

**NSHC Tidal Working Group  
Work Plan and Actions  
10 April 2024**

**Approved by the NSHC 37<sup>th</sup> Conference, 8-10 April 2024**

**Work Plan**

Item Number (TWG/Item)	Objective (Why/Priority)	Task Description (What/How)	HO Involved	Status
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	Explain and reduce differences in reference surfaces at the international boundaries	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 and coordination of the implementation of S-104 Water Level and S-111 Surface Currents	Coordinate the implementation of S-104 Water Level and S-111 Surface Currents and report on the progress to NSICCWG. 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 important assets	All	Permanent

## List of Actions

Item Number (TWG/Item)	Objective (Why/Priority)	Task Description (What/How)	HO Involved	Status	Corresponding Work Plan Item
AP 18/01	Explain differences in realizations of LAT	Exchange on bilateral basis between involved HO's to investigate further the origin of observed differences at the boundaries between national reference surfaces	All	Permanent	WP 18/01
AP 19/03	Make an overview over existing separation and hydrodynamic models, including metadata	Each member state sends the information to UKHO	All, UK	Done	WP 18/01
AP 22/02	Investigate the differences in national LAT reference surfaces at all borders	Each member state should supply all LAT updates to NL who will update the LAT differences matrix accordingly	NL, All	Periodical	WP 18/01
AP 22/03	Investigate the differences in national LAT reference surfaces at all borders	Make error estimates in LAT surfaces	All	Permanent	WP 18/01
AP 22/05	Ensure common European LAT surface adoption	Follow the developments of European initiatives e.g. EMODnet on new LAT	All	Permanent	WP 22/01
AP 23/02	Investigate all LAT differences at the borders and overlapping parts of surfaces using the redefined Norm	Investigate the differences at all MS borders (and overlapping parts of surfaces) between national LAT reference surfaces	All	Permanent	WP 22/01
AP 24/01	UK and FR to supply 'CD to Ellipsoid' separation values along their common boundary to NL to investigate if this improves the result in any way	Charted depths in this region are reduced to 'CD', which is <b>approximately</b> LAT. Therefore it is important to ensure the correct surfaces are being compared with each other, then used in the 1% norm calculation (or other suitable method as decided by TWG)	FR, UK, NL	TWG27 Feb 2025	WP 18/01

AP 24/04	Elect a permanent Chair of NSHC TWG	As directed by NSHC; the Chair should expect to be in place for a 5-year minimum term	All	Done	2024-04-10 Approved at NSHC37
AP 25/01	Investigate LAT differences at overlapping parts of surfaces	Each member state should supply LAT surfaces for an as large as possible area of the North Sea to NL who will compare the surfaces	All	TWG27 Feb 2025	WP 18/01
AP 26/01	Provide links to S-104 and S-111 test datasets	Link to existing IHO website, which already coordinates this. <a href="https://iho-ohi.github.io/S100Resources">https://iho-ohi.github.io/S100Resources</a>	All	TWG27 Feb 2025	WP 24/01