

## 9. REPORT OF THE NORTH SEA HYDROGRAPHIC COMMISSION (NSHC)

### 1. Chair

Declan Black (IE): June 23, 2016 until 28 March 2018.  
 Virginie Debuck (BE): June 23, 2016 until 28 March, 2018.  
 Koen Vanstaen (BE): from 7 October, 2019 until present.

### Vice-chair

Virginie Debuck (BE): June 23, 2016 until 28 March, 2018.  
 Hilmar Helgason (IS): March 28, 2018 until 1 November 2019.  
 Árni Þór Vésteinsson (IS) from 1 November 2019 until Present.

### 2. Membership

Belgium, Denmark, France, Germany, Iceland, Ireland, Netherlands, Norway, Sweden, United Kingdom.

### 3. Meetings

33 <sup>th</sup> meeting:	Ostend (B),	27-28 March 2018.
34 <sup>th</sup> meeting:	Reykjavík (IS),	26-27 March 2019 (after submission of this report).

Plus several meetings of the Tidal and Resurvey Working Groups.

### 4. Agenda Items

Task numbers refer to work programme for 2018-2020 (A.1/WP1/02, approved by decision 23 of the 1<sup>st</sup> Session of the IHO Assembly).

#### **IHO Work Programme 1 – Corporate Affairs**

*Element 1.1 Co-operation with International Organisations and participation in relevant meetings.*

#### **Task 1.1.4 Maintain relationship with European Union Initiatives (such as INSPIRE and EMODNET)**

NSHC member states have been active in participating in the IHO-EU network working group since its inception in 2012 with substantial cooperation and progress on the European Commission's flagship maritime project European Marine Observation and Data Network (EMODNET) and its coastal mapping project. Extensive NSHC member state bathymetric data is now available and regularly updated through the EMODnet portal.

The NSHC member states have also been active in the area of maritime spatial planning and the importance of data from Hydrographic Offices to underpin these plans and support development of the blue economy.

#### **Task 1.1.8. Relationship with IMO**

NSHC HO representatives are involved in IMO meetings, in particular the "Maritime Safety Committee" and the "Navigation, Communications and Search and Rescue Subcommittee" and their working groups.

These are particularly important to HO's in the area of ENAV, ECDIS, Maritime Safety information and ships routing.

## **IHO Work Programme 2 – Hydrographic Services and Standards**

### **Task 2.3 S-100 Framework**

The members of the NSHC provided recommendations and suggestions in the discussions on S-100 in the IHO S-100WG.

### **Task 2.5 Support the implementation of e-navigation and Marine Spatial Data Infrastructures (MSDI)**

The members of the NSHC contribute to the related WGs.

## **IHO Work Programme 3 –Inter Regional Coordination and Support**

### *Element 3.1 Programme Coordination*

#### Tides and water Levels

The NSHC Tidal Working Group (TWG) continues to work with the IHO Tides, Surface Currents and Water Levels working group (TWCWG). Both Working Groups continue to work to combine existing national models in order to develop a common reference surface for tidal reduction to Chart Datum in the North Sea (AP6/2016 B.5 33NSHC). The NSHC Tidal Working Group made progress in comparing differences between surfaces of different NSHC members states. Differences were observed but further investigation is needed to understand the source of these differences. Initiatives to create a common LAT surface by the EU's EMODnet initiative were noted but at this stage considered inadequate for navigation purposes.

#### Chart contours

A workshop to share knowledge and experiences of Contouring algorithms (AP2/2018 33NSHC) has been organised by Germany in April 2019.

#### Surface Currents

The Netherlands provides representation at both the NSHC Tidal Working Group (TWG) and the IHO Tides, Surface Currents and Water Levels Working Group (TWCWG). The Netherlands keeps the NSHC TWG group aware of the progress being made specifically in the global 'Surface Current' arena.

#### Resurvey Group

The resurvey Working Group (RWG) has met annually during the reporting period. Work continued to publish NSHC member state resurvey strategies and plans on the NSHC website. The possibility of creating a North Sea Risk Assessment was discounted as each NSHC Member State had its own strategy based on the physics of its part of the North Sea, the particularities of usage and its own capacities. It was therefore decided in the first instance to limit any work to the Dover Strait area.

The RWG considered the role of crowd sourced bathymetry as a monitoring tool but concluded that further work is needed by the group on this topic.

At its last two meetings the RWG also considered the role of autonomous vehicles, noting the progress that has been made by Member States since the last NSHC meeting.

**Task 3.1.1** The Belgian Chair of the NSHC has reported to the annual meeting IRCC11 in Genoa in June 2019.

**Task 3.2.1.** The Belgian and the future Icelandic Chair of the NSHC are preparing the meeting of the North Sea Hydrographic Commission in Reykjavik, 26 and 27 March 2020.

The NSHC has maintained its place on the internet under [www.nshc.pro](http://www.nshc.pro) to raise the profile of our work in the region and inform the public of the work that the commission undertakes.

**Task 3.1.18** There has been a high level of industry participation in NSHC meetings during the open session of the meetings which appears to be very beneficial to member states and industry participants.

#### *Element 3.3 Capacity Building Management*

**Task 3.3.1** There are no real capacity building initiatives currently carried out within the NSHC. However a number of the NSHC members are involved in capacity building activities, the CBSC is chaired by Germany and a number of member states HO's participate, NSHC is represented by Norway.

#### *Element 3.4 Coordination of Global Surveying and Charting Coverage*

**Task 3.4.1.** The United Kingdom provides NSHC representation at the World-Wide Electronic Navigational Chart Database (WEND) Working Group. In addition, the UK provides the Chair of the WEND Working Group.

North Sea International Charting Co-ordination WG (NSICCWG) started in 2017. NSHC approved draft Terms of Reference of the WG.

#### *Element 3.6 Ocean Mapping Programme*

**Task 3.6.3.** *Encourage the contribution of bathymetric data for the IHO DCDB.*

Bathymetric data for the NSHC area are contributed via EMODnet.

#### *Element 3.7 Marine special Data Infrastructures*

Task 3.9.1 The MSDI working group is now a merged group between NSHC and BSHC (BSNSMSDIWG) and will report to both commissions. There has been sharing of experience and expertise between members that have more developed systems in place with members that are in the process of deciding how to constitute MSDI and how best to utilise the available data that HO's have available to contribute to or indeed underpin decision making.

### **5. Difficulties encountered and challenges yet to be addressed**

The high cost of carrying out surveys and the limits on national budgets during the period continue to be a limiting factor on survey activity.

### **6. Achievements/outputs/conclusions**

Member states have continued to contribute extensively to the work of the IHO and have been active participants of working groups.

There has been substantial cooperation between commission member states and other European States and the EU on information sharing and shared projects.

There has been continued progress and cooperation on achieving an up to date bathymetric data set for the North Sea and resurvey strategies.

There had been considerable sharing of experiences in new technologies (autonomous vehicles), MSDI and raising the profile of HO's and the data that they acquire and hold.

There is progress on the establishment of vertical reference frames, including national chart datums, with ongoing efforts to understand the differences at national boundaries and how to reduce these to an acceptable level.

**7. Actions required by the Assembly**

Adoption of the report of the North Sea Hydrographic Commission.