

Annex A to report to NSHC32 of the Resurvey Working Group "Towards a common risk assessment framework for the North Sea – or not?"

In its meeting in Amsterdam in 2014, NSHC released Conclusion 112:

*"The activity within the DSSS WG and the Resurvey WG has resulted in a greater harmonization of survey strategies. Nevertheless the work is based on strategies for each nation and the Commission recognized the need to verify the consistency of the strategies. The Commission made the following decision:
The Resurvey WG to undertake a risk assessment analysis for the North Sea area, including the Dover Strait."*

This conclusion reflects that:

- (1)** each MS has its own survey strategy, based on the physics of its part of the North Sea, the particularities of usage, and its own capacities;
- (2)** it is necessary to verify the consistency of the national strategies;
- (3)** RWG is expected to undertake an analysis for the entire NSHC region, in line with recent developments on risk assessment.

The three parts of the conclusion were discussed during RWG5. The conclusion of the meeting was that the assignment to perform a North Sea wide risk assessment is a difficult task, because of the lack of a standardized procedure suitable for the North Sea, lack of insight into the morphological behaviour of the seabed and lack of accessibility of AIS-based shipping intensity maps.

The following comments were made on **part (3)** after the meeting:

DK, Nov. 2015: "In principle, we support the proposal to conduct a risk assessment in the North Sea – but due to our reorganization we do not at the moment have the resources to participate. Maybe we could decide to conduct a full risk assessment of the Dover Strait – and wait with the other areas in the North Sea. Members have a lack of insight into the morphological behavior of the seabed – this is much the current state in Denmark."

UK, Feb. 2016: "It is current UK policy to undertake a national risk assessment strategy within the defined UK Civil Hydrographic Area. This considers all waters from around the UK and prioritises survey in order to maximise the benefit of hydrographic resources available to us on a national scale. While the UK recognises the value of undertaking a regional risk assessment analysis of the North Sea area, unfortunately it is not something we are able to support at this time."

For **part (1)**, the Resurvey Working Group already made a simple start by showing national resurvey strategies on a North Sea wide scale (Action item 1). The "Interval" map (map 1) is useful for those MS that work with fixed resurvey frequencies (BE, NL, DE).

Part (2) would require to create North Sea wide maps of a series of data sets. The data sets could include:

- depth (as provided by the NSBD)
- morphological characterisation, including an impression of expected dynamics
- resurvey frequency (example: map 2)
- applied S-44 order
- date of last survey (example: map 3)
- applied sensors (example: map 4)
- shipping intensity (example: map 5)
- maximum shipping draught (example: map 6)
- administrative and usage areas¹

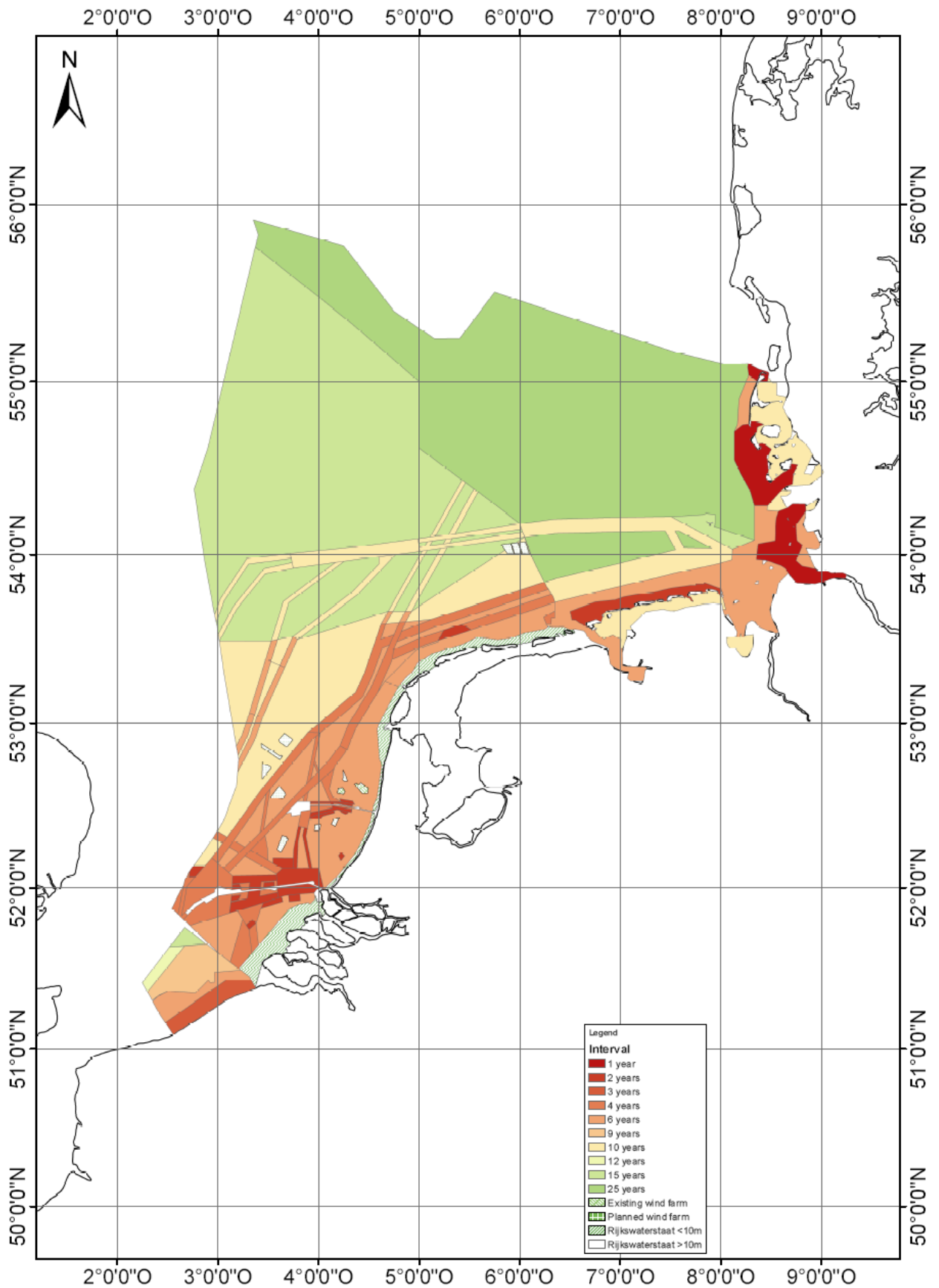
These data sets could be complemented by a short textual descriptions from each MS that describes its methodology to create a survey strategy, if available with a few references to

¹ think of: boundaries; traffic separation schemes; planned and realized wind farms; deep water routes; PSSAs

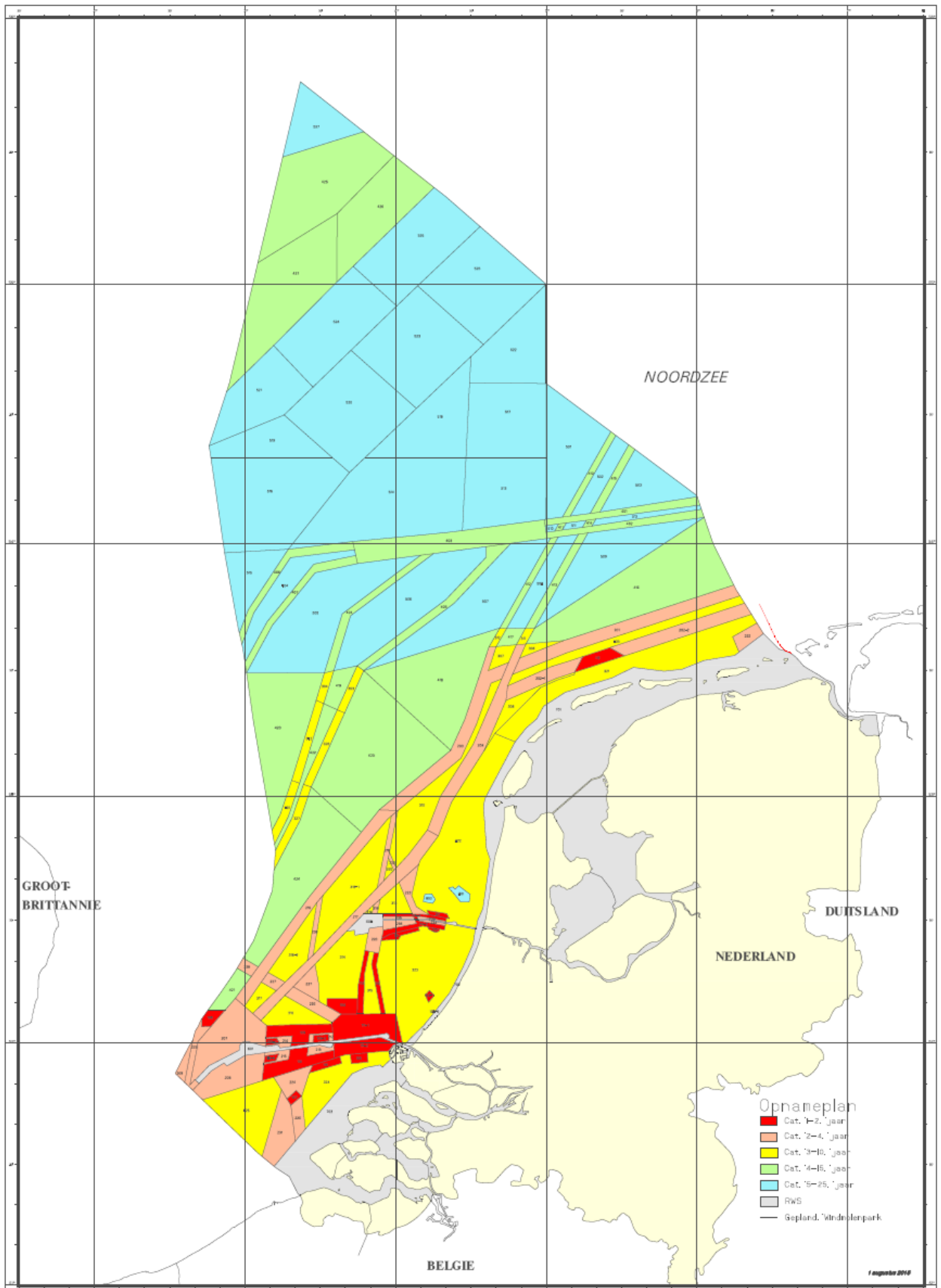
explanations in more detail. The NSHC web site would provide a suitable platform for the visualisation of these subjects and descriptions.

The Resurvey Working Group requests NSHC32:

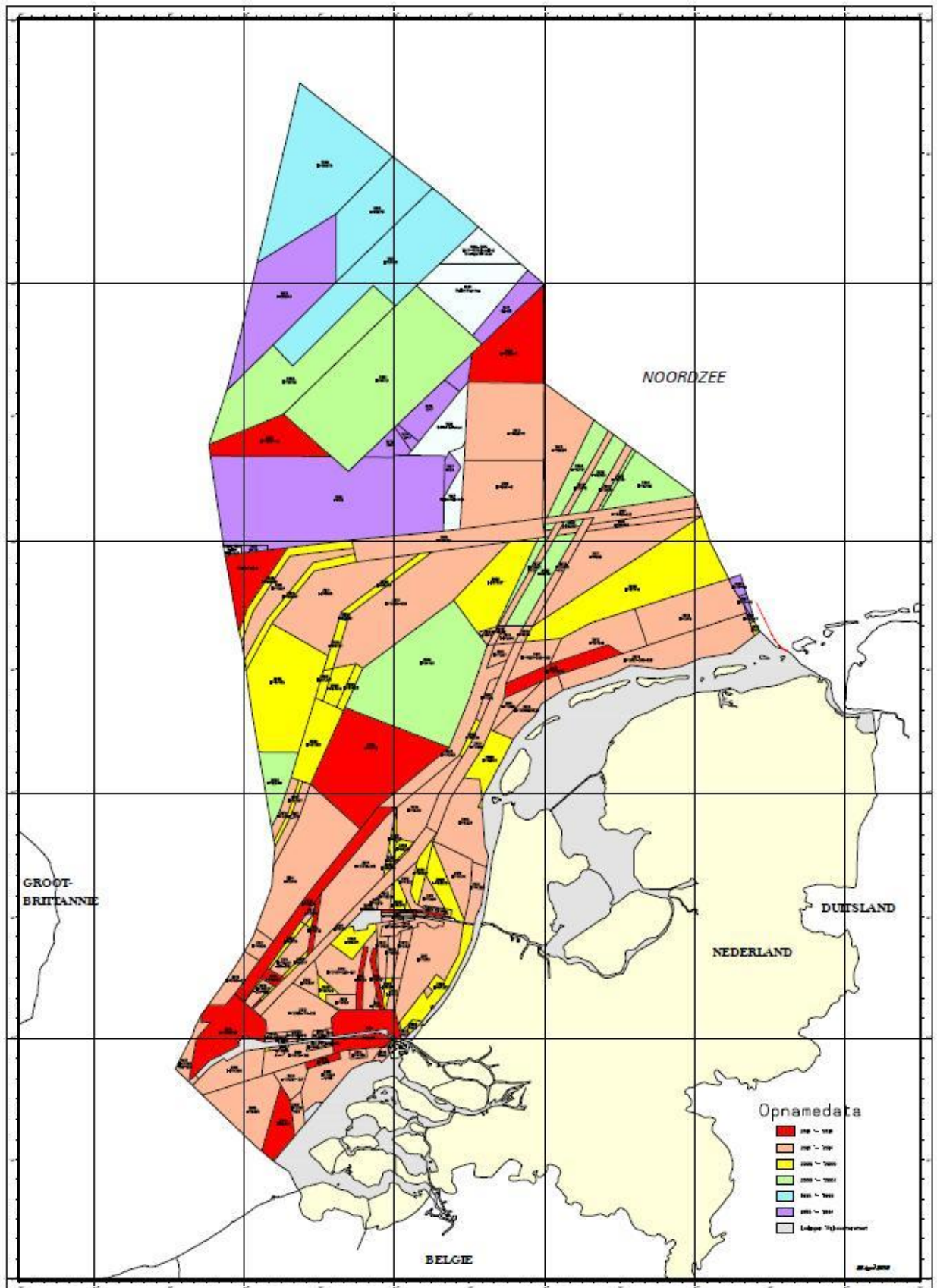
1. to confirm continuation of the activities relating to part 1 of the conclusion;
2. to discuss potential activities relating to part 2 of the conclusion;
3. not to pursue progress relating to part 3 of the conclusion at this time.



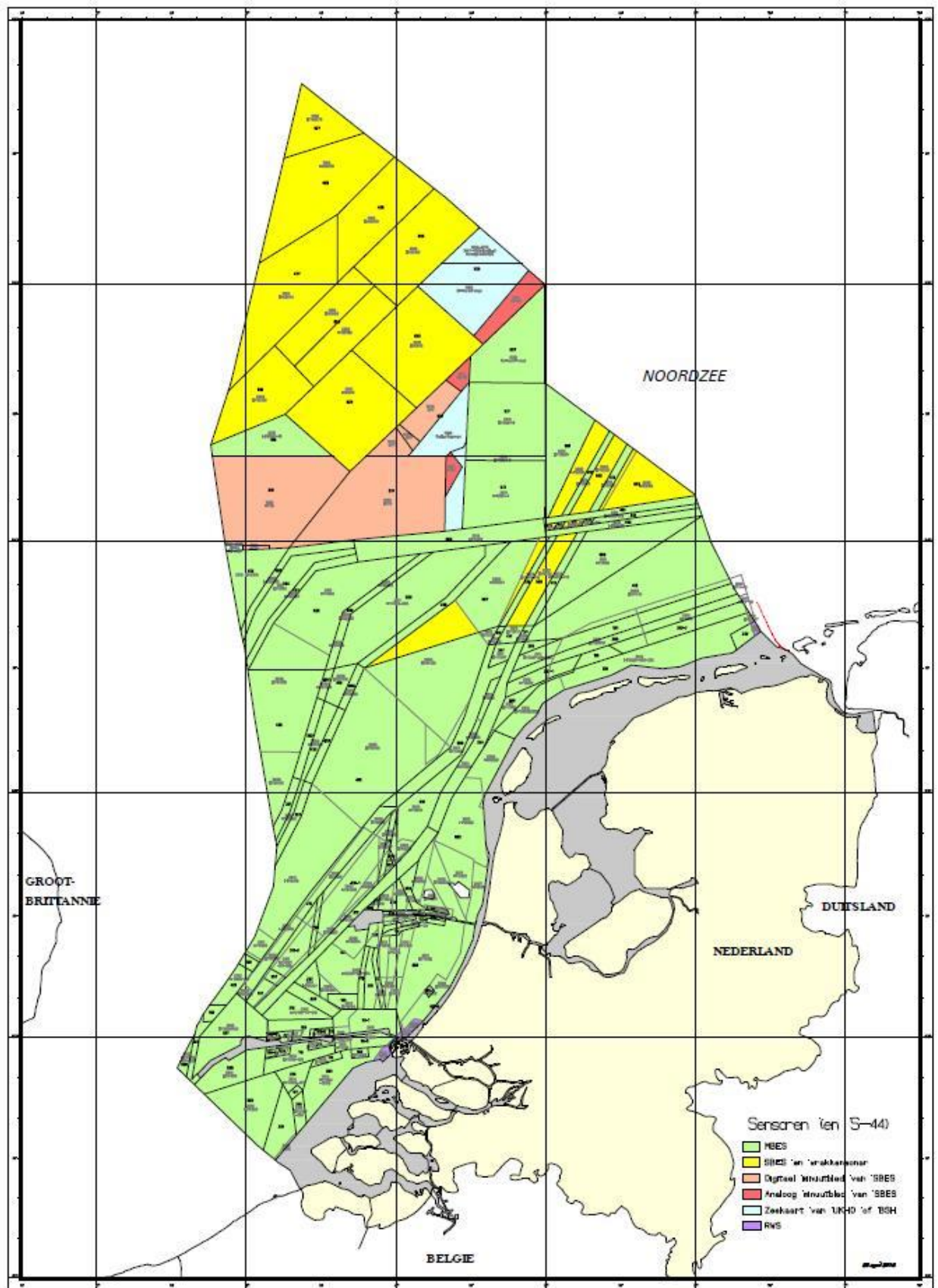
Map 1: combined NSHC resurvey policy (by Bernd Vahrenkamp (BSH) on behalf of NSHC Resurvey Working Group, June 2014) Note the gap between BE and NL, and the overlap between NL and DE. This map has not yet been adapted to the new NL resurvey frequencies.



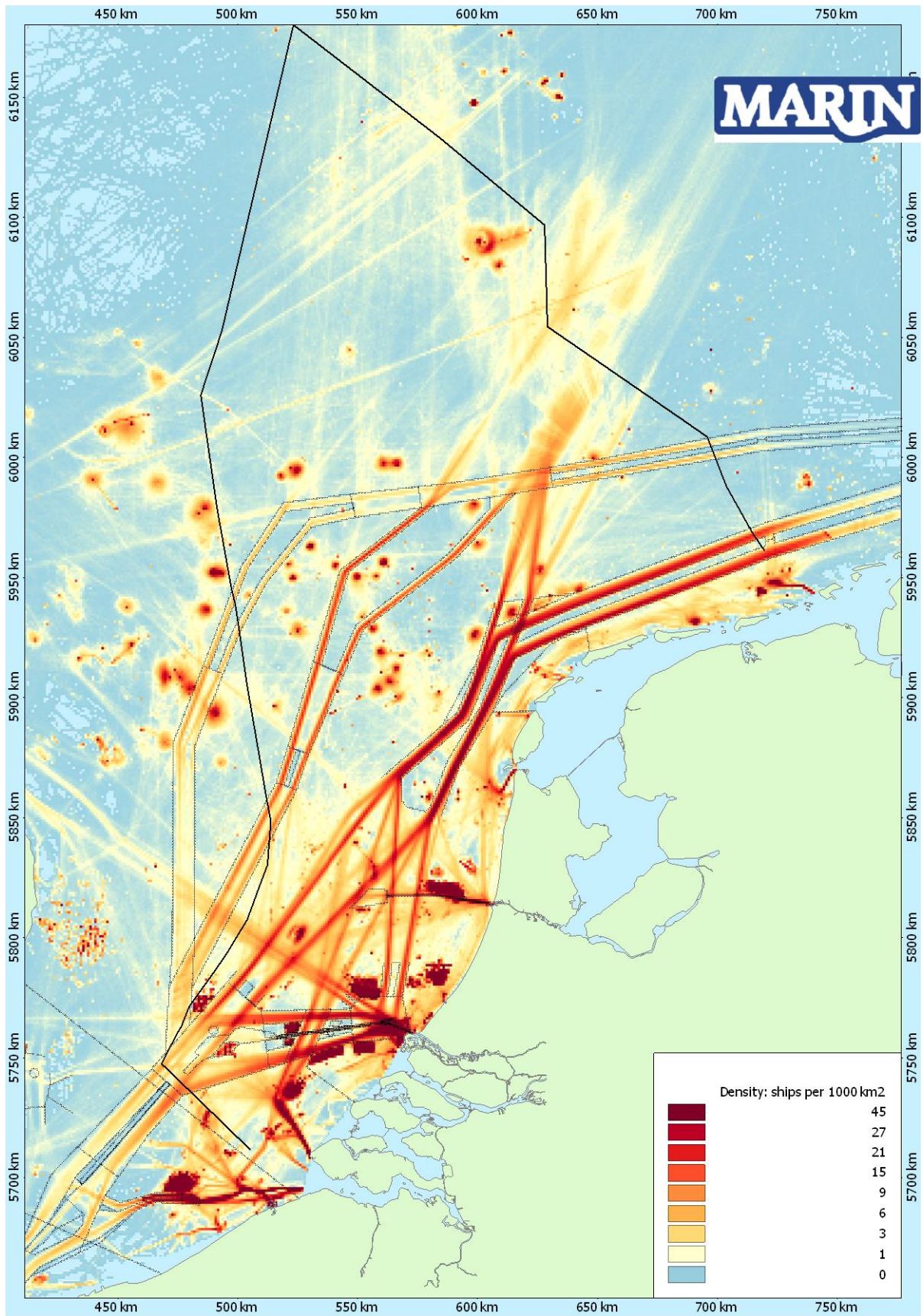
Map 2: new NL survey plan with updated repeat frequencies (red: 2 years; orange: 4 years; yellow: 10 years; green: 15 years; blue: 25 years; grey: responsibility of Rijkswaterstaat)



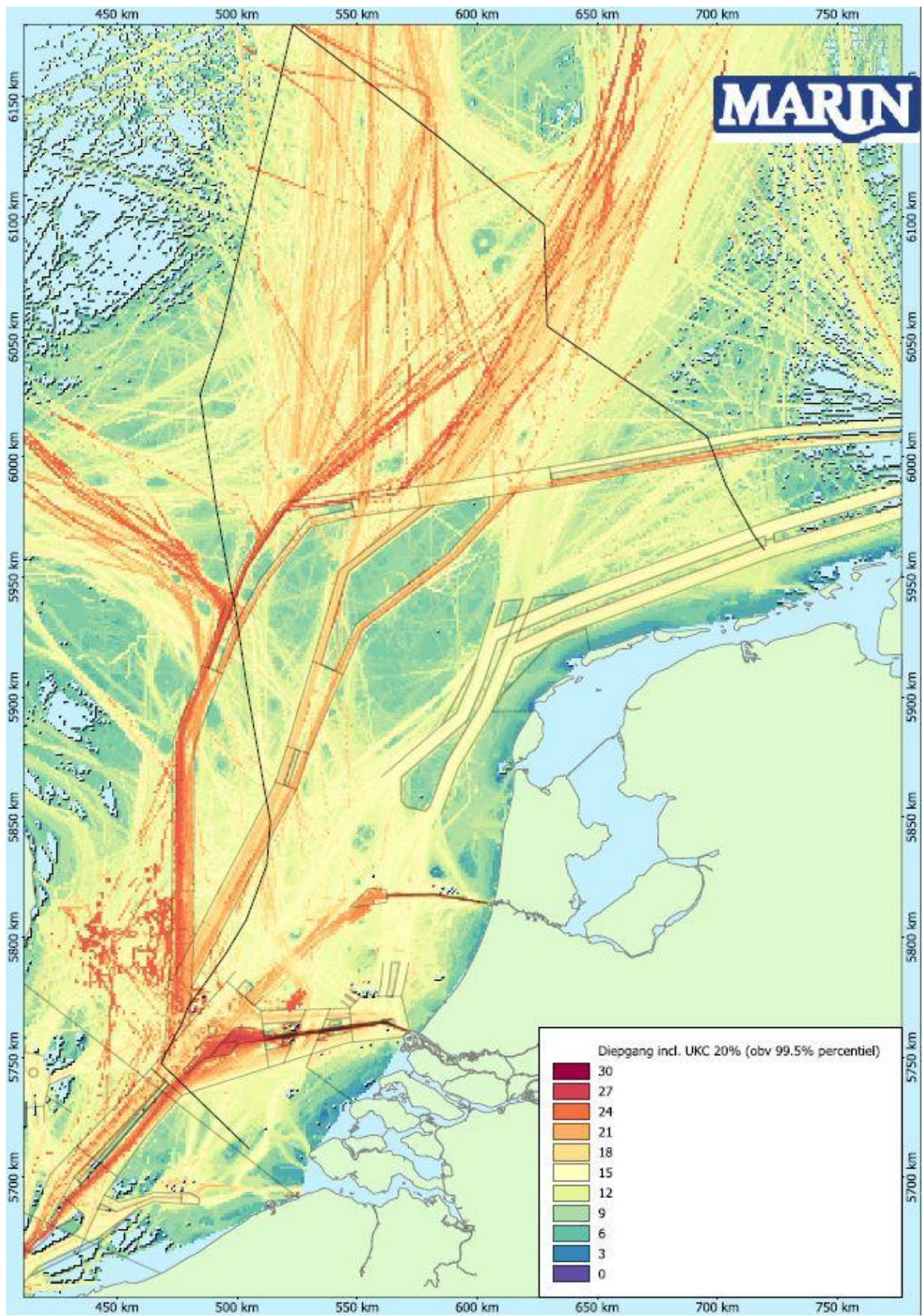
Map 3: survey dates, status Spring 2016 (red: 2015; orange: 2010-2014; yellow: 2005-2008; green: 2000-2004; blue: 1995-1999; purple: 1955-1994; grey: Rijkswaterstaat, or earlier than 1955)



Map 4: used sensors, status Spring 2016 (green: MBES+SSS; yellow: SBES+object sonar; orange or red: SBES; light blue: foreign surveys or lead line)



Map 5: shipping intensity in 2009 (AIS based, taken from ValHYD project)



Map 6: max. shipping draught in 2009, including a 20% safety margin (AIS based, taken from ValHYD project)