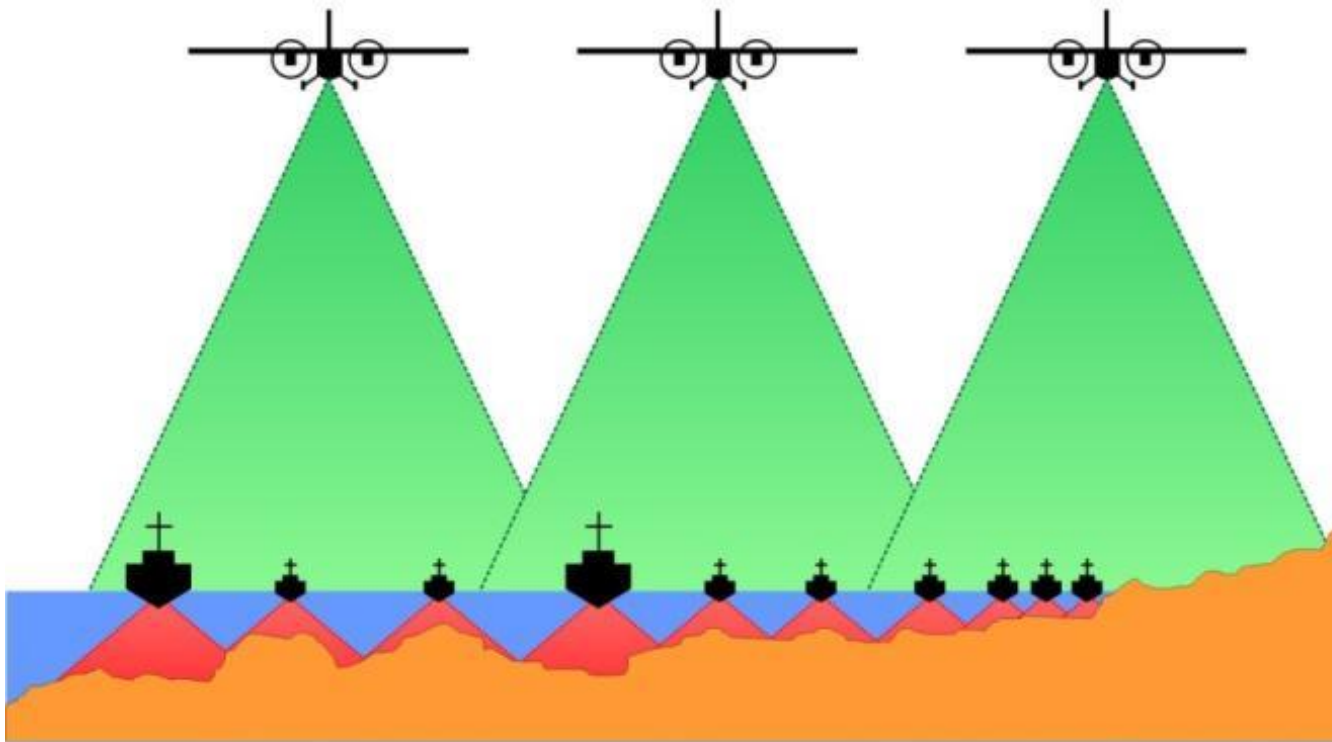


Why bathymetric LiDAR

Closing the gap...

Buzz-word: Integrated Coastal Zone Management



Fra AHAB

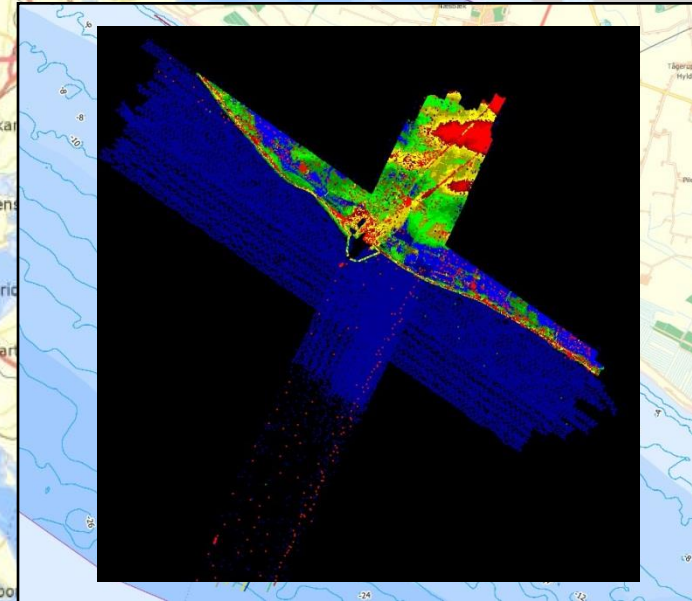
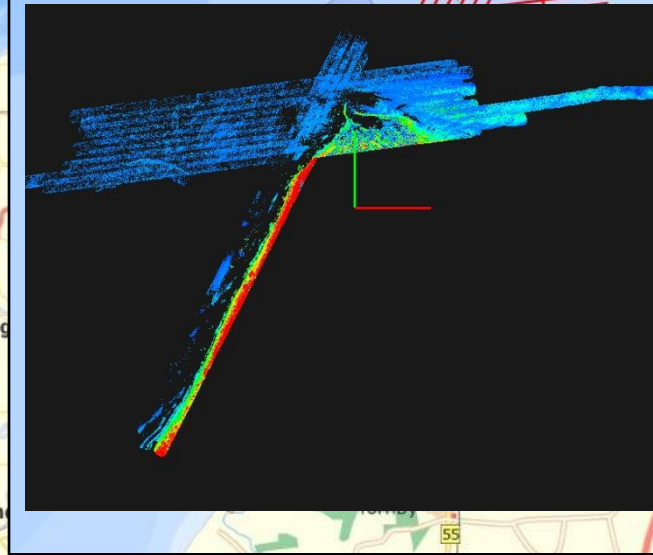
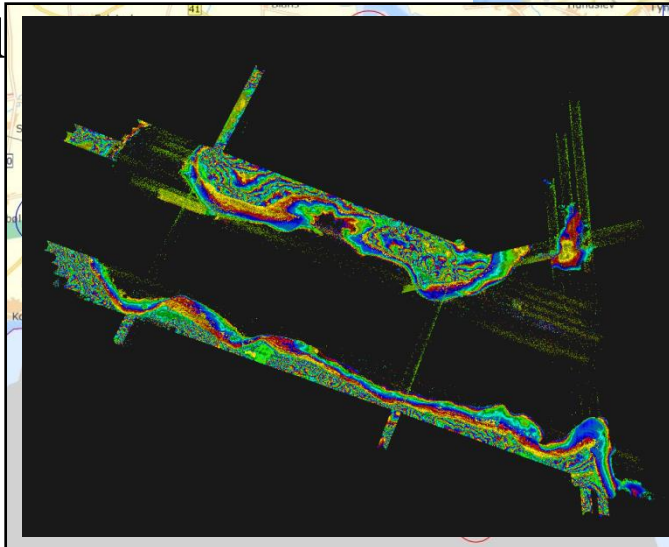


Where: Test area

Three different places

Three different environment

- Rødby
- Flensborg Fjord
- Hirtshals

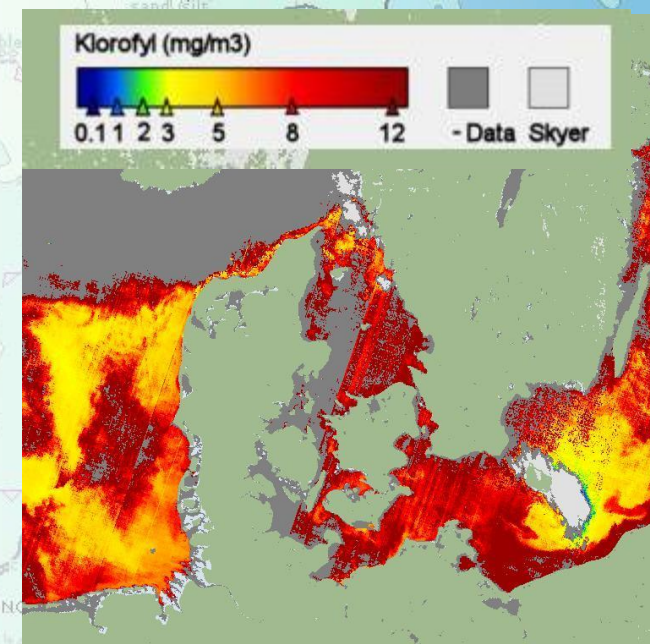


Challenges

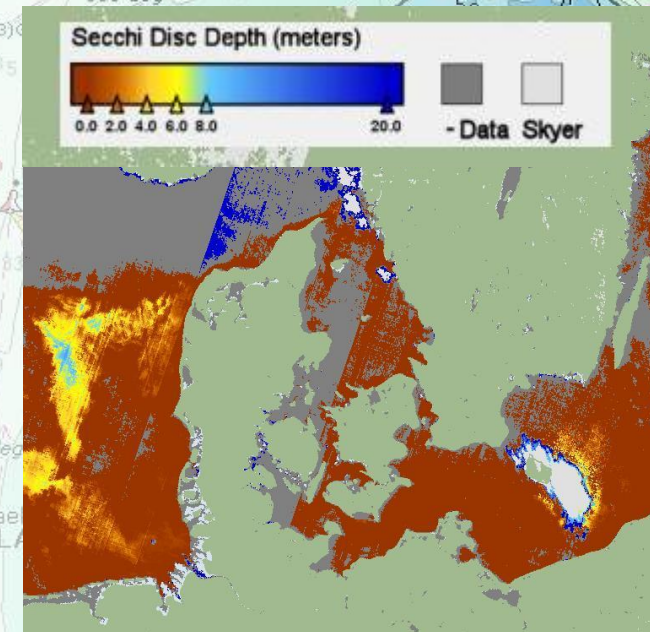
Operators and system maturity

Local water and weather problems

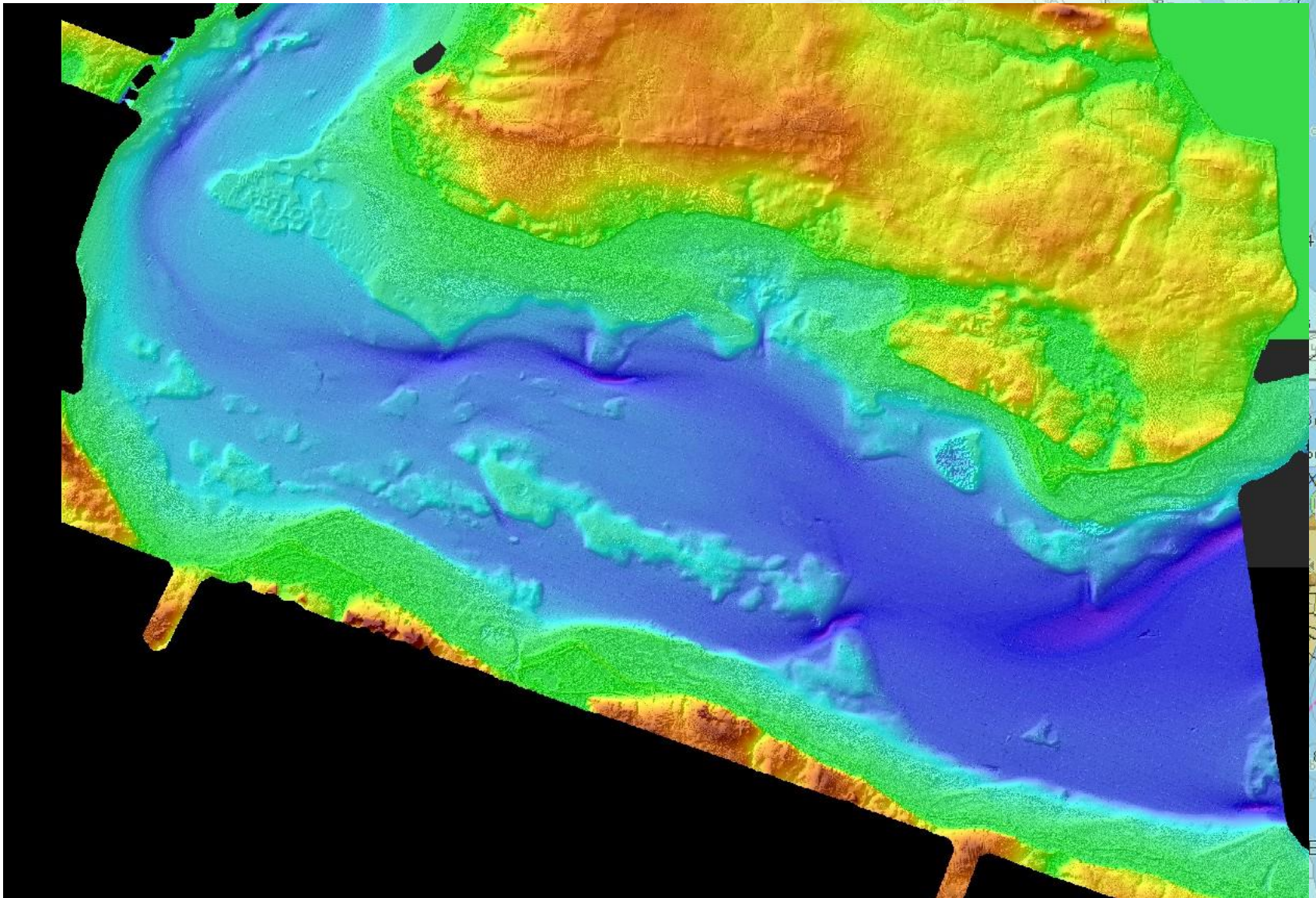
Rødby	Hirtshals	Flensborg
April 2011 – Algae bloom	April 2011 – Algae bloom	July 2012 – Success
June 2011 – Technical issue	June 2011 – Technical issue	
February 2012 – Low clouds	February 2012 – Low clouds	
April 2012 - Success	April 2012 – Strong winds and waves	
	July 2012 – High turbidity	
	August 2012 – Partly Success (Chiroptera)	



<http://marcoast.dmi.dk/>



Resultater: Flensborg Fjord – en samlet model



Resultater: Rødby

LiDAR havoverflade

LiDAR bund

Points per m2	Depth
0.20 ppm2	6.0 m
0.21 ppm2	7.5 m
0.22 ppm2	8.5 m
0.23 ppm2	9.0 m
0.19 ppm2	12.0 m
0.007 ppm2	13.0 m

LiDAR bund

Multibeam bund

Results: A long list of questions



?

How is the light spreading in water?

When did light reflects from bottom?

What happens inside the black system boxes?

What kind of algorithm is used?

When can one expect no signal?

How big is the footprint?

Can you ignore holes in data?

Salinity?

Speed of light though watercolumn?

How to verify data?

How to combine LiDAR and Multibeam?

What does we register?

What kind of objects can be observed?

How early can you migrate multibeam and LiDAR ?

Optimal migration with multibeam and existing height models?

Optimal dataprocessing?

Use of data besides hydrographi?

What have we learned

Not a stand alone method...

... supplement to multi-beam

- Lowwater area in Denmark – closing the gab
- Narrow routes in Grønland
- Planning of multibeam
- Classification of the bottom

