ICOP 2016 -
Permaforst Mapping and Data session

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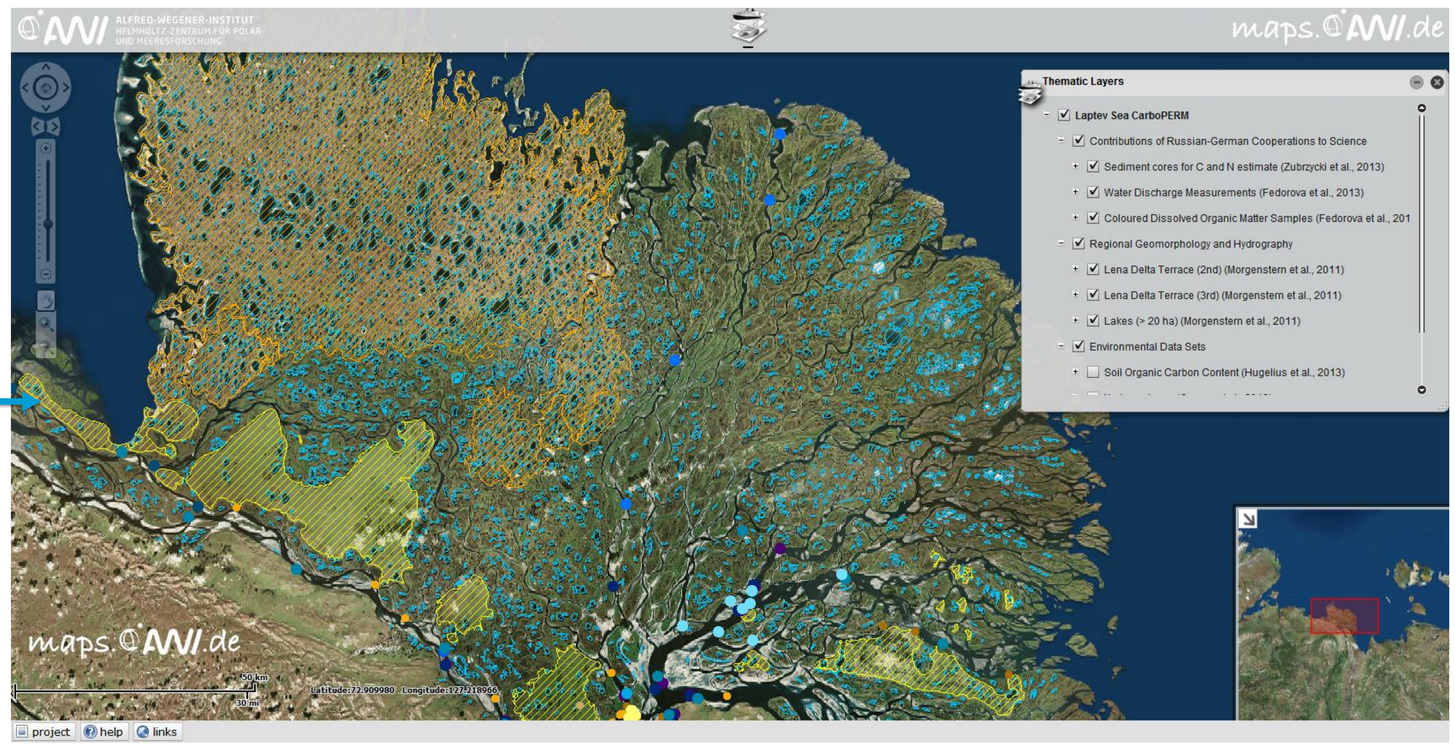
Permafrost related reseach data – their accessibility, visualisation, and publication using GIS and WebGIS technology

Point of access to information & WebGIS projects: maps.awi.de



CarboPerm - project description and link to the WebGIS project

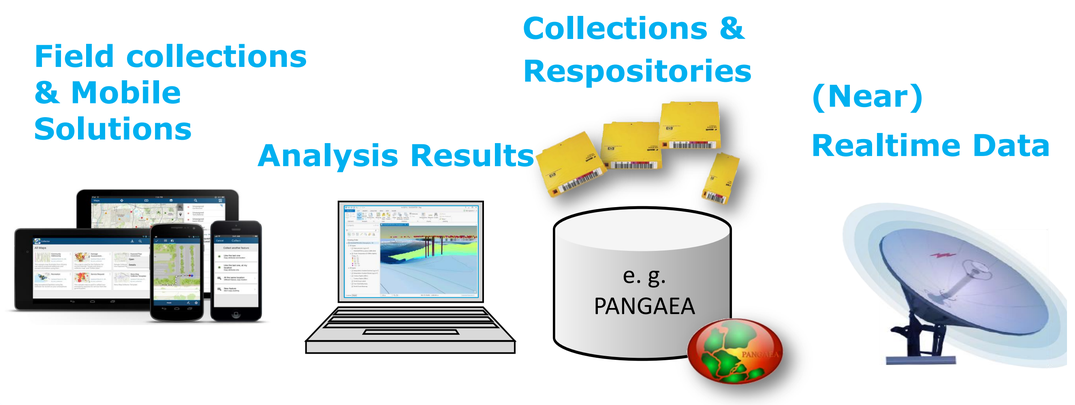
Motivation and Project Data

CarboPerm is an interdisciplinary Russian-German project on the formation, turnover and release of carbon in Siberian permafrost landscapes. The WebGIS was set up to visualize and emphasize the spatial context of the samplings and measurements vs. the thematic background information (e.g. morphology, pedology, geology, vegetation). Its focus is not only to provide information about available data, but rather to understand and interpret research data. The Web-GIS database is currently assembled combining field data from long-term Russian-German co-operations, project field data, and additional spatial data sets that are freely available data via the world wide web or already published 'geodata' products from research projects. The data data sets are represented either as vector elements or as raster data matrices. Vector data display a model of the real world as multi-point layers, like 'discharge measurements (*Fedorova et al. 2013*)' or 'sediment cores [carbon, nitrogen] (*Zubrzycki et al. 2013*)', or vector layers (lines and polygons) like 'Lena Delta terraces (*Morgenstern et al. 2011*)', and 'Yedoma (*USGS, Grosse et al. al. 2013*)'.

Geographical Information Systems (GIS) desktop and server technologies enable the publication and therefore visualization of multidisciplinary project data in the World Wide Web. At AWI, the **GIS Deodata Infrastructure (GIS-GDI at AWI)** comprises of ArcGIS for Server and PostgreSQL databases including Spatial Database Engine (SDE) as core components. Data uptake to PostgreSQL DB can be accomplished by using the ArcGIS desktop application. An AJAX-capable intuitive editor ensures standardized meta data (Inspire Profile) and project descriptions. **maps.awi.de** - a JavaScript application lists publicly available WebGIS projects which are realized by AWI scientists and various project partners. **maps.awi.de** offers filter functionalities either by key words or by location as well as a brief introduction into the project and links to access the WebGIS project.

GIS - Geodata Infrastructure (GDI) at AWI

Data Acquisition and Transfer



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See **carboperm.net** or **maps.awi.de** for further developments

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