The Arctic Research Mapping Application (ARMAP; http://armap.org/) is a suite of online applications and data services that support Arctic science by providing project tracking information to researchers, the public, and United States Government funding agencies. In collaboration with 18 research agencies, project locations are displayed in a visually enhanced web mapping application. Key information about each project is presented along with links to web pages that provide additional information. The mapping application includes new reference data layers and an updated ship tracks layer. Visual enhancements are achieved by redeveloping the front-end from FLEX to HTML5 and Javascript, which now provide access to mobile users utilizing tablets and cell phone devices. New tools have been added that allow users to navigate, select, draw, measure, print, use a time slider, and more. Other module additions include a back-end Apache SOLR search platform that provides users with the capability to perform advance searches throughout the ARMAP database. Furthermore, a new query builder interface has been developed in order to provide more intuitive controls to generate complex queries. These improvements have been made to increase awareness of projects funded by numerous entities in the Arctic, enhance coordination for logistics support, help identify geographic gaps in research efforts and potentially foster more collaboration amongst researchers working in the region. Additionally, ARMAP can be used to demonstrate past, present, and future research efforts supported by U.S. agencies.

New tools include improved capacities for navigation, feature selection, drawing, measuring, time-slider functionality, advanced search (above), downloading filtered data, printing and animations (right). The advanced search tool benefits from the development of a back-end Apache SOLR search platform and allows users to compile complex queries in a query builder interface (above). Ship tracks from the R2R and other repositories are also included (below).

ARMAP is funded by the National Science Foundation Division of Polar Programs Arctic Sciences Section and is a collaborative development effort between the Systems Ecology Lab at the University of Texas at El Paso, CH2M HILL Polar Services, Effingham, IL, USA; Nutar Technologies, the INSTAAR QGIS Laboratory at the University of Colorado, Boulder, CO, USA; The HDF Group, 1800 South Oak Street, Champaign, IL.