



Arctic Foods Innovation Cluster: Russian Focus

Northern Arctic Federal University, Russia Lyubov Zarubina, AFIC Project Coordinator

NORTHERN ARCTIC FEDERAL UNIVERSITY

- one the largest research and educational centers in Russia

RESEARCH PRIORITIES 2021-2035

Arctic and Northern Resources

- Arctic ecosystems and climate change
- Materials and technologies for the Arctic
- Human dimension in the Arctic

Total number of students	15 000
Academic staff, total having D.Sc./ PhD	20 0 0 ***
Higher Schools Institutes / Colleges / Campuses	7/ 2/3/3
Research Centers and Labs	50+
Academic programs, total	360+



AFIC PROJECT: RUSSIAN FOCUS

contribution to the efforts towards promoting the local foods sector in the Russian Arctic by providing innovative solutions and technologies for local foods development, entrepreneurship and local producers support

KEY THEMATIC FIELDS:





НОЦ РОССИЙСКАЯ АРКТИКА

НОВЫЕ МАТЕРИАЛЫ, ТЕХНОЛОГИИ И МЕТОДЫ ИССЛЕДОВАНИЯ

NArFU CENTRE OF EXCELLENCE "RUSSIAN ARCTIC: New Materials, Technologies and Research Methods"

KEY WORKING PRINCIPLES:

- Fundamental science and applied research
- Multidisciplinary approach
- Interregional centre (50+ partners & stakeholders)
- Global expertise exchange

KEY FIELDS:

- Bioresources of the Arctic Human in the Arctic
 - Shipbuilding and marine facilities



Exploration, extraction and processing of minerals Northern Sea Route



NETWORKING RESOURCES





IMPACT OF CLIMATE CHANGE ON THE RUSSIAN ARCTIC

AVERAGE TEMPERATURE GROWTH RATE per decade*

RUSSIA: 0.51°C, **2.5+ times higher** than the global **ARCTIC:** 0.8 °C

CONSEQUENCES





Forest fire in Yakutia



Consequences of permafrost melting (Yakutia)

"Food Sovereignty of the Indigenous Peoples in the Arctic Zone of Western Siberia: Response to COVID-19 Pandemic" // <u>https://www.mdpi.com/1660-4601/17/20/7570</u>

"The Impact of Climate Change on the Food (In)security of the Siberian Indigenous Peoples in the Arctic: Environmental and Health Risks" // <u>https://www.mdpi.com/2071-1050/13/5/2561</u>

*Source: Climate Change: A Case Study of Incidents in the Russian Arctic // Policy Brief – October 2021, Northern Dimension Institute



INTERNATIONAL PROJECT: AGROFORESTRY IN BARENTS REGION



OBJECTIVE:

To combine agricultural and forestry technologies aiming to create diverse, productive, profitable, healthy, ecologically sound and sustainable land-use systems for improved availability of Non-Timber Forest Products (NTFP) raw materials in Barents region

The project develops and tests combinations of diversified farming systems which integrate trees, shrubs, other plants and livestock production

PARTNERS:

Lapland University of Applied Sciences
Natural Resources Institute Finland

Norwegian Institute of Bioeconomy Research















AGROFORESTRY IN BARENTS REGION





WILD FOREST PRODUCTS berries,

mushrooms, wildgrowing herbs

NORTHERN BEE FARMING

bee colony biology, bee forage supply





POSTAGROGENOUS LANDS location, scale, potential

for agroforestry uses

AGROFORESTRY BUSINESSES dealing with harvesting of wild crops, performance analysis





TreNat: Treasures from the Northern Nature

OBJECTIVES:

- to increase the market and public awareness of healthy Northern nature products aiming to develop production and value-chains of the products
- to promote cooperation between the organizations and projects aiming to support the full use of existing knowledge and know-how

PERIOD: 2020-2021

PARTNERS:

Lapland University of Applied Sciences, Finland
Norwegian Institute of Bioeconomy Research, Norway

NArFU, Russia









BIOTECHNOLOGY

PROJECT: Biotechnologies in the Arctic – Integrated, zerowaste processing of seaweed and producing biologically active substances (BAS) for pharmaceutics

algae properties

to analyze the

Arctic brown

to identify specific advantages



2

PHASE

to expand the range of biologically active drugs for pharmacological purposes

to asses the prospect of

a source of BAS

using the brown algae as



a series of pharmaceuticals and dietary supplements for enhancing human body adaptation for life and work in the Arctic



PHASE

2

PHASE





AQUACULTURE



PROJECT: Biotechnologies in the Arctic – processing of seaweed and reproduction of crop species and aquacultures in the Arctic region

Laboratory of Aquatic Life Nutrition Physiology and Feed Production Technologies

PARTNER: Russian Aquaculture PJSC, Murmansk

September 2021, Training programme for fish farmers "Industrial Aquaculture"







Workshop «TREASURES FROM THE NORTHERN NATURE IN ECONOMY, MEDICINE AND CULTURE: CHALLENGES AND PROSPECTS»



01-02 December 2021

Northern Arctic Federal University (NArFU, Arkhangelsk, North-West Russia) is pleased to invite you to take part in the international workshop «Treasures from the Northern Nature in Economy, Medicine and Culture: Challenges and Prospects» which will be held at NArFU in the framework of the international project "Treasures from the Northern Nature" (TreNat) funded by the KOLARCIC CBC programme.



Format:

hybrid (face-to-face participation and online).

Timing (Moscow time):

01 December 2021, 10:00-14:00 02 December 2021, 10:00-14:00

Venue: NArFU main building (17 Northern Dvina Embankment), Room 1321.



Thank you!



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