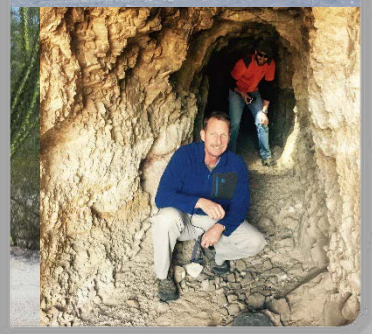
Cold Regions Research & Engineering Laboratory

Welcome!



Dr. Joe Corriveau, Director

ERDC
Engineer Research and Development Center

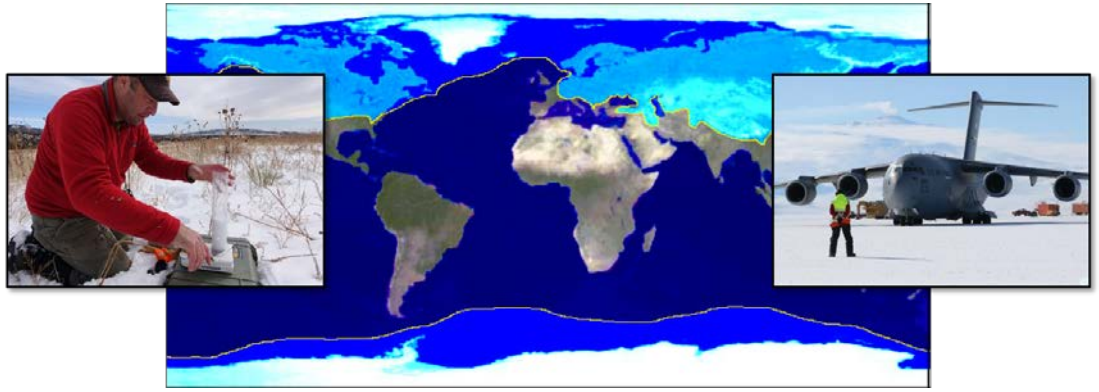
US Army Corps of Engineers®

U.S.ARMY

Innovative solutions for a safer, better world

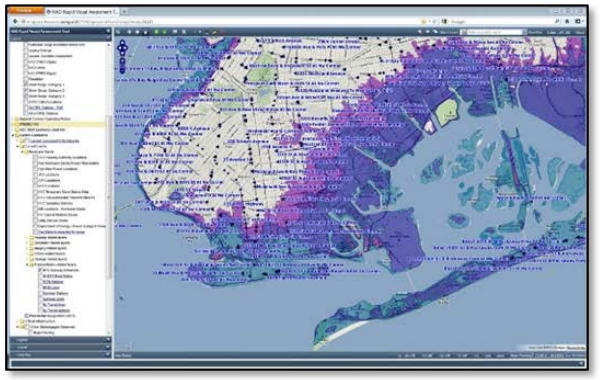
VISION

The National resource for cold regions science and engineering



MISSI0N

Solve scientific and engineering challenges in cold and complex environments through effective, interdisciplinary solutions for our Warfighters and the Nation



ERDC-CRREL has advanced and applied science and engineering solutions to complex and strategically-important problems in the Arctic region for more than 50 years.

Arctic Strategic Goal: *Enable the DoD and the Nation to make truly effective decisions that mitigate risks to national security, operations, and the environment*

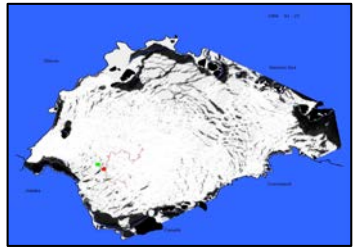
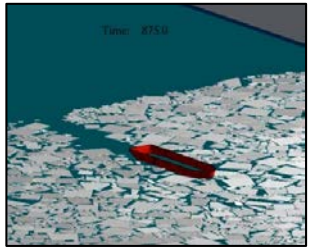
ERDC-CRREL is building a basic understanding of Arctic climate processes and incorporating this knowledge into predictive models to inform current operations and provide future situational awareness.

ERDC-CRREL strives to mitigate operational risks by obtaining a holistic understanding of ecosystem processes and providing science and engineering solutions to ensure a sustainable presence.

Arctic Region Science & Engineering

In Situ observations & autonomous sensors – climate change effects on sea ice dynamics

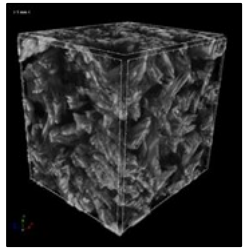
Enhance Arctic Domain Awareness

Modeling ice floe behavior, mechanics & forces – safe, efficient navigation in ice filled waters

Engineering & science solutions to support operations

Evolve Arctic Infrastructure & Strategic Capabilities



Systems & materials performance under harsh Arctic conditions

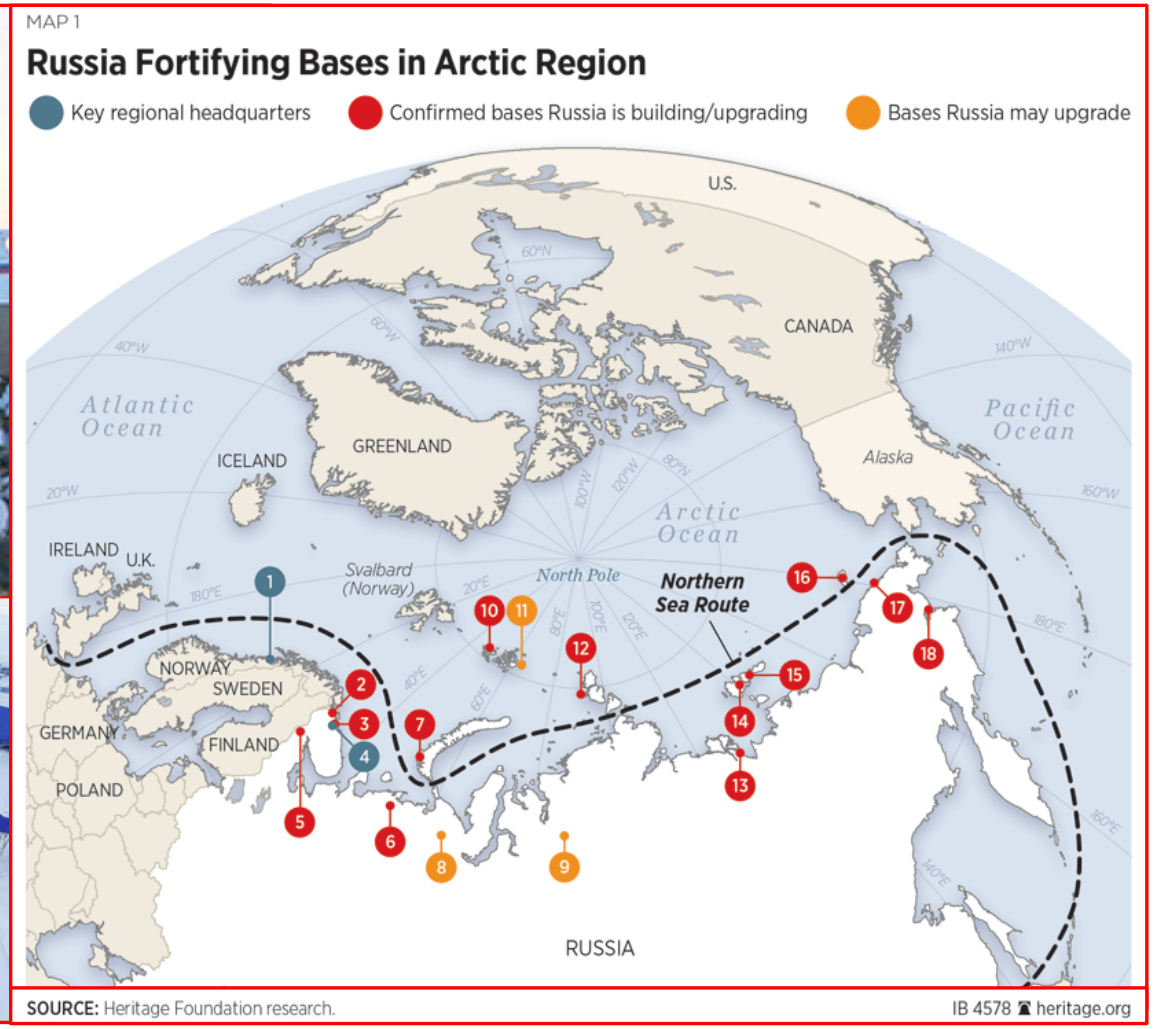
Holistic understanding of Arctic ecosystem processes – data driven decision making

Protect the Arctic Environment

Detection & mitigation of oil in ice covered waters

Red Arctic

In MAR 2015, Russia executed an 80,000 man training event above the Arctic circle
One of 13 new Russian Bases in the Arctic


MAP 1
Russia Fortifying Bases in Arctic Region
Key regional headquarters
Confirmed bases Russia is building/upgrading
Bases Russia may upgrade
U.S.
CANADA
Atlantic Ocean
Pacific Ocean
GREENLAND
ICELAND
Alaska
Arctic Ocean
IRELAND
U.K.
Svalbard (Norway)
North Pole
Northern Sea Route
NORWAY
SWEDEN
GERMANY
FINLAND
POLAND
RUSSIA
SOURCE: Heritage Foundation research.
IB 4578 heritage.org

CRREL

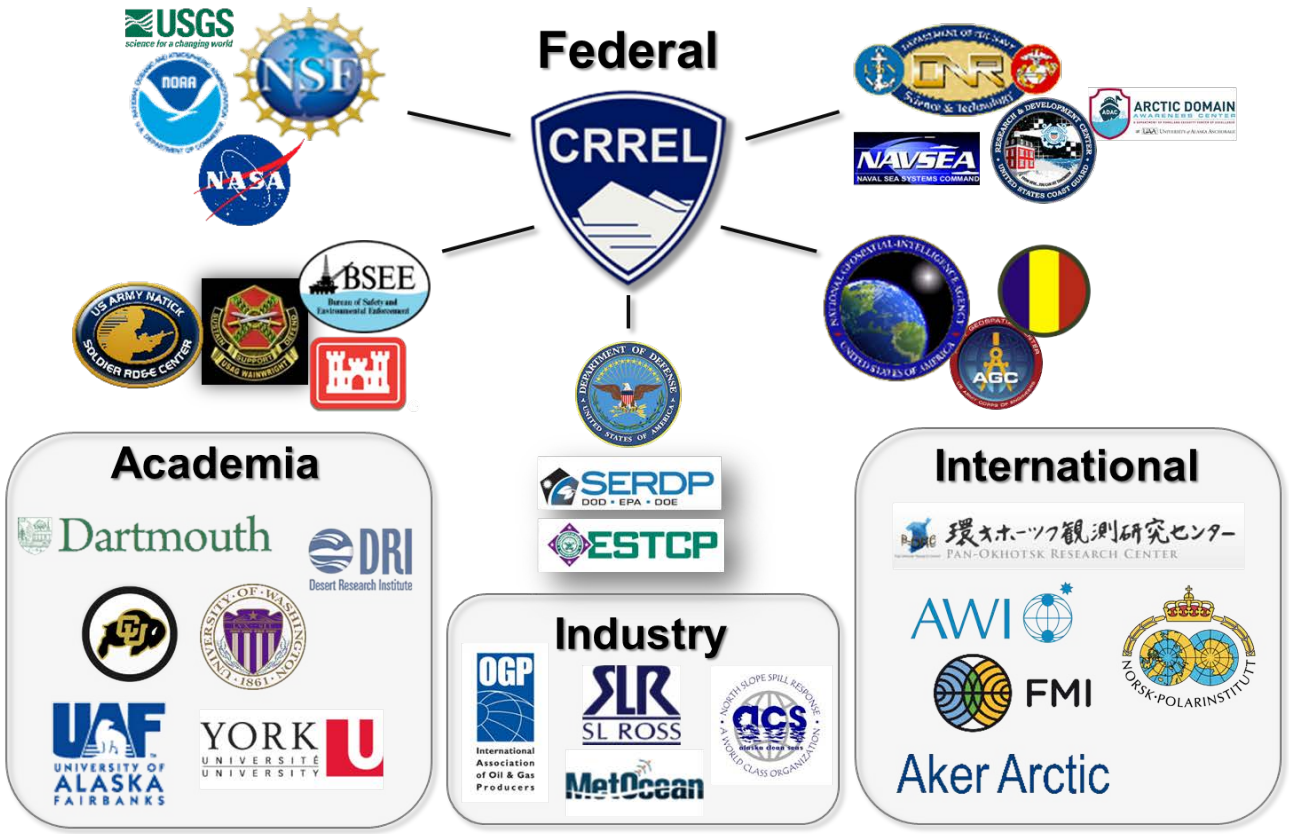
ERDC
Engineer Research & Development Center

Coordination of Arctic Interactions:

The ERDC works closely with the Department of Defense in implementing the departments strategy for the Arctic region.

In addition, towards an enhanced unity of scientific effort in the region, the ERDC coordinates a number of its research efforts through the Interagency Arctic Research Policy Committee.

KEY PARTNERSHIPS



Partnering to Support Department of Defense and National interests in the Arctic region