



# Northern Arctic Federal University

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# Russian Arctic Policy in Education and Research

## Russian Science Map in compliance with RF Arctic Strategy



Basic Principles of State Policy  
of the Russian Federation in the Arctic  
for the Period up to 2020 and Further

Strategy of Development of the Russian  
Arctic and National Security for the Period up  
to 2020

List of Priority Projects in the Arctic Zone of  
the Russian Federation

### Main areas of the Russian Arctic development:

- Integrated development of the Northern Sea Route;
- Preservation of the Arctic ecosystem and elimination of accumulated environmental damage;
- Integrated use of marine and terrestrial bioresources;
- Development of telecommunication infrastructure;
- Development of solid minerals;
- Development of tourism;
- Development of air connections;
- Development of the energy systems;
- Development of hydrocarbon resources;
- Yamal LNG Project;
- Civil shipbuilding



**NArFU mission:** protection of Russian geopolitical and economic interests in the Arctic by creating a system of continuous professional education, integration of education, science and industry, as well as by strategic partnership with business

**Total number of students**

**> 20,000**

**Academic staff, total  
having D.Sc./ PhD**

**1163  
71%**

**Higher Schools  
Institutes / Colleges / Campuses**

**7  
2 / 3 / 3**

**Research Centers and Labs**

**41**

**Educational programs, total**

**over 360**

# NARFU HIGHER SCHOOLS AND CAMPUSES



## Arkhangelsk Campus

**Higher School of Energy,  
Oil and Gas**

**Higher School of  
Information Technologies  
and Automated Systems**

**Higher School of  
Engineering**

**Higher School of  
Psychology, Pedagogy  
and Physical Training**

**Higher School of Natural  
Sciences and  
Technologies**

**Higher School of Social  
Sciences, Humanities and  
International  
Communication**

**Higher School of  
Economics, Management  
and Law**

## Severodvinsk Campus

## Koryazhma Campus

**Naryan-Mar  
Representative Office**



# NARFU PRIORITY RESEARCH FIELDS

## Environment of the Arctic areas

- \* Comprehensive study of the northern nature aimed at bio-resources managing
- \* Modeling of physical processes and systems occurring in the Arctic
- \* Formation of environment eco-analytical control system

## Construction and energy in Cold Climate

- \* Investigating properties of structurally unstable soils and industrial ground
- \* Ensuring safety and energy efficiency of buildings and complexes in the European North

## Chemistry and biotechnology

- \* Creation of scientific basis of chemical and biotechnological use of renewable resources for solution of Arctic development's problems

## Human dimension in the Arctic

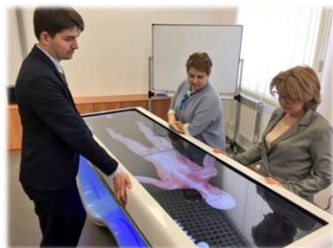
- \* Adaptation and human health in the North

## Mineral resources of the Arctic areas and resources

- \* Development of a monitoring system to intensify the process of oil extraction, hydraulic fracturing modeling under the Arctic climate conditions.

## Shipbuilding and ship repairing

## IT Technology



# NArFU Research Infrastructure



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Center of Research Equipment for Collective Use «Arktika»

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Center of the Arctic Remote Sensing

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Center of Research Equipment for Collective Use -2

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Arctic Biomonitoring Laboratory

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Laboratory of Molecular Ecology and Phylogenetic

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Center for Innovation “Arctic Oil and Gas Laboratory Research”

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Center for Innovation “Modern Technologies for Northern Bio-Resources Processing”

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Education and Research Centre of Energy Innovation

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Research Centre “Construction in Extreme Climate”

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Laboratory for Emergency Prevention and Modelling

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Arctic Centre of Strategic Research

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Technology Center of Shipbuilding and Arctic Marine Engineering (cluster in Severodvinsk)

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# ARCTIC BIOMONITORING LABORATORY

Direction of scientific research <http://narfu.ru/biomonitoring/en/>

» Development of methodology for monitoring, assessment, prediction and prevention of risks associated with the high level toxic polluting substances transfer via biological pathways. These substances can accumulate in the food chain and spread in Arctic ecosystems.

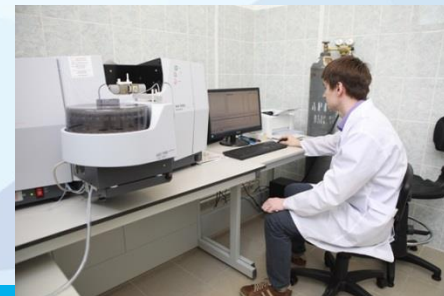
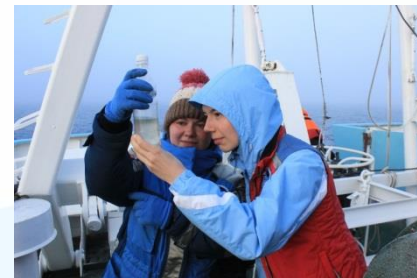


## Yngvar Thomassen - Leading Scientist

He has given over 275 presentations on various aspects of his research, of which 105 were invited lectures at major conferences and symposia. In the period 1983-91 he was a member of the Commission on Toxicology, International Union of Pure and Applied Chemistry (titular) member from 1986, where he initiated the development of human

body fluids as quality assurance materials for the measurement of minor, trace and ultra-trace elements and organic metabolites. From 2011-2014 he served as a titular member in the Analytical Chemistry Division.

[More »](#)







# Arctic Floating University: An On-Board School Exploring the Russian Arctic



Arctic Floating University



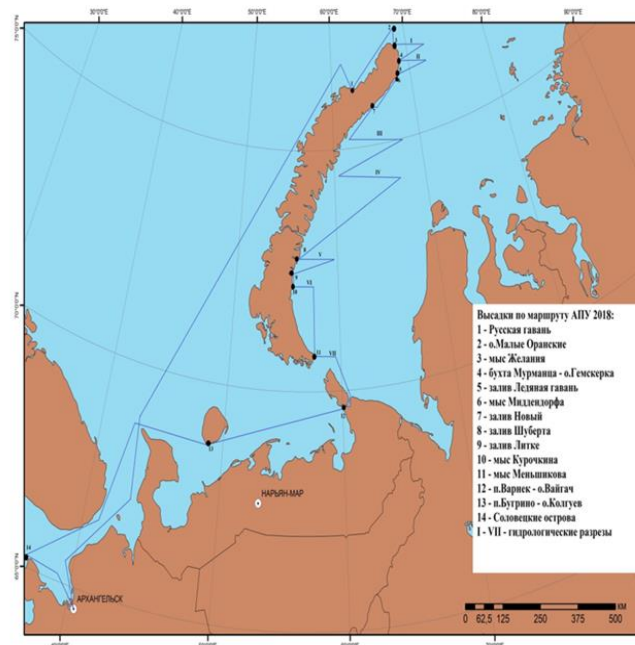
**ORGANIZERS:**  
**NArFU, RosHydroMet,**  
**Russian Geographical Society**

- ✓ **9** expeditions to the Arctic Ocean
- ✓ **27** HEIs
- ✓ Since **2013** the expedition has been an international one

**Aims:** monitoring of the environmental state of water and coastal areas in the western Russian Arctic;  
training of research and production personnel for the region.

Since **2012** – about **500** participants from **12** countries,  
including **200** students.  
The researchers have covered over **30 000** nautical miles.

## Expedition Route 2018



**27 PARTNER ORGANIZATIONS**  
**July 2018 – 10<sup>th</sup> expedition: *Terrae Novae***





# University of the Arctic

## Vision

**An Empowered North  
– With Shared Voices**

## Our Values

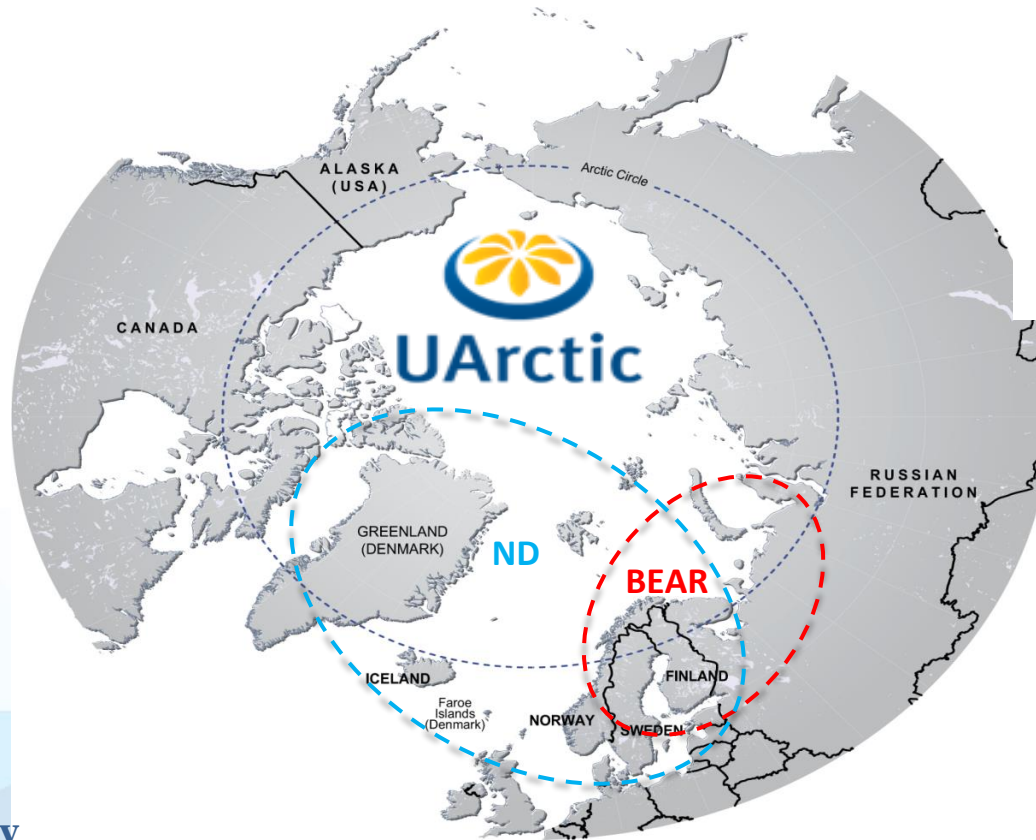
**Circumpolar  
Inclusive  
Reciprocal**

## More than 180

**Institutions  
from Arctic and  
Non-Arctic countries**

## Japan:

**Hokkaido University**



## Mission

**Empower the people of  
the Circumpolar North  
by providing unique  
educational and research  
opportunities through  
collaboration within a  
powerful network of  
members.**

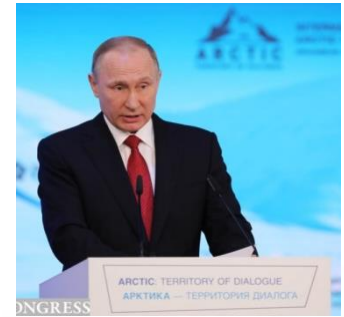
## Goals 2020

- ☐ Educational Access  
for Northern  
Students
- ☐ Research  
Representation in  
the North
- ☐ Expanding  
Knowledge of the  
North
- ☐ Engaged  
Membership  
Network



## INTERNATIONAL ARCTIC FORUM

ARKHANGELSK • RUSSIA • 2017



*Welcome to:*

*March, 2019, NArFU - International Forum “Arctic: Territory of Dialogue”  
International School «Russia in the Arctic Dialogue».  
2020, NArFU – Congress of the International Arctic Social Sciences Association  
(IASSA)*





**THANK YOU !**  
**[www.narfu.ru](http://www.narfu.ru)**