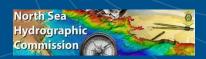
# NSHC36\_C4\_TWG\_Presentation-SE

36<sup>th</sup> NSHC Meeting 29 - 30 March 2023 VTC

Thomas Hammarklint





# Objectives

- 1. Status of the TWG work: Meetings 2022 and 2023
- 2. TWG List of Members
- 3. TWG Terms of Reference
- 4. TWG Work Plan and List of Actions
- 5. Answers to NSHC36 several Actions from NSHC35 to TWG
- 6. Actions requested from the NSHC36 Conference





# 1. Status of TWG work: Meetings / Implementation status

## NSHC36-C4 TWG Report-SE

Since the NSHC 35<sup>th</sup> Conference (5-6 April 2022), Mr Thomas Hammarklint has acted as Chair.

The communication within the TWG has been done mainly by e-mail correspondence. The last two meetings (TWG24 and TWG25) were held on 27 September 2022 and 7 February 2023. Both meetings were arranged as VTC meetings, where 13 and 10 delegates attended the meetings, respectively.

The main objectives of the two meetings were to update the <u>TORs</u>, <u>Work Plan and List of Actions</u> and coordinate our work.

A provisional TWG Website have been published with a lot of new information.

The TWG emphasizes the need for a new, official NSHC website, as the nshc.pro website is no longer active.





# 2. TWG List of Members

## **Members of TWG:**

Belgium Mr Johan Verstraeten

Denmark Mr Nicki Riber Andreasen

France Mrs Gwénaële Jan

France Mr Gael Andre

Germany Mr Andreas Boesch

Iceland Mr Árni Þór Vésteinsson

Ireland Mr Sean Cullen

Netherlands Mr Ronald Kuilman

Norway Mr Aksel Voldsund

Sweden Mr Thomas Hammarklint (Chair)

United Kingdom Mr Chris Jones

United Kingdom Mr Colin Sheperd





# 3. TWG Terms of Reference



NSHC Tidal Working Group

### NSHC Tidal Working Group Terms of Reference 7 February 2023

### To be approved by the NSHC 36th Conference, 29-30 March 2023

Proposed amendments marked in red

#### As proposed by TWG24 (27 September 2022)

#### Objective

To provide technical advice and promote co-ordination on tidal issues especially within the North Sea Hydrographic Commission (NSHC).

#### 2. Authority

The Tidal Working Group (TWG) is a subsidiary of the NSHC and its work plan is subject to NSHC approval. Subject to approval by NSHC the TWG is especially involved with the regional interpretation and implementation of tidal issues as identified by Tidal, Water Level and Current Working Group (TWCWG).

#### 3. Procedures

- a. The TWG should:
- 1. work according to the agreed NSHC work plan
- 2. monitor and report the progress of the work plan
- 3. propose new work plan items for consideration by the NSHC.

To support the identification of new work plan items deemed relevant for the NSHC, the TWG should:

- liaise with relevant Hydrographic Services and Standards Committee (HSSC) working groups, such as TWCWG.
- Exchange views and experiences concerning tidal issues like unifying vertical datums, analysis, modelling and related issues like sea level rise and surge.
- Coordinate the implementation of the IHO S-100 products S-104 Water Level Information and S-111 Surface Currents.
- b. The TWG will conduct its business mainly by correspondence. Meetings and workshops should be scheduled as deemed necessary for the accomplishment of the work plan.

### 4. Composition and Chairmanship

- The TWG shall comprise representatives of the NSHC Member State and expert contributors if applicable.
- Decisions should generally be made by consensus, if a majority is required each Member State has one vote.
- 3. External contributors can contribute to the work plan but are not entitled to vote.

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7 February 2023





# 4. TWG Work Plan and List of Actions



NSHC Tidal Working Group

#### NSHC Tides Working Group Work Plan and Actions 7 February 2023

To be approved by the NSHC 36th Conference, 29-30 March 2023

### Proposed amendments marked in red

### Work Plan

Item Number (TWG/Item)	Objective (Why/Priority)	Task Description (What/How)	HO Involved	Status
(TwG/Item)	(Why/Phority)	(what/How)		
WP 16/04	Enable GNSS- based tidal reduction and the connection with the vertical datum on land	Follow developments on geoid, MSL and LAT computations for the North Sea area	All	Permanent, see also WP18/01
WP 18/01	Improve North Sea wide realization of reference surfaces		All	Permanent
WP 18/02	Improve methodologies for ERS	Exchange between HO's on operational methodologies for ellipsoidal referenced surveying for GNSS based surveys	All	Permanent
WP 22/01	Ensure common European LAT surface adoption.	Follow the developments of European initiatives on new LAT surfaces.	All	Permanent
WP 24/01	Regional cooperation for S-104 (Water Levels) and S-111 (Surface Currents)	Make available S-104 and / or S-111 test datasets which could be compared at national boundaries in the North Sea region, investigate and collaborate on resolving any differences	All	Permanent
WP 24/02	Data Rescue and Data Archaeology	Exchange between HO's on details and methods used in the rescue of national / international archive tidal & water level datasets, for the purposes of climate change studies, tsunami research and any such activity requiring access to these	All	Permanent

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# 5. Answers to NSHC36 – Actions from NSHC35 to TWG

No/year Agenda item	Subject	Action	Who	When	Status
15/2022 D.4.2	TWG	Permanent chair for TWG to be chosen per correspondance. SE (Thomas Hammarklint) serves as Chair until permanent chair elected.	Chair	NSHC36	Ongoing
8/2021 B.10	Risk Assessment	Need of a well-founded clarification for the use of 1% of LAT as the norm;	TWG	NSHC35	Ongoing. Passed on to NSHC36
6/2016 B.5	Vertical reference (LAT) comparison	Continue to investigate and reduce the differences between the LAT along boundaries in accordance with the action items of TWG WP 18/1. Publication of those differences is paused until the outcomes of the investigations are available.	Chair TWG	NSHC 34	Different approach on this matter has been endorsed. AP maintains OPEN until the Tidal WG closes this AP.

## TWG Work Plan and List of Actions

## I. NSHC35 Action 15/2022 D.4.2 to TWG:

Permanent chair for TWG to be chosen per correspondence. SE (Thomas Hammarklint) serves as Chair until a permanent Chair has been elected.

### TWG answer to NSHC36:

Thomas Hammarklint serves as interim Chair until <u>NSHC37</u> (2024). TWG supports this and will nominate a candidate to take over as permanent Chair, which needs to be approved by the NSHC37 Conference.

The TWG proposes the following amendment to the <u>TWG Terms of Reference</u>: The Chair and secretarial support will be from the Member State hosting the meeting. 'The Chair will be nominated by the TWG and approved by the NSHC Conference'.





# 5. Answers to NSHC36 – Actions from NSHC35 to TWG

### II. NSHC35 Action 8/2021 B.10 to TWG:

Need of a well-founded clarification for the use of 1% of LAT as the norm.

### **Background:**

This means that the LAT difference at the boundaries should not exceed 1% of the water depth. The NSHC tasked the TWG to link the norm to something practically. The people that actual use the LAT difference in their daily work want to know if the LAT difference between the countries is small enough so that they don't introduce significant errors in the surveying work.

### TWG answer to NSHC36:

TWG has come up with a proposal for a refinement of the norm (TWG AP 24/03) and introduced the Total Vertical Uncertainty (TVU) as the new norm connected to S-44 for comparing differences in LAT surfaces at the national boundaries. Also, to which percentage of the TVU can be allocated by the LAT models has been investigated. Member states send their suggested values to NL. In general, most countries agreed with the proposed TVU norm, but would also like to continue to investigate the LAT differences between the countries (TWG WP 18/1).

1) Proposed norm: LAT difference =< Total Vertical Uncertainty (TVU)

=< ½ Total Vertical Uncertainty

Does the (½) TVU norm meets the expectations of the TWG?

- 2) 10 of 12 boundaries 2 Difference in LAT height is always smaller than 50% of Max TVU value S44 Order 1a.
- 3) The (½) TVU norm accepted more LAT differences at shallow water





# 5. Answers to NSHC36 – Actions from NSHC35 to TWG

## III. NSHC35 Action 6/2016 B.5 to TWG:

Continue to investigate and reduce the differences between the LAT along boundaries in accordance with the action items of TWG WP 18/1. Publication of those differences is paused until the outcomes of the investigations are available.

### TWG answer to NSHC36:

Different approach on this matter has been endorsed. AP maintains OPEN until the Tidal WG closes this AP.

### IV. NSHC35 Action to TWG:

TWG tasked to work specifically with S-104 and S-111 implementation coordination.

### TWG answer to NSHC36:

Ongoing. The work has been postponed due to the pandemic, but is now a prioritized task within the TWG. TWG proposes the following amendment/addition to the <u>TWG</u> Terms of Reference:

'Coordinate the implementation of the IHO S-100 products S-104 Water Level Information and S-111 Surface Currents'.





# 6. Actions requested from NSHC 36<sup>th</sup> Conference

- 1. Note this report
- 2. Endorse the answers given under section 5 (I-IV) from the TWG on the NSHC35 Actions, i.e. approve a more permanent TWG Chair and small amendments in the ToR to include coordination of S-104 and S-111 implementation
- 3. Give further guidance to TWG, as seen appropriate





# Thanks!



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