

# EXPERIENCE OF DRY BIOTOILET INSTALLATIONS IN THE FRAME OF THE INTERNATIONAL FINNISH RUSSIAN PROJECT

4<sup>th</sup> International Dry Toilet Conference

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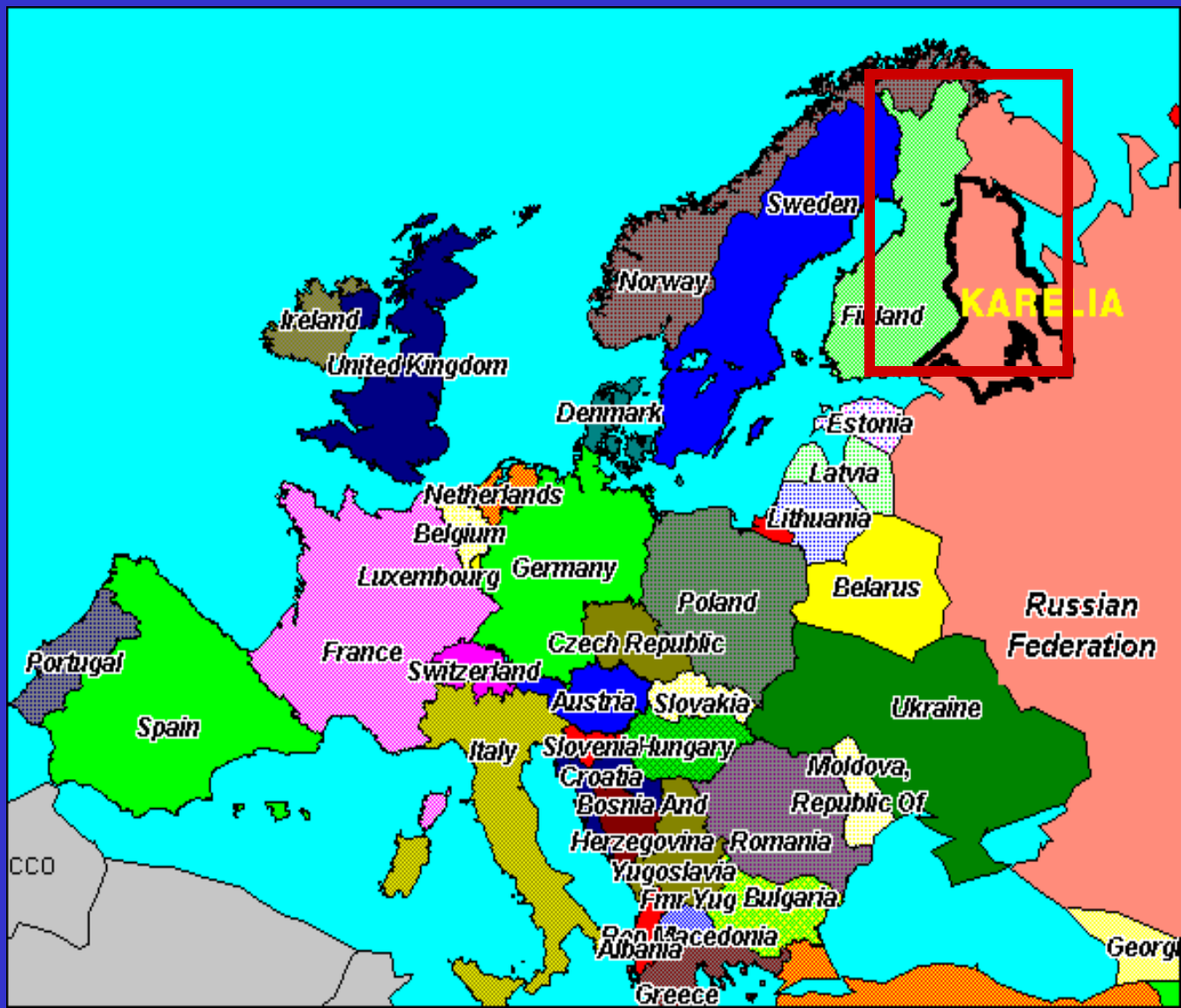
# Republic of Karelia on Europe map

Republic of Karelia is situated in the northwest of European Russia.

The area is 172,400 km<sup>2</sup>.

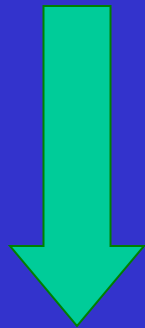
Republic of Karelia and Finland are the neighbour countries.

The largest lakes of Europe Ladoga and Onega are situated partly on the Karelian territory



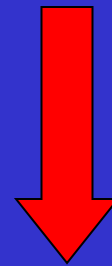
# Northern Water Problems Institute is the academic research structure

**Russian Academy of Sciences**



**Department Earth Sciences**

**Karel'ian Research Center**



**Northern Water Problems Institute**

# **The basic research areas of the NWPI :**

- Natural development of the lake-river systems and ground waters located in Northwest Russia, study of their stability and variability with regard to climatic and anthropogenic factors.**
- Scientific assessment of the status and forecast of changes in water ecosystems; development of measures for nature conservation and restoration.**
- Assessment of water ecological potential; development of the scientific basis for sustainable management of water resources in the North of European Russia.**
- Optimization of use, conservation and restoration of water resources in Karelia.**
- Theory of lake-river and sea systems development.**
- Water resources in relation to population vitality.**

# The main objects of investigations are the largest lakes of Europe Lake Ladoga and Lake Onega



storm on Lake  
Onego 23.11.2008



# Water resources of Karelia

The 21% of the territory is covered by water of lakes and rivers

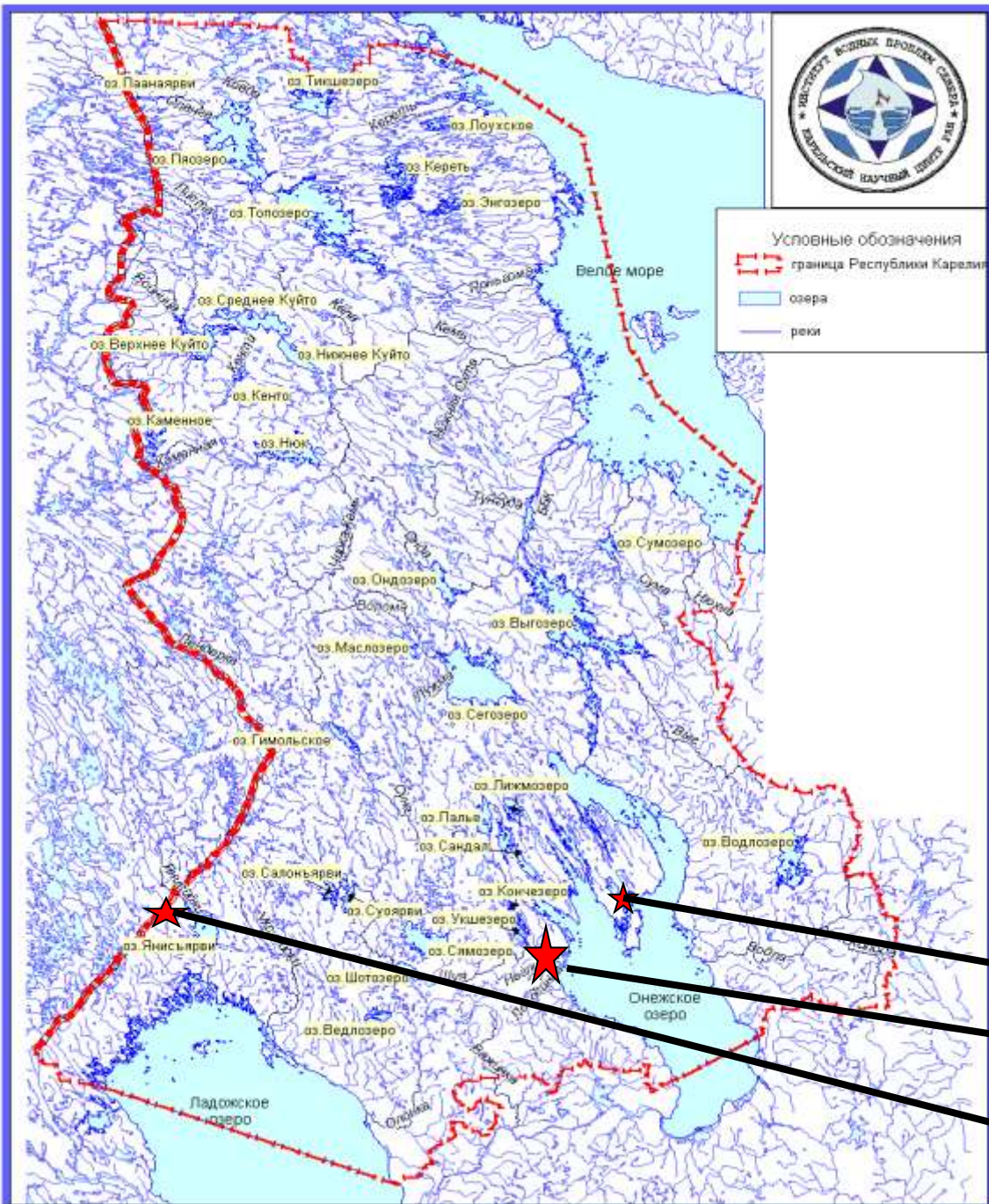
61 000 lakes and 30 000 rivers including Lake Ladoga and Lake Onego

(taking into account the amount of different kinds of bogs, swamps and wetlands - 51%)

Kizi island

Petrozavodsk

Harlu



# **The co-operation between the Northern Waters Problems Institute Karelian Research Center Russian Academy of Sciences (NWPI KRC RAC) and the Global Dry Toilet Association of Finland (GDTAF)**

- was established in 2007 with the aim to improve the environmental situation in the Karelian settlements in the directions of water supply, water treatment, waste treatment sanitation problems, environmental education.**
- was started in the frame of the joint project №HEL6312-23/14.2.2008 “Development of sanitation in Karelian villages”. The project was prolonged up to 2012 and conducted by independent stages in co-operation with Ministry of Education of Republic of Karelia and State Historical, Architectural and Ethnographic Reserve-Museum KIZHI and partners from Finland.**

# **“The Karelian villages' sanitation development” project**

**The project is focused on the development of water supply and waste water treatment of small villages and important tourist resorts in the Lake Onego and Lake Ladoga catchment areas.**

**The three phase project began in April 2008 with the support of the Finnish Ministry for Foreign Affairs. The project has received financial support for the third phase in 2011.**

**The project activity was divided in two main directions: Ministry of Education and Ministry of Culture. According to the information got from the Ministry of Education of Republic of Karelia there are schools and children summer camps without the modern toilet equipment.**



# **The first object constructed at 2010 was the children summer camp Matkachi**



**This place is very popular especially in summer school vocation period for the children coming from all regions of Karelia and North-west Russia, who are interested to conduct different research investigations concerning the nature and environment.**

## **The second pilot-object is the secondary school in Harlu village, Republic of Karelia**



**There are about 75 pupils at the school. The school building is very old (1934) but still in a good condition. There are centralized water supply system and hot-water heating. There are different possibilities for the pupils with library, sport hall, research laboratories and computer class. The idea was to improve the sanitation situation using the available modern technologies and old facilities.**



The toilet (lavatory or cesspool) constructed in the separate building on the school territory.

This situation causes some problems:

the children's health, especially in wintertime, when the outdoor temperature is something close to  $-30C^0$  ;

the sanitation problem, because there is no possibility to wash hands in that toilet building;

the whole school study process being interrupted due to toilet attendance.



# Problem decision

It was organized 2 toilet places according to the rules for schools and the point for hand washing.

The model Ecolet VS-10 was chosen for installation.





# Kizhi – the partner of the project

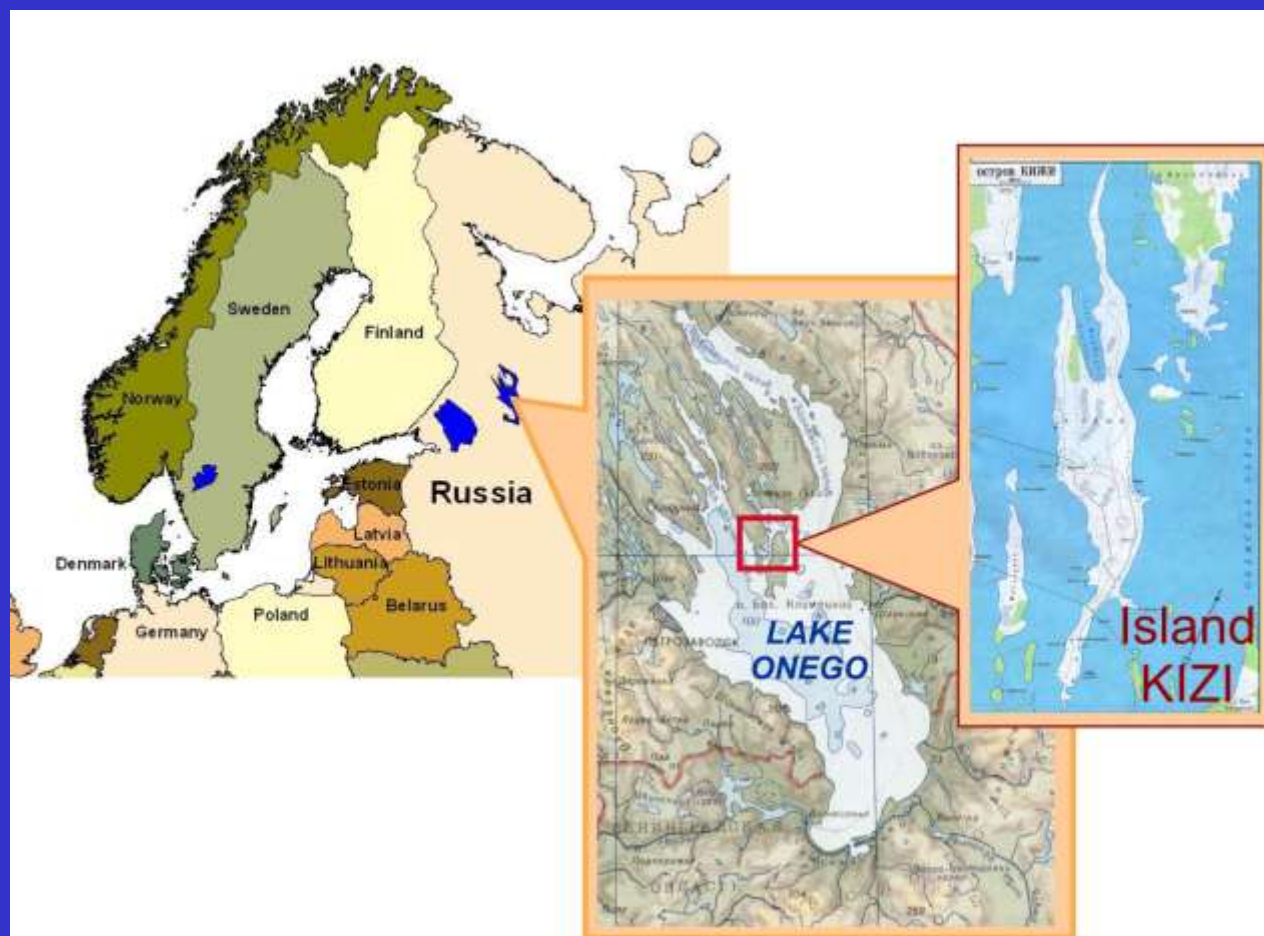


State Historical, Architectural and Ethnographic Reserve-Museum Kizhi is situated in Medvezhjegorsky District, Republic of Karelia. It was founded in 1966 through a resolution of the Soviet Union Government.

Architectural monuments in the museum, especially the Transfiguration Cathedral, are unique masterpieces of Russian wooden architecture. In 1990, UNESCO included the Kizhi Pogost ensemble in the World Heritage List.

The project idea for Kizhi Island was to establish a model area – environmentally clean territory of the reserve-museum within the natural landscape, away from large settlements. It was presumed there existed all possibilities to adapt European experience of applying environment-friendly technologies to Russian social and natural settings.

Given that Kizhi Island is very popular among tourists from both Russia and abroad, there are good chances for wide dissemination of the project experience.



**The Kizhi Island has long been known far beyond Russian borders. Today, it is a center of global tourism. Tourist traffic on average per year is about 200 000 people, in that number foreign people more than 100 000.**







**In 2010-2011 3 dry toilets of different modification were constructed at the Kizi Island. These toilets meant for different possibilities, for example for the ecological trip in the forest.**

**One of the modifications was done as the mobile construction and transported three times to the different holidays places according to the needs of about 300 people.**





# To be continued



**More over the Kizi-museum as the project permanent partner goes forward with new ideas and innovations, such as waste waters purification system which is close connected with the main project direction.**

# Conclusions

The project has positive moving in Republic of Karelia never the less the project team wants to be it more active. The sustainable development of the project was based on effective financing and management, close co-operation between partners inside the project and between project and local society (ministries, administrations and people) and on real responsibility for nature and environment.

The project international group is looking with the great hope for the future. The larger work has been done together for the health and well being of the people and environment.



**Final seminar on the project activity in the Baltic Institute of Finland (BIF), Tampere, 2012.04.03.**

**Thank You for attention and welcome to co-operation**

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