In the Russian Arctic is home to more than 2 million people, more than half of the Arctic of the world's population is Russian population



## International Scientific Initiatives in Russian Arctic (Chair´s Report 2016-2017 & a View from Russia)



Arkadiy Tishkov <u>tishkov@biodat.ru</u> http://www.isira.ru/

## The trends, vectors and new priorities of government policy in Russian Arctic in last time

## The Trends in Scientific cooperation in Russian Arctic of Last Years

(1) The trends of government policy in Russian Arctic (priorities of co-operation): a lot new strategic governments documents, incl. - «Strategy of development of Arctic zone ... and national security in the period up to 2020», «Socio-economic development of the Arctic zone up to 2020» a.o. – in each document - international cooperation; development of scientific research; increasing participation in international arctic forums

(2) The concept of development of Northern sea route (NSR) - 5 new icebreakers (incl. 2 nuclear) and 25 of the courts ice category. NSR – the axis for region development

(3) The trends – restore a networks of border service and defense Ministry (on the Islands and archipelagos), the formation of a network of rescue services of emergency, restore the network of weather stations and satellite monitoring

(4) New Roadmap for international scientific cooperation in the Arctic - in the last 3 years the decrease in the intensity of cooperation with the European Arctic countries, USA and Canada, the trend to the East - China, Japan, Korea

#### The trends of government policy in Russian Arctic: about 10

#### new magasines on arctic topic, dozens of new sites and portal



## The other trends

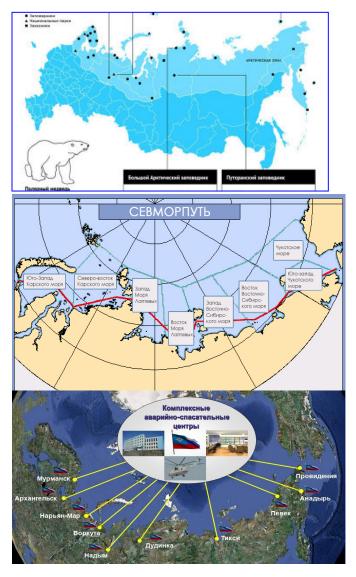


> nature protectedareas and arctic tourism> Sea expeditions



 Ports and towns along the Northern sea route
 New Polar stations, incl. international

> New international arctic laboratory (Yakutiya, Tomsk, Moscow a.o.)
> Network of centers emergencies



The new vectors of cooperation was discussed esterday in Arkhangelsk on the 4th international forum "Arctic - territory of dialogue"

> «Арктика. Сделано в России» Новые имена

Unfortunately the date of the forum the Arctic - territory of dialogue in Russia coincided with the beginning of Arctic Scientific Weeks of IASC

АРКТИК/

Arkhamgelsk, March 27 Made in Russia. New names! Scientific program -? 1.5 thousand participants from 1countries, including Australia, the UK, Germany, Italy, Canada, China, Norway, USA, Finland, Switzerland, Japan. The Main theme of the meeting in Arkhangelsk man in Arctic

RCTIC FORUN

## The Russian International Affairs Council - Interest in Cooperation in the Russian Arctic

- 12-13 October 2016 in Moscow was held the conference "International cooperation in the Arctic: new challenges, new vectors of development", organized by the Russian international Affairs Council (RIAC) with the support of the Russian Government and the Russian foreign Ministry.
- The event to the 20th anniversary of the Arctic Council (AC), was attended by the representatives of all States members of the international forum, including Senior officials in as from Russia, Norway, Iceland, officials of Denmark and Canada, representatives of big business, leading experts from the Arctic countries

http://russiancouncil.ru/inner/?PROJECT\_THEME\_ID\_4=13

## Examples of new vectors - Japan in Russian Arctic

In October 2016, Russian Academy of Sciences was held the Russian-Japanese Arctic conference of young scientists, which was submitted about 20 reports, including the results of joint research March 20-21 2017, Russian Academy of Sciences was held the Russian-Japanese Arctic conference on the first results of Russian-Japanese Arctic program (was prepared and discussed in 2015 in Tokyo and Moscow



In the North-Eastern Federal University (Yakutsk) is created Russian-Japanese laboratory of Arctic research. In Japan's Parliament on 30 October 2016 discussed priorities projects of the Arctic scientific cooperation with scientists of Yakutiya

http://yakutsk.monavista.ru/images/sizednews/yakutsk1478403735big.jpg

## Examples of new vectors - China in Russian Arctic 2016 (expeditions, conferences, projects)

25 August 2016 In the framework of the 33rd IGC (Beijing) Round table on international cooperation in the Russian Arctic.

31 October 2016 in Qingdao (China) hosted the Fifth workshop on Russian-Chinese cooperation in the Arctic (5th Conference of China–Russia Arctic Workshop). The event was organized by Ocean University of China (Ocean University of China). The Symposium participants discussed strategies of Russia and China in the Arctic region, the main directions and challenges of cooperation between the two countries in the far North, the prospects of participation of Beijing in the development of the Arctic zone of the Russian Federation, the Arctic shelf development and use of the Northern sea route.

Report: Asian players in the Arctic: interests, opportunities, perspectives (an overview with examples of scientific cooperation)



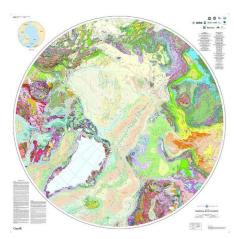
#### Global Arctic Projects in Russia: Circumpolar and Eurasian (samples)

1. The international project "Atlas of geological maps of Circumpolar Arctic".

Work on it has been ongoing for 10 years by an international group of experts under the program of the Commission for the geological map of the world UNESCO. Also, in last years - special attention will be paid to the project "Atlas of geological maps of Northern, Central and Eastern Asia."

2. Pan Eurasian EXperiment (PEEX) Leader: The Finnish Meteorological Institute, co-operation – Finland, Russia, China, 2013–2033. The interdisciplinary program environmental studies and climate of the Arctic and taiga regions of Northern Eurasia. Next meeting – September 2017, Moscow.

3. «Lancet: Global Indigenous Health – Russia» - to study the health of the indigenous peoples of the world in the framework of cooperation program







## 2

Examples of international scientific initiatives and international co-operation in the Russian Arctic (institutes, laboratories, programs, projects)

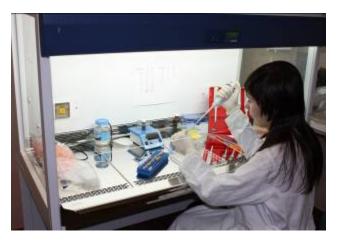




## Kola scientific centre of RAS

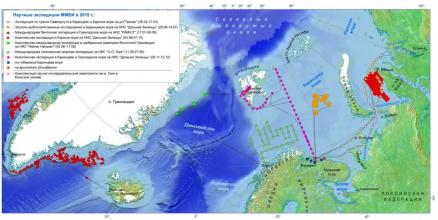
#### Polar-Alpine Botanical garden-Institute

#### http://www.pabgi.ru



Joint work was undertaken and carried out with Finland, Natural History Museum of the University, University of Trondheim, Norway, Field Museum, Chicago, USA

#### MURMANSK MARINE BIOLOGICAL INSTITUTE



In 2016 - International conferences and expeditions support for Russian studies in Svalbard

HTTP://WWW.MMBI.INFO/ENG/

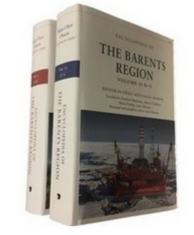
## Center of humanitarian problems of the Barents Region



ASSW\_ISIRA\_31\_03\_2017

Improving the effectiveness of international cooperation in science, culture and education, including Norway, Finland

#### http://bch.kolasc.net.ru/



A joint publication of countries of the Barents Region, 2016

# Polar geophysical Institute, Kola scientific centre of RAS – in international network

Oobservations of geomagnetic pulsations in the frequency range of 0.1-20 Hz. Two identical induction magnetometers with a precise time reference, which were designed and constructed in PGI, are installed at PGI observatories Barentzburg (Svalbard) and Lovozero (Kola peninsula),

http://www.gproxx.com/http://ww w.forskningsradet.no/sios/

**OPTICAL OBSERVATIONS** 

**Barentsburg all-sky camera** 

**Barentsburg emission photometers** 

Lovozero, Apatity

MAGNETIC AND ELECTRIC FILEDS

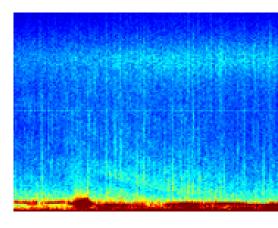
Archive of PGI Geophysical data

**Barentsburg Station website** 

http://www.gproxx.com/http://pgia.ru/lang/en/a bout/general **Russia-Norway Grant of** 

Russian Foundation of Basic Research "Seismological research related to geophysical processes in the European Arctic", 2014-2016



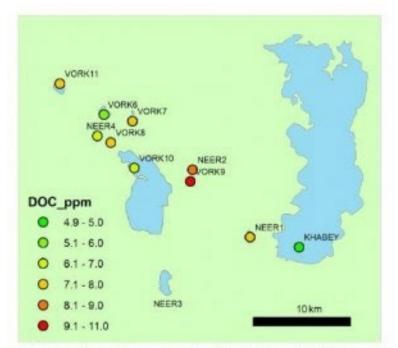


## The Institute of Biology of Komi Science Centre of the RAS

University College London and the Komi Scientific Center of RAS.

Studying the role of lakes in carbon Cycling. Investigations the lakes (67°33'N, 62°34'E) in Bolshezemelskaya tundra near Vorkuta city

2017 - International field Symposium "Peat ecosystems of North-East Europe", seminar "Problems of ecological restoration in the permafrost zone



Lake water dissolved organic carbon (DOC) measured in lakes visited in August 2014. DOC is a useful measure of carbon dynamics between catchments, solls and lake water.

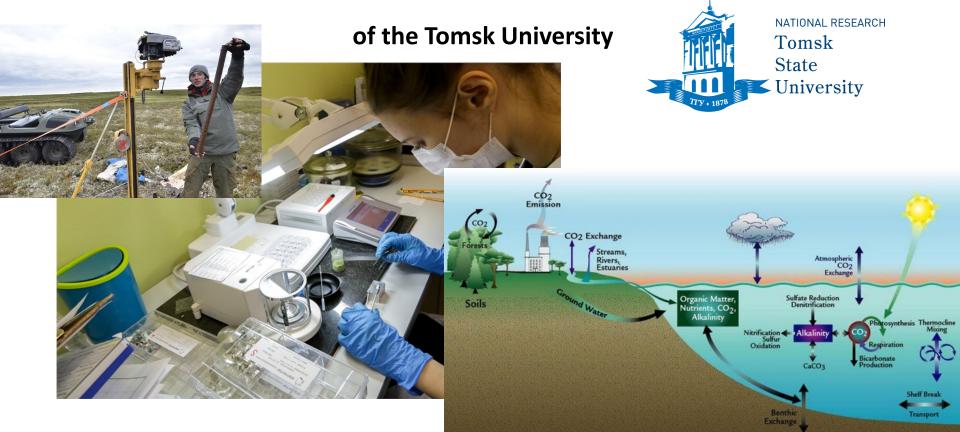
#### http://ib.komisc.ru/rus/international-co-operation/813-ozera-i-uglerod

### Arctic Research Center of the Yamal-Nenets autonomous district (Salekhard, Yamal)



http://www.arctic89.ru/

### International laboratory for the study of carbon cycle, CENTRE FOR RESEARCH INTO BIOTA, CLIMATE AND LANDSCAPES (BIOCLIMLAND)

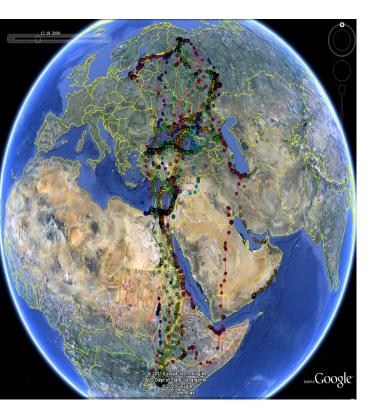


#### LEADING RESEARCHERS

**Terry V. Callaghan,** The Royal Swedish Academy of Sciences, Stockholm, Sweden **Oleg Pokrovsky**, Centre National Recherche Scientifique, Toulouse, France **Pilar Catalan**, University of Zaragoza, Spain

## Institute of Geography, RAS

A new European program to study the migrations of Arctic birds – ICARUS: Institute of geography (Russia) and Institute of Max-Planck (Germany)





# Russian-Japanese laboratory of Arctic investigations, Yakutsk scientific centre



The results of Research in the Laptev sea, new Siberian Islands, in the Lena Delta and on the Bykovsky Peninsula in Yakutia





Thank you for your attention!

#### Conclusion – Like 2 years ago ...

About 150 - projects, grants and themes, but...

- 1. The absence of strategic planning for international scientific co-operation in Russian Arctic
- 2. The research priorities of Russia and the international community in Russian Arctic are not the same
- 3. There are difficulties in visiting some of the territories and aquatories of the Russian Arctic for foreign scientists
- 4. The weak development of transport and infrastructure and the high cost of the icebreaker, and sea, river and air transport
- 5. The absence of international pan-Arctic agreement on research in the Arctic
- 6. The weak development of network of international scientific stations
- 7. Some restrictions on the scientific initiatives of the non-Arctic States

# List of real and potential partners for international initiatives in Russian Arctic

*Moscow:* Geological institute – <u>www.ginras.ru</u> Institute of global climate and ecology – <u>www.igce.comcor.ru</u> Institute of oceanology – www.ocean.ru Institute of geoecology – <u>www.geoeny.ru</u> Institute of physic of atmosphere - www.ifran.ru Institute of physic of Earth-<u>www.uipe-ras.ru</u> Institute of geography – www.igras.ru Institute of geochemistry – www.geochi.ru Institute of problems of ecology and evolution – www.sevin.ru Sankt-Petersburg: Institute of limnology – www.limno.org.ru Botanical institute – www.botguaide.spb.ru/bin.html Zoological institute – <u>www.zin.ru</u> Regional branches – Komi Republic: Institute of biology – <u>www.ib.komisc.ru</u> Institute of social and economic investigations – www.komosc.ru/iseps Institute of geology – <u>www.geo.komisc.ru</u>

#### List of real and potential partners for international initiatives in Russian Arctic (Continue of partners list)

Regional branches – Cola scientific center: Murmansk sea biological institute – www.mmbi.ru Polar-alpine botanical garden-institute – http://www.pabgi.ru Regional branches – Sacha-Yakutia Republic: Yakutia international centre on development of north territories – v.n.vasiliev@sci.yakutia.ru Institute of biological problems of cryolithozone – bio@ibpk.ysn.ru Institute of problems of indigenous people – inip@ysn.ru Institute of cryolithology and using of nature resource of cryolithozone Regional branches – Ural: Arctic scientific centre -asc@sanet.ru Institute geology and geochemistry – www.igg,uran.ru Institute of geophysic – dir@imaglab.mplink.ru Institute of history and archeology – www.ihist.uran.ru/index/ru Institute of industrial ecology – chukanov@ecko.uran.ru Institute of plants and animals ecology – www.ipae.uran.ru **Regional branches – Far East:** International scientific center "Arctica" (Magadan) – arctica@online.magadan.ru North-East complex scientific institute – www.neisri.ru Regional branches – Archangelsk: Archangelsk scientific centre of Russian Ac. of Sci. Archangelsk institute of ecological problems of North – www.dvina.ru/~inep