

Royal Netherlands Navy  
Hydrographic Service

### Sea floor dynamics and resurvey efficiency

A contribution to axis 4:  
"Sedimentology & marine dune dynamics"  
of the Roadmap

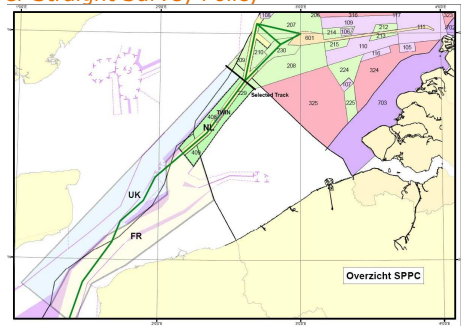
Leendert Dorst  
4th EU/IHO talks, 24 October 2013

### Progress on different levels:

- National:
  - government (NHI=Rijkswaterstaat+NLHO);
  - academia (UT, DUT);
  - institutes (Deltares, MARIN).
- North Sea wide:
  - NSHC Resurvey WG;
  - Dover Strait Survey Policy WG;
  - MARID conferences.
- European:
  - INSPIRE EL;
  - EMODNET Bathymetry;
  - Green paper Marine Strategy.

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### Dover Strait Survey Policy

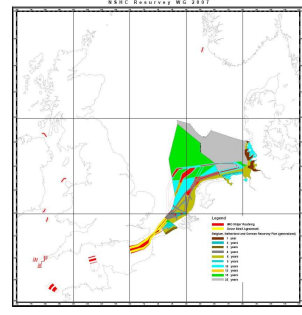


Overzicht SPPC

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Source: NSHC Resurvey Working Group, 2007  
Figure courtesy of Bernd Vahrenkamp, BSH

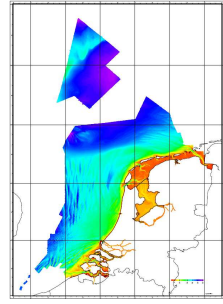
### NSHC Resurvey Working Group



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### NLHO contribution to INSPIRE Elevation

Database in use since early 90s, based on NHI surveys.

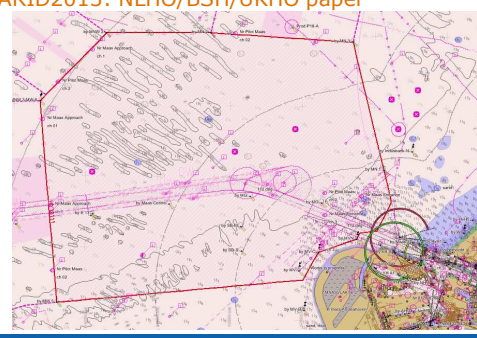


Limited operational ship time does not affect high frequency areas.

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Dirck Dalhoff, Howlett  
Developments in North Sea wide resurveying and charting of dynamic sand wave areas

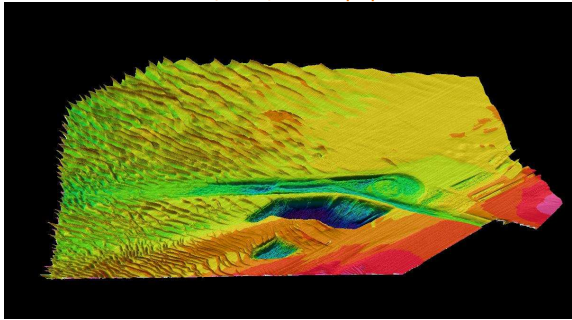
### MARID2013: NLHO/BSH/UKHO paper



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Dorst, Dehling, Howlett:  
Developments in North Sea wide resurveying and charting  
of dynamic sand wave areas

### MARID2013: NLHO/BSH/UKHO paper

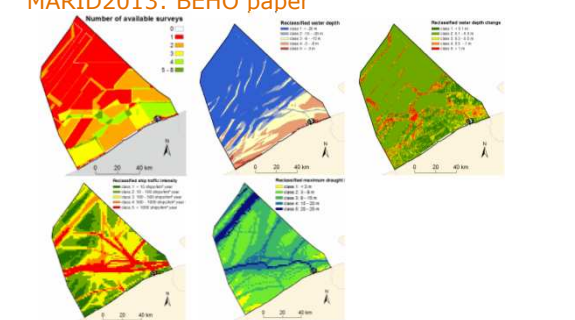


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Bos, Dumon, Verstraeten, Claeys, Wauters, Eggermont  
A GIS-based hydrographic resurvey strategy  
of the Belgian Continental Shelf

### MARID2013: BEHO paper

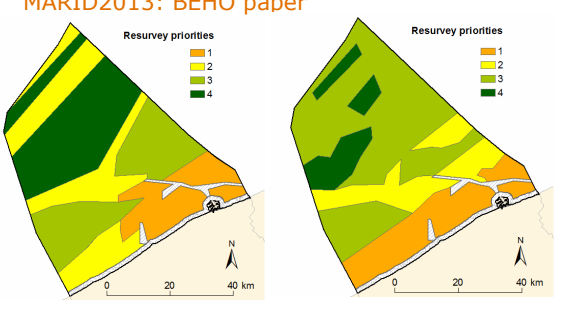


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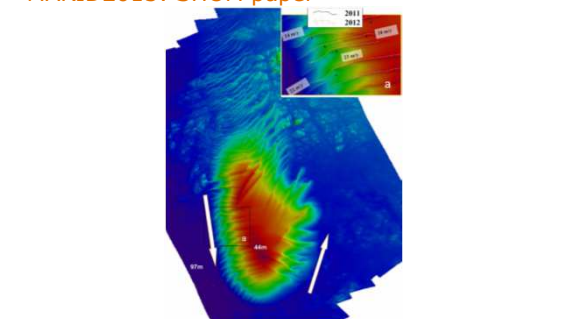


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Franzetti, Le Roy, Garlan, Delacourt, Thibaud, Cancouët,  
Graindorge, Brunier, Sukhovich  
Short and long term evolution of deep giant submarine dunes in  
continental shelf environment: the example of the "Blanc du Four"  
(Western Brittany, France)

### MARID2013: SHOM paper

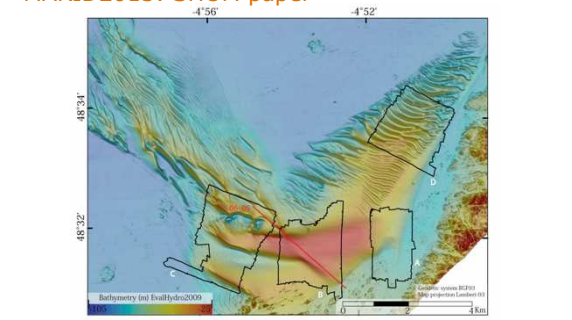


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Garlan, Cartier, Franzetti, Le Roy, Duarte, Pombio, Pea,  
Guyonard, Le Faou, Gabelotaud, Marché  
Complex morphology and organisation of dune  
in a giant dunes field

### MARID2013: SHOM paper



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### Conclusion:

- Each NSHC MS has different sea bed morphology; analysis techniques; resurvey policies; survey capacity.
- We all rely upon each other for access to our ports.
- The BSHC MS rely on us for access to their ports.
- All of us experience a lack of resources.
- Many of us are experimenting with resurvey policies.
- EU involvement will make a significant contribution.

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