre 1963; (2) Londres, 29 janvier 1965; (3) Hårnösand, 13 septembre 1973; (4) Londres, 25 avril 1975; (5) Oslo, 2 juin 1981; (6) Stavanger, septembre 1994; et (7) Brest, septembre 2010.

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Structure des rapports nationaux

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IRCC Meetings

Regional Hydrographic Commissions

North Sea HC (NSHC)

Mediterranean and Black Seas HC (MBSHC)

Baltic Sea HC (BSHC)

US/Canada HC (USCHC)

East Asia HC (EAHC)

Eastern Atlantic HC (EAHC)

South-East Pacific HC (SEPHC)

South-West Pacific HC (SWPHC)

MESO American & Caribbean Sea HC (MACHC)

Southern Africa and Islands HC (SAIHC)

North Indian Ocean HC (NIOHC)

ROPME Sea Area HC (RSAHC)

South West Atlantic HC (SWAHC)

Arctic RHC (ARHC)

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NSHC TWG Status
& Update

TWLWG7
21-24 Apr 15



Inter-Regional Coordination Committee (IRCC)

Objectives:

- *To promote and coordinate those activities that might benefit from a regional approach*
 - *Capacity Building (IHO Capacity Building Strategy and Initiatives)*
 - *Training & Education*
 - *Establish, coordinate and enhance cooperation amongst States on a regional basis, and between regions*
 - *Establish co-operation to enhance the delivery of Capacity Building programs*



Tidal Working Group (TWG)

Terms of Reference & Objectives:

- To provide technical advice and promote co-ordination on tidal issues especially within the North Sea Hydrographic Commission (NSHC).
- Subsidiary of the NSHC
- Work plan subject to NSHC approval.
- Especially involved with the regional interpretation and implementation of tidal issues as identified by Tidal, Water Level and Current Working Group (TWCWG).
- Work according to the agreed NSHC work plan;
 - monitor and report the progress against plan;
 - propose new work plan items for consideration by the NSHC.
 - Identify new work plan items deemed relevant for the NSHC.
 - liaise with relevant HSSC working groups, such as TWCWG;
 - Exchange views and experiences concerning tidal issues
 - unifying vertical datums, analysis, modelling and related issues like sea level rise and surge.



20th NSHC TWG Meeting The Hague, Netherlands: 27-28 January 2015

Main Topics and Themes

- *National Presentations from Member States*
 - **Deltares** (a semi-government institution). Models used for real-time flooding forecasting in the Netherlands
 - **Technical University of Delft.**
NEVREF (Vertical Reference Frame for the Netherlands Mainland, Wadden Islands and Continental Shelf). The aim is to create a geoid for land and sea with an accuracy of 1 cm and to establish its relationship to LAT with 1 dm accuracy.
 - **Rijkswaterstaat** (executive part of the Ministry of Infrastructure and Environment, NL). Coastal Zone mapping, call for tender by **DGMARE**. Aim: to support economic activities in the coastal zone. Specific aims are the availability, dissemination, share experience, develop standards of best practice and proposals for future strategy.



• **Lowest Astronomical Tide as Chart Datum: definition and safety aspects of IHO resolution 3 / 1919**

- Source of the discussion was TWLWG6-8-Final Report, paragraph 4.14, determining ellipsoidal height of MSL at the coast.
- LAT Definition – minimum predicted tide under astronomical conditions and “average meteorological conditions”.
- Application of the **Sa*** constituent ? “Average meteorological conditions”?
 - if this is interpreted as an average per season, Sa should be included
 - if it is interpreted as a yearly average, the meteorological part of Sa should be excluded.
 - Some MS only use constituents which have amplitudes of > 1cm (accuracy of the tide gauge).
 - Concluded that Sa should be implemented in computing LAT in the North Sea.
 - Time period to compute LAT? 18.6 years? Or can it for example be 100 years?
- Conclusion: NLHO will no longer pursue the corresponding TWLWG-6 action item 4.14
- Resolve this matter not on a regional (not global) level. The discussion at NSHC TWG20 has solved this for the North Sea region.
- NLHO has communicated this to IHO.



- **Awareness EU-DGMARE of vertical reference frames**

- NL has represented NSHC-TWG at the quarterly meetings of the **EU Marine and Maritime Policy Working Group (EU2MPWG)**
- Reason: to follow up on the IHB representation on the topic of the creation of a single set of reference surfaces for all European seas (NSHC TWG Action 19/02).
- The NL presentation summarising the work of the NSHC TWG over the past few years was supplied to **DGMARE (Directorate-General for Maritime Affairs and Fisheries of the European Commission)**, within the framework of the EU2MPWG.
- NSHC31 tasked the Chair of EU2MPWG to wind up its activities and transfer duties to the newly formed **IHO-EU Network WG (IENWG)**



IENWG – has a new member structure

- Each HO no longer provides an individual member
- One region is represented by one member.
- For NSHC this is Germany (currently Matthias Jonas).
- IENWG has been established to deal with EU/EC matters and manage the IHO/EC MOU.
- Currently composed of the following groups (Chair is France (currently Michiel Even))
 - ARHC (Arctic)
 - BSHC (Baltic)
 - EatHC (Eastern Atlantic)
 - MBSHC (Med and Black Sea)
 - NHC (Nordic)
 - NIOHC (North Indian)
 - NSHC (North Sea)
 - SAIHC (South Africa and Islands)
 - SWPHC (South-West Pacific)
- NL posed the question to the NSHC-representative to the IENWG (Matthias Jonas, DE), if it is productive to currently remain represented in the follow-up IENWG.
- Conclusion that it is currently not productive to remain represented in the IENWG.



European Vertical Reference System (EVRS)

- NL explained how EVRF2000 and EVRF2007 were established.
- This is a European levelling network (cm accuracy) connecting tide gauges across Europe.
- The connection between EVRS and LAT is important within the INSPIRE program.
- Datasets can be presented on either reference height (for land or sea uses).
- NSHC TWG established an Action Item (20/04) to understand the differences between EVRS and LAT.
- NSHC TWG also proposes to re-visit the work done in 2010 to Improve North Sea wide realization of reference surfaces.