

Web-GIS Visualisation of Permafrost-Related Remote Sensing Products for ESA GlobPermafrost



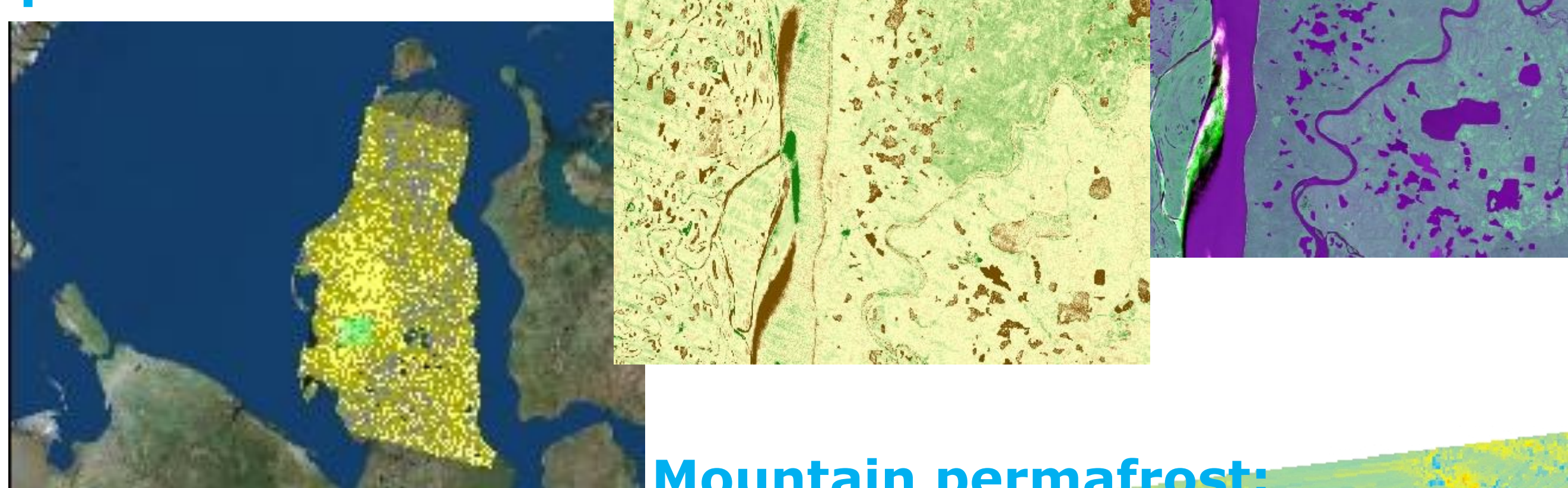
Motivation and Project Data

The **ESA** (European Space Agency) project **GlobPermafrost** (www.globpermafrost.info) provides a remote sensing service for permafrost research and applications. The service comprises data product generation for various sites and regions as well as specific infrastructure allowing visualisation and access to datasets.

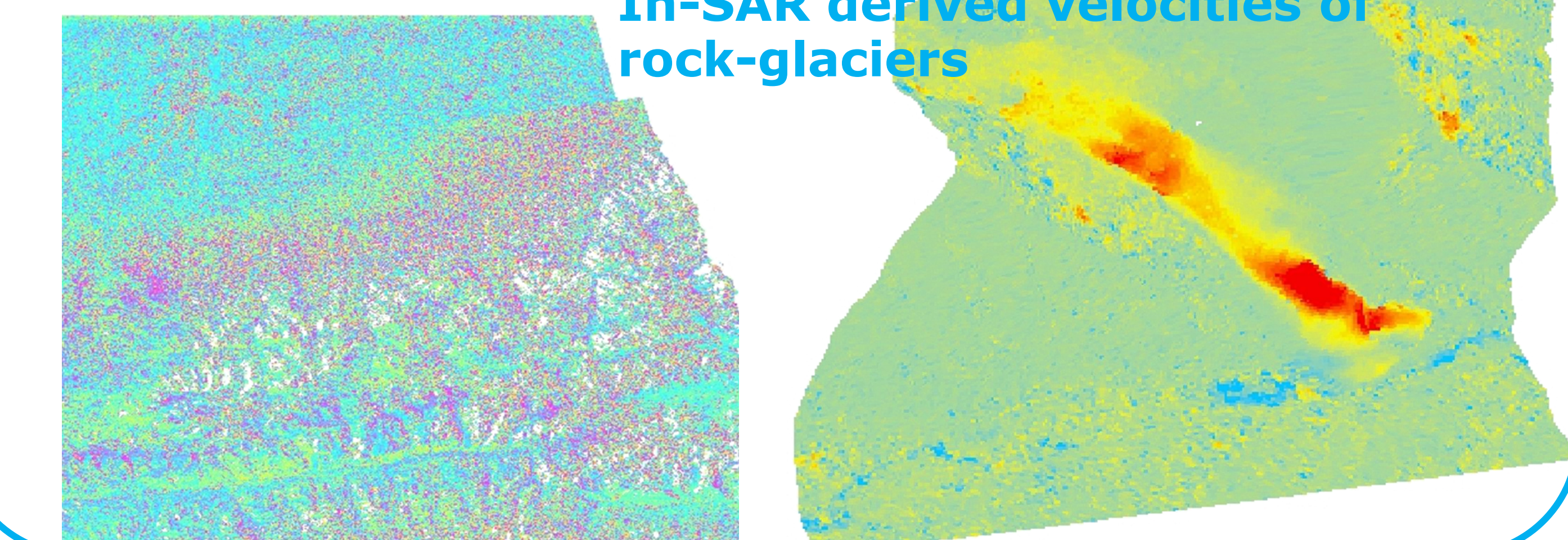
The **GlobPermafrost** Permafrost Information System **PerSys** is designed as an open access geospatial data dissemination and visualisation portal. **PerSys** allows visualisation of a wide range of **GlobPermafrost** raster and vector products: land cover classifications, Landsat-derived trend datasets, lake and wetland extents, InSAR-based land surface deformation maps, rock glacier velocity fields, spatially distributed permafrost model outputs, and land surface temperature datasets.

Landsat-derived trends of surface change in permafrost landscapes

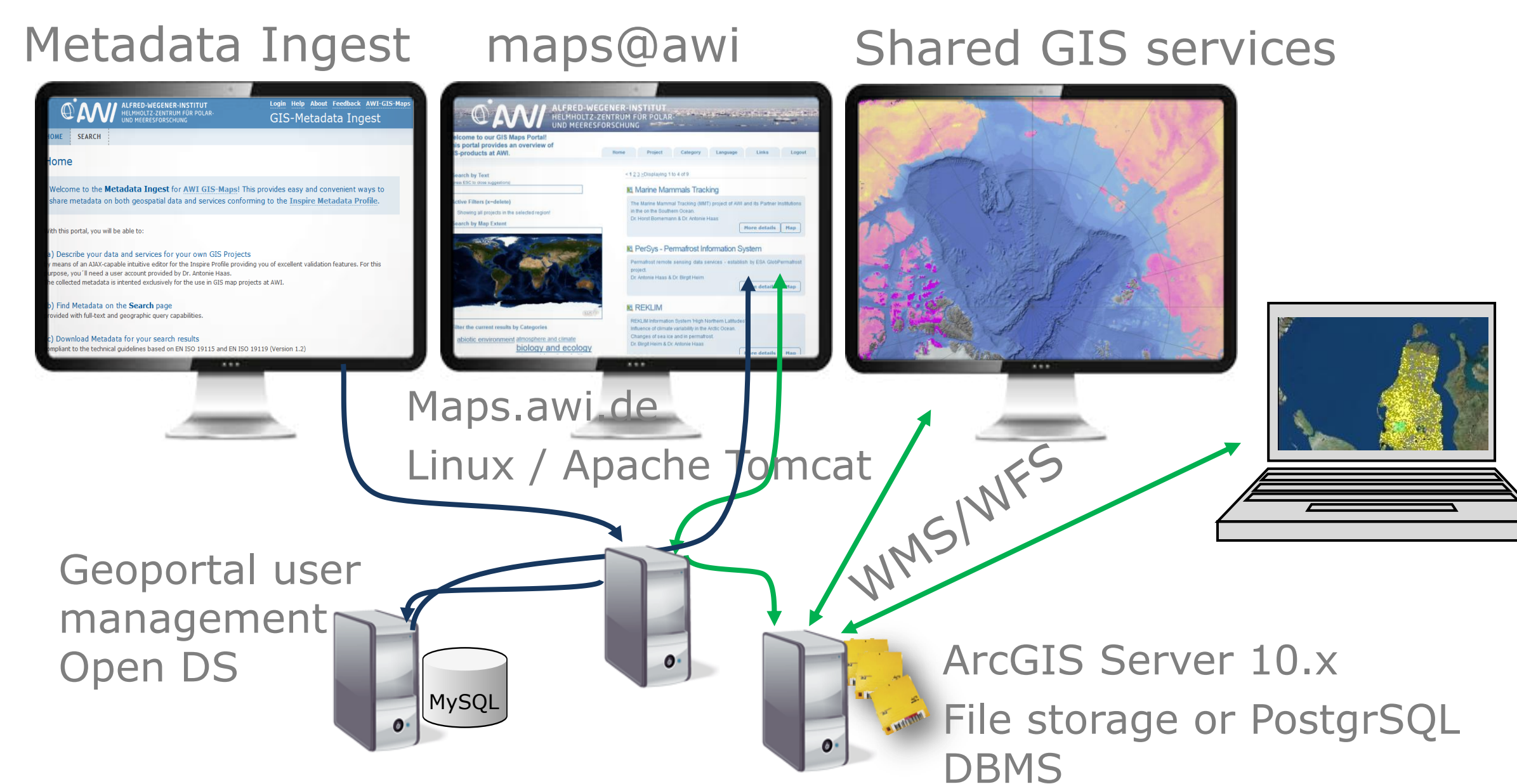
Arctic Land Cover products



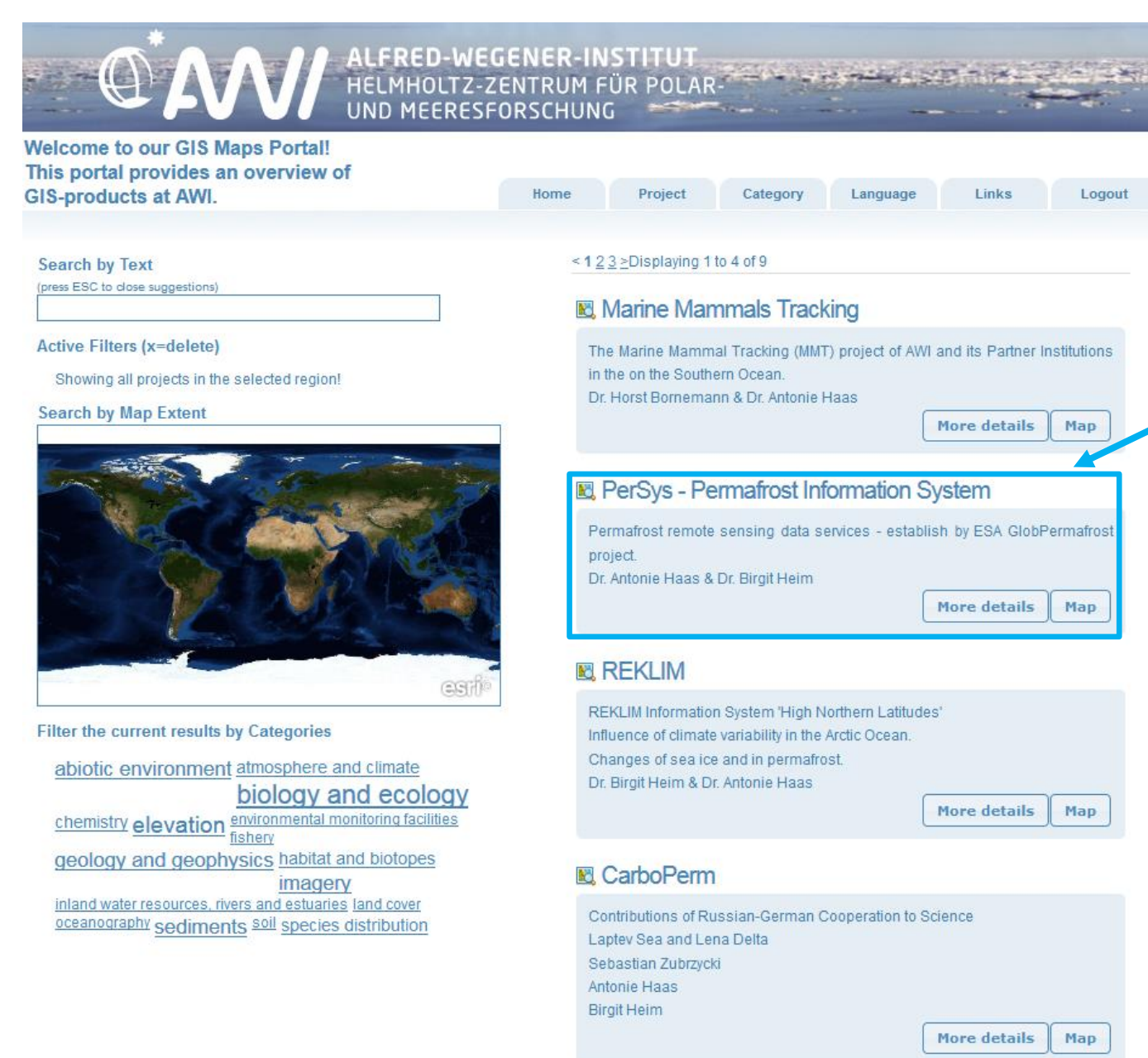
Mountain permafrost: In-SAR derived velocities of rock-glaciers



GIS - Geodata Infrastructure at AWI

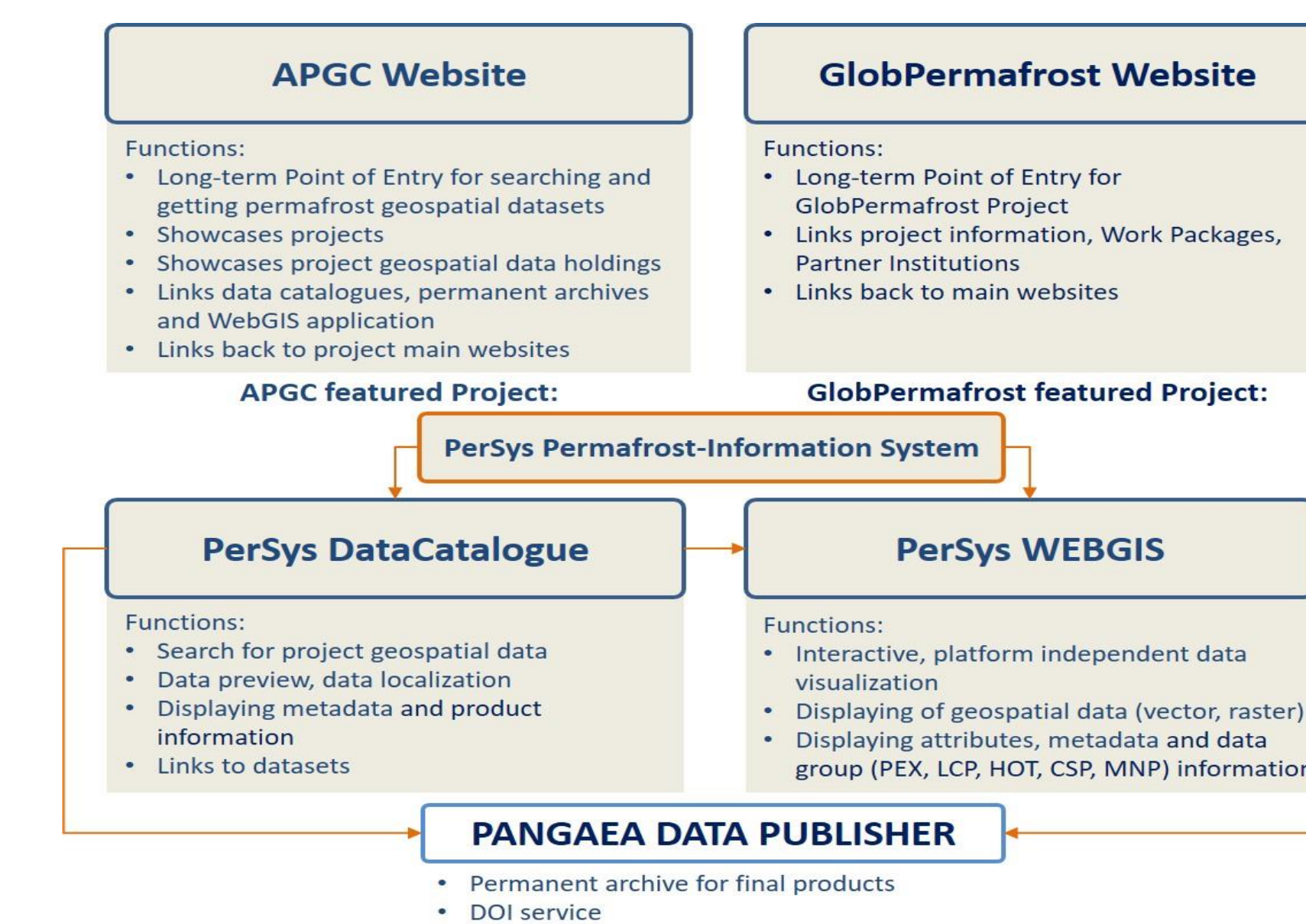


PerSys is hosted at AWI and technically realised upon **GIS (Geographical Information Systems)-based Geodata Infrastructure (GIS-GDI@AWI)**. GIS server technology enables the digital publication and therefore visualization of multidisciplinary project data in the World Wide Web. **GlobPermafrost** datasets will be published as WebGIS services relying on OGC-standardized Web Mapping Services (WMS) and Web Feature Services (WFS). Due to this, all services are interoperable and can be integrated into various desktop GIS applications. All GlobPermafrost WMS are embedded in a JavaScript GIS viewer application based on the leaflet library.

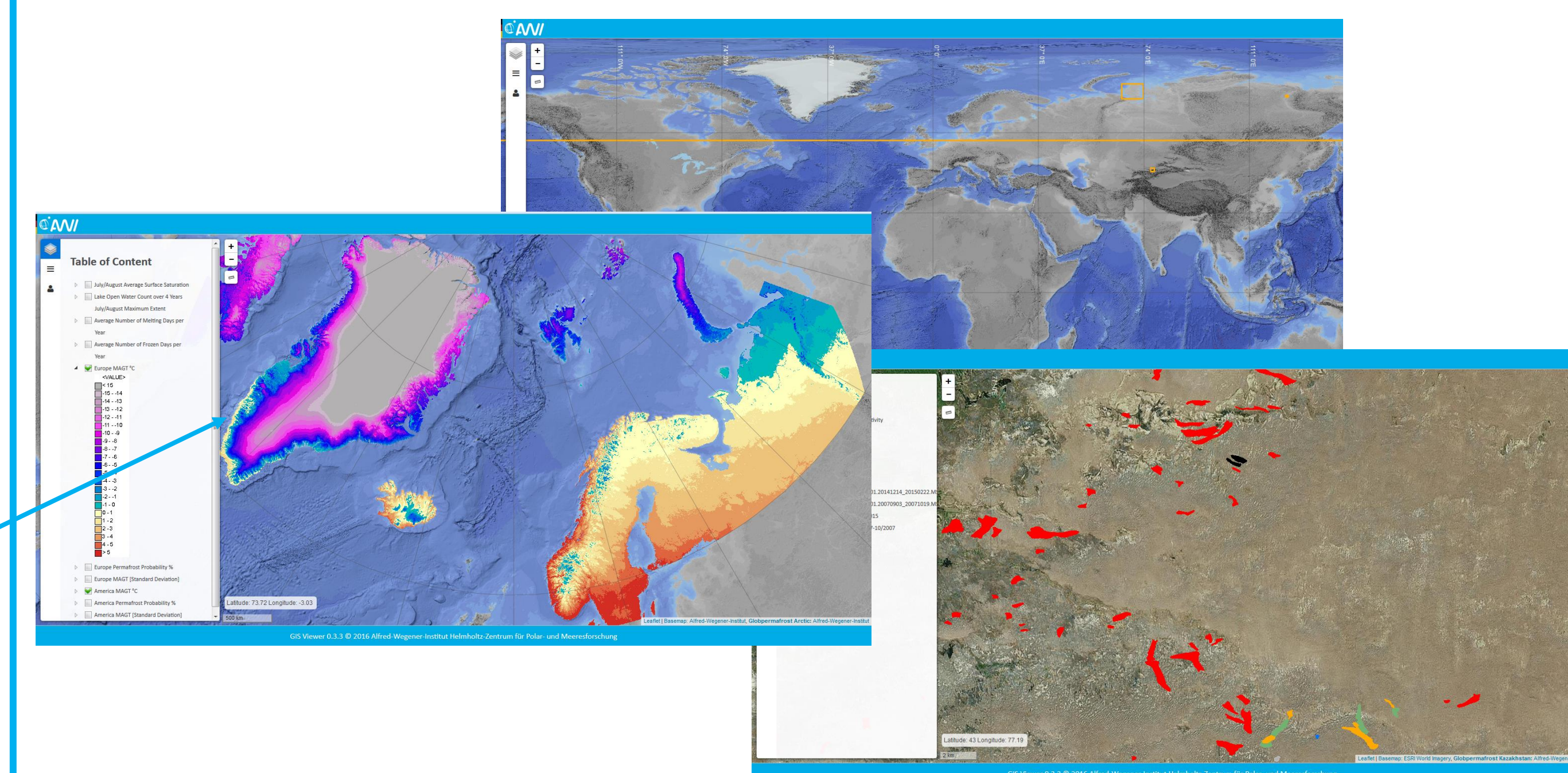


Maps.awi.de lists all publicly available AWI Web-GIS projects. There, filter functionalities either by key words or by locations link to the **GlobPermafrost** Web-GIS services. Additionally, brief descriptions of the projects are given.

Information, Web-GIS Projects, Data: Points of Access



Access to the **GlobPermafrost** services: maps.awi.de, globpermafrost.info, **Arctic Permafrost Geospatial Centre (APGC)**



GlobPermafrost data can be download from PANGAEA (www.pangaea.de) where the final data products will be assigned a DOI (digital object identifier) and archived. PANGAEA is hosted by the two German institutes AWI and MARUM.

The ESA DUE Permafrost final product data set is already published under doi:10.1594/PANGAEA.780111

