

Coastal Changes on the Pan-Arctic Scale – Update of the Arctic Coastal Dynamics Database

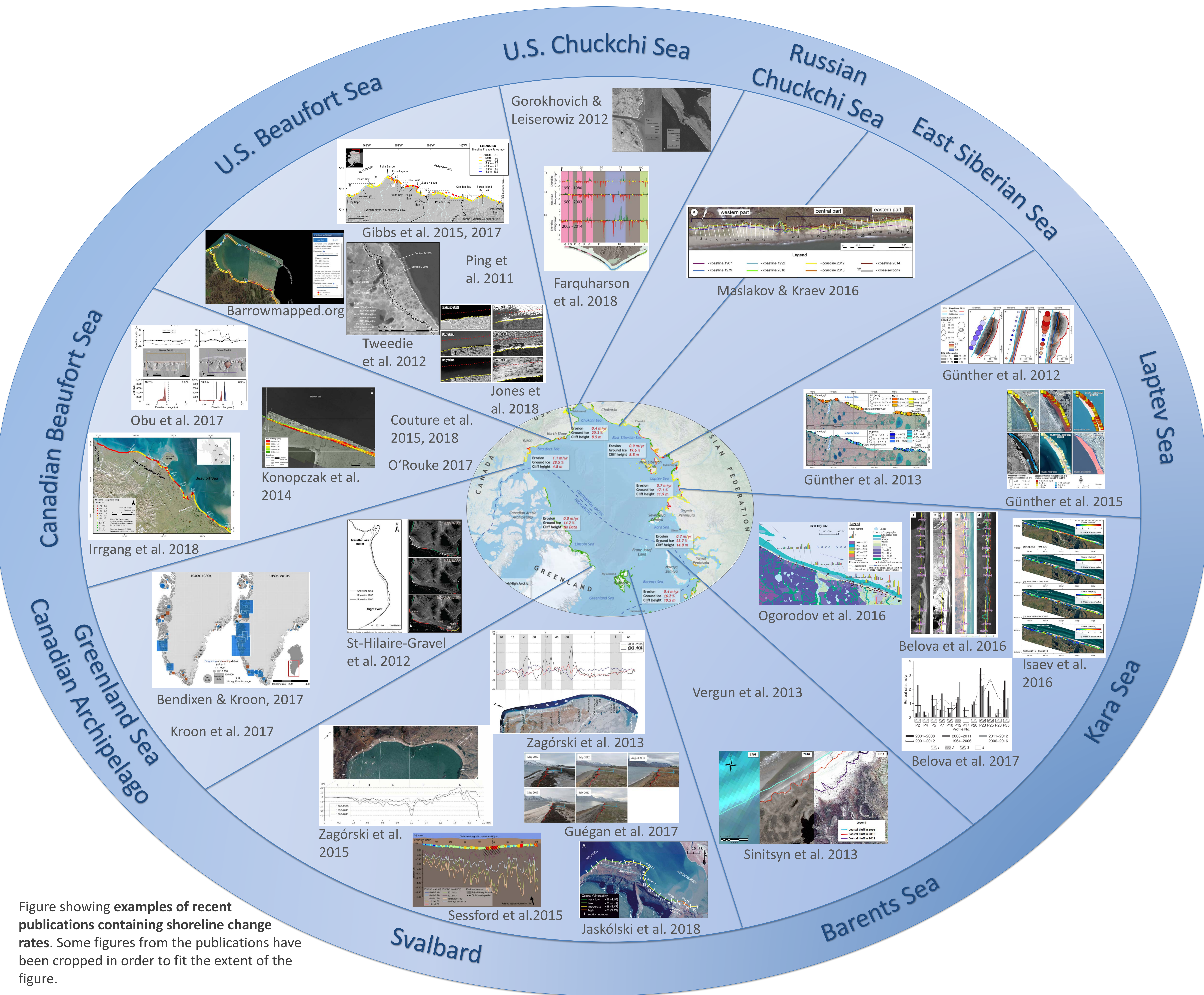
The Arctic Coastal Dynamics (ACD) Project

Coasts are among the most dynamic landscapes in the Arctic. They are the connection between land and sea and thus play a key role in understanding both systems.

In order to get a better understanding of the complexity of processes influencing coastal zones on the local to pan-Arctic scale, the International Polar Association (IPA) and the International Arctic Science Committee (IASC) initiated the Arctic Coastal Dynamics project in 1999.

In the following years, the Arctic coastal research community created a database and filled it with collected and estimated information about coastal geomorphology, shoreline change rates, as well as carbon contents for over 101,000 km of the Arctic coast. For the first time, this information allowed comparing coastal dynamics across all Arctic regions. Major findings were published by Lantuit et al. in 2012.

Since then, many publications and some datasets containing updated shoreline change rates were released. With a general update of the ACD database, we aim to provide an overview over these data in order to enhance understanding of current arctic coastal dynamics from the local to the pan-Arctic scale.



Your Contribution

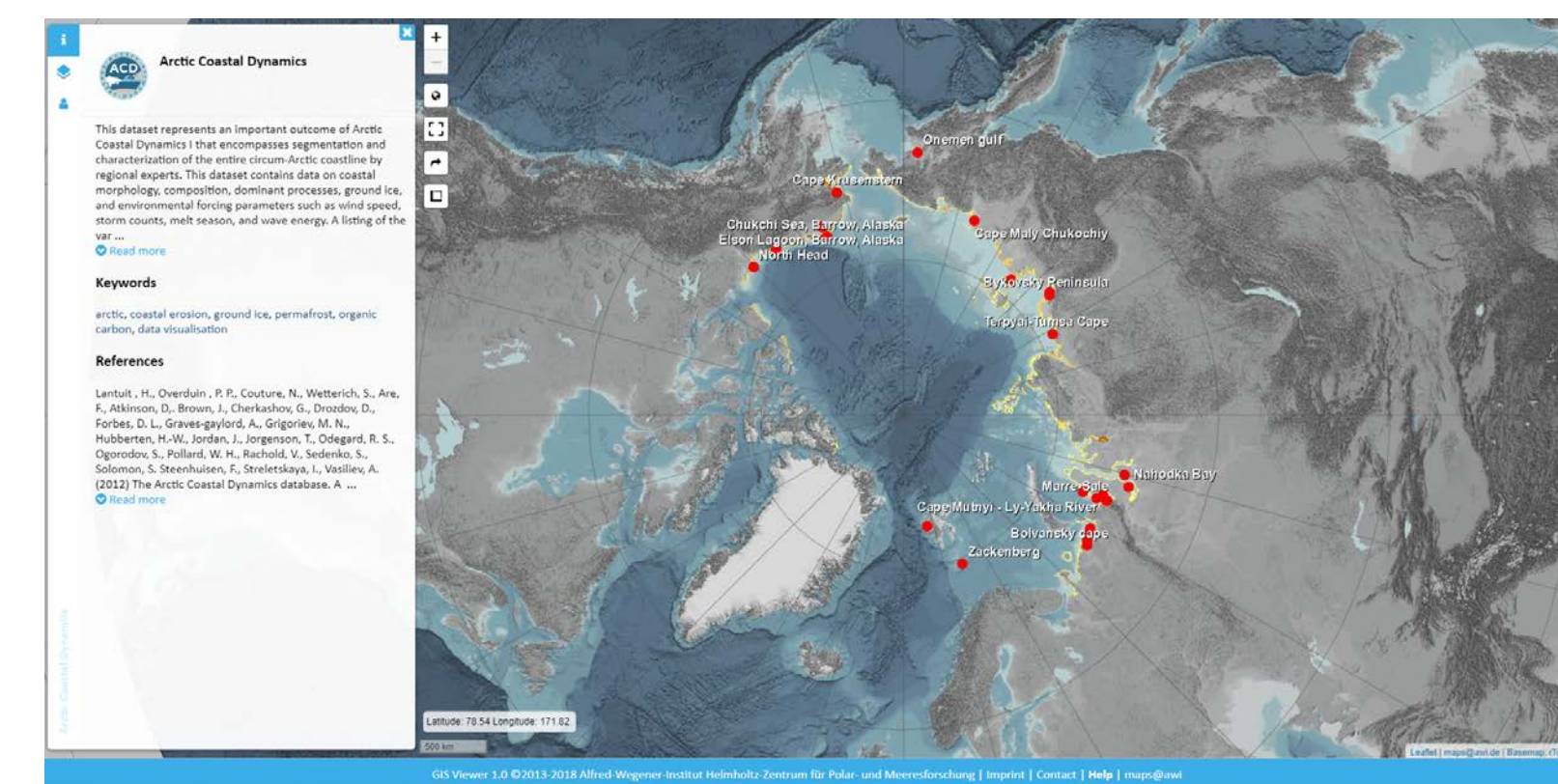
We welcome any new data contributions!

If you would like to get involved in the Arctic Coastal Dynamics project, simply contact us and we will guide you through the simple process of sharing your data with us!

ACD Database Update

In 2016, the ACD database was officially launched as a GIS web application. You can access it under:

[https://maps.awi.de/map/map.html?cu=Arctic Coastal Dynamics#home](https://maps.awi.de/map/map.html?cu=Arctic%20Coastal%20Dynamics#home)



New extent: We will extend the coverage of the database to all permafrost affected coasts.

A baseline shoreline: We anticipate to create one common circum-Arctic shoreline based on Digital Globe satellite imagery from one common reference year.

New coastal heights: We will update the backshore heights by using open source products, like the ArcticDEM (Polar Geospatial Center).

New datasets: We will include all data which are accessible and usable for us.



Contact:
Dr. Anna M. Irrgang
Coastal Geomorphologist
anna.irrgang@awi.de

