

THE FIT-FOR-USE OF THE GEBCO COASTLINE TO ESTIMATE COASTAL LENGTH – A CASE STUDY FROM SPITSBERGEN

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The fit-for-use of the GEBCO coastline to estimate coastal length has been investigated for an area in Kongsfjorden, Svalbard (79° N, 12° E). This is one of the key sites of the ACD project. Coastal length is basically a fractal problem. The dependency between map scale and obtained length will depend on the mapping technique used, post processing of the digital data and the complexity of the coast. A comparison of the GEBCO coastline with digital maps on the scale 1:100 000 and satellite imagery (Landsat) clearly shows the problems of estimating reliable coastal lengths in coastal dynamics applications. The two main problems are that the quality of the estimate is not known and that the quality needed in the ACD applications is not clearly defined.

The following strategy is suggested:

- Define user requirements for the ACD project depending on desirable accuracy of estimates made within the project.
- Test different methods to correct the estimates from the GEBCO coastline, based on reference from satellite imagery.
- Decide on a method based on validation from high accuracy digital maps or field control.