Lomonosov Moscow State University

Department of Biogeography

Infectious diseases in Russia

Dmitry Orlov

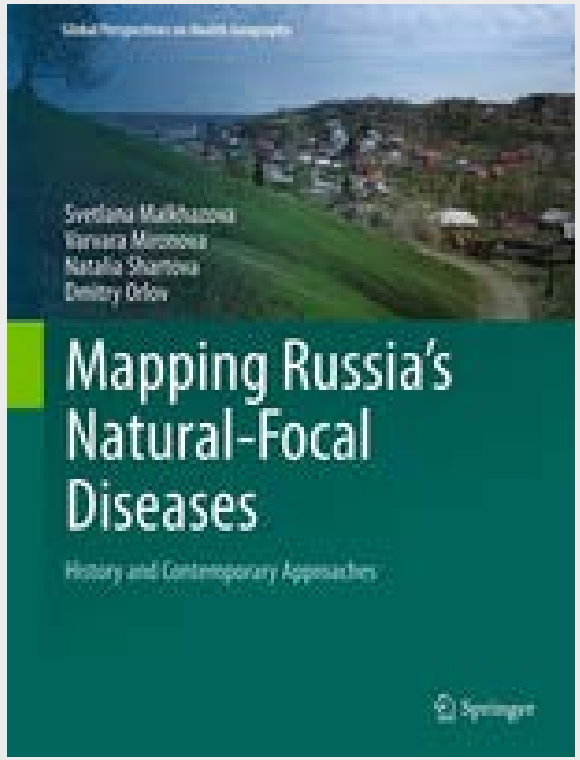
Understanding and Responding to Global Health Security Risks from Microbial Threats in the Arctic
Hannover, 6-7 November 2019

Medico-geographical Atlas of Russia “Natural Focal Diseases”

1st edition (2015)

2nd revised edition (2017)

Medico-geographical Atlas of Russia “Healing Springs and Plants” (2019)

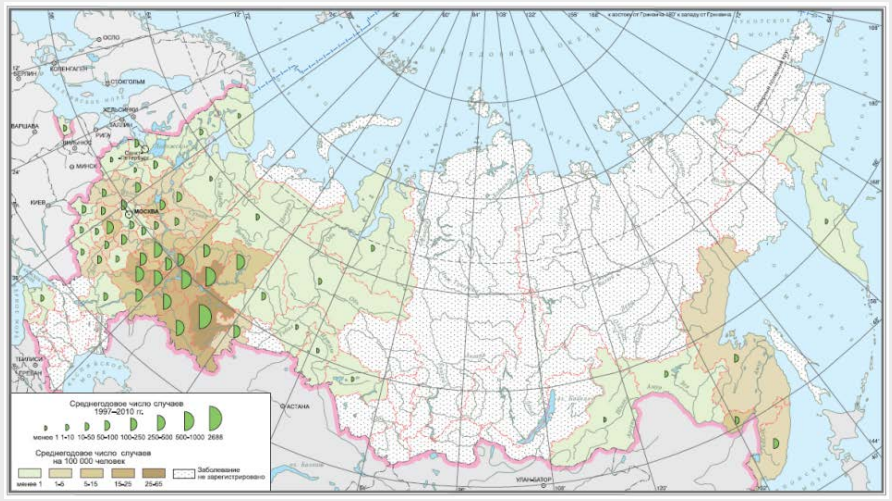


Mapping Russia's Natural-Focal Diseases
History and Contemporary Approaches (2019)

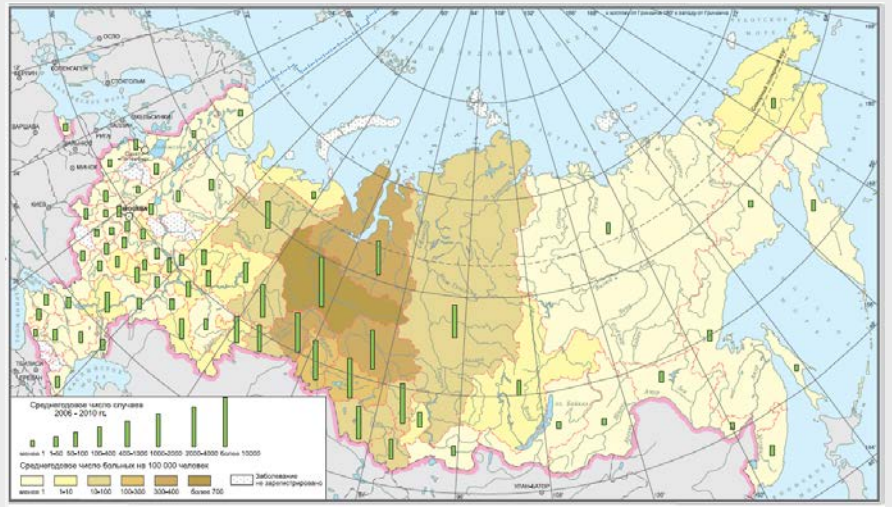
Authors: Svetlana Malkhazova, Varvara Mironova, Natalia Shartova and Dmitry Orlov

- It is the first up-to-date medico-geographical scientific publication covering the vast territory of Russia in English
- Illustrates with many color maps on the distribution of diseases, morbidity and its dynamics
- Demonstrates various approaches to medico-geographical mapping

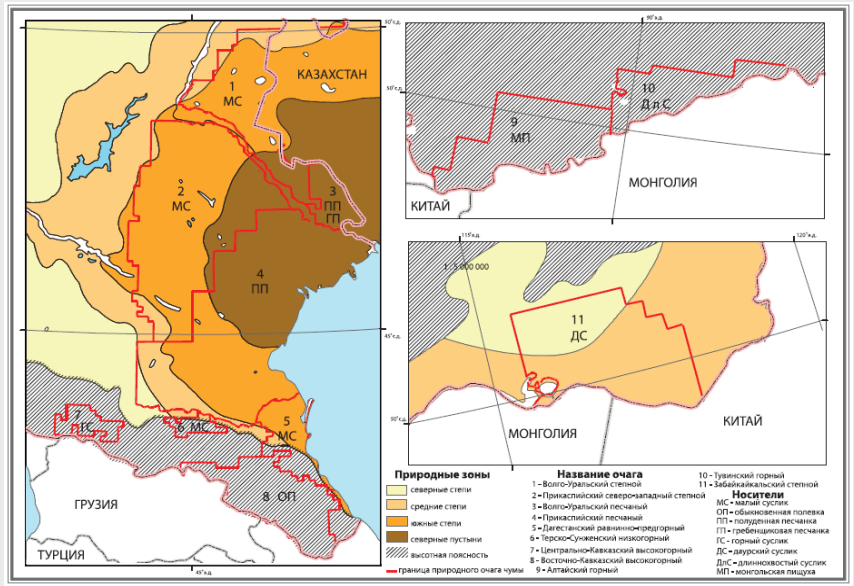
Nosogeography



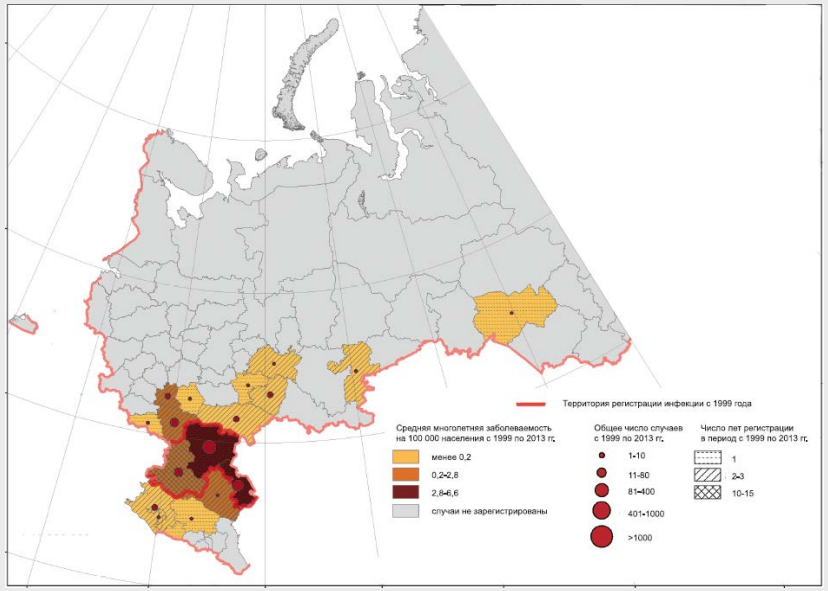
HFRS



Opisthorchiasis

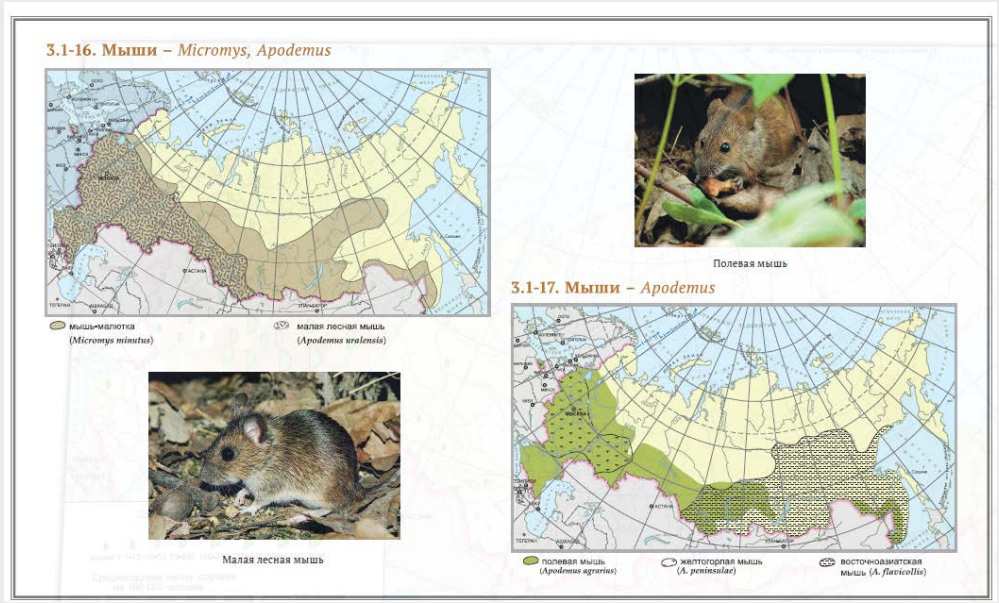


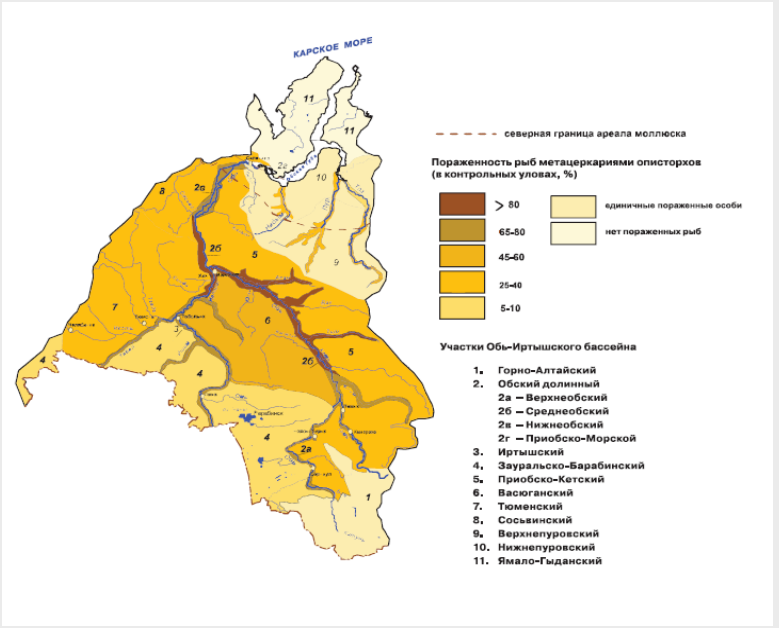
Plague

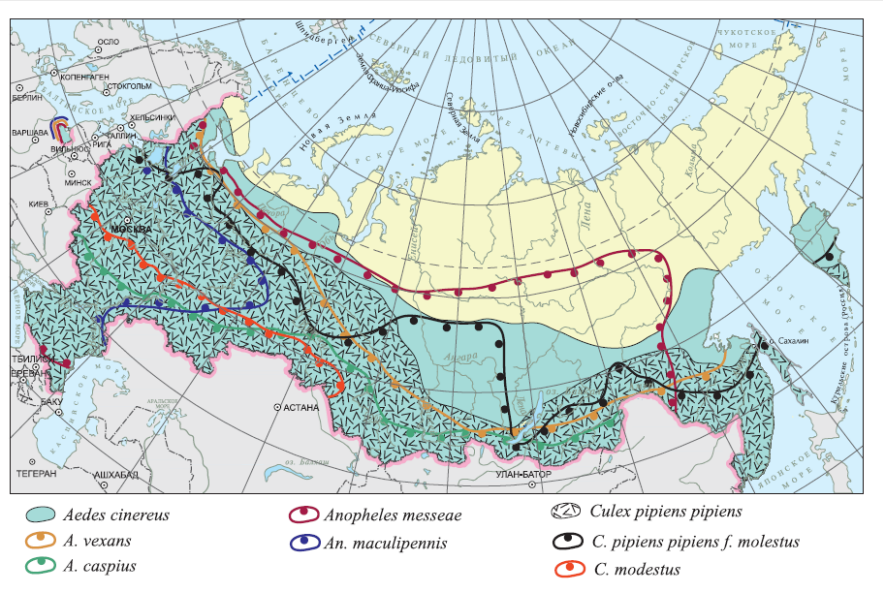


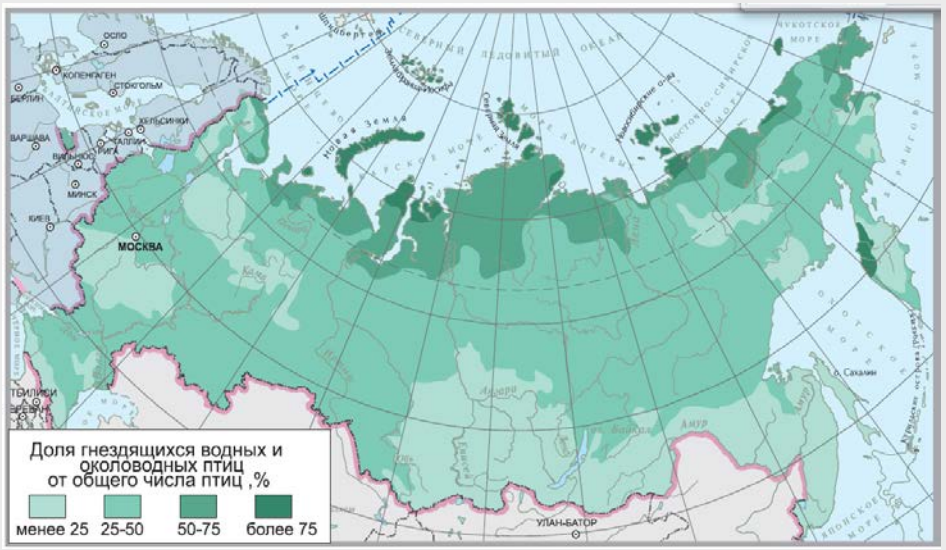
West Nile fever

Geography of natural determined diseases hosts and vectors

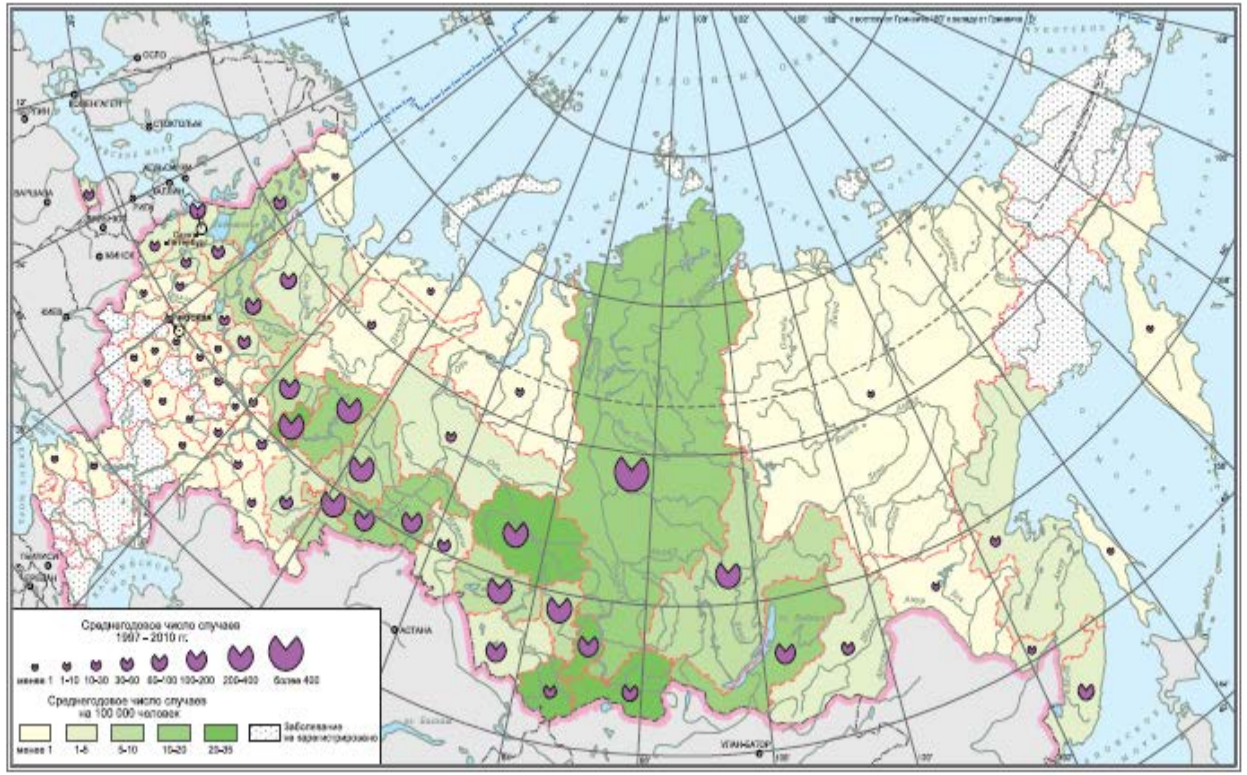


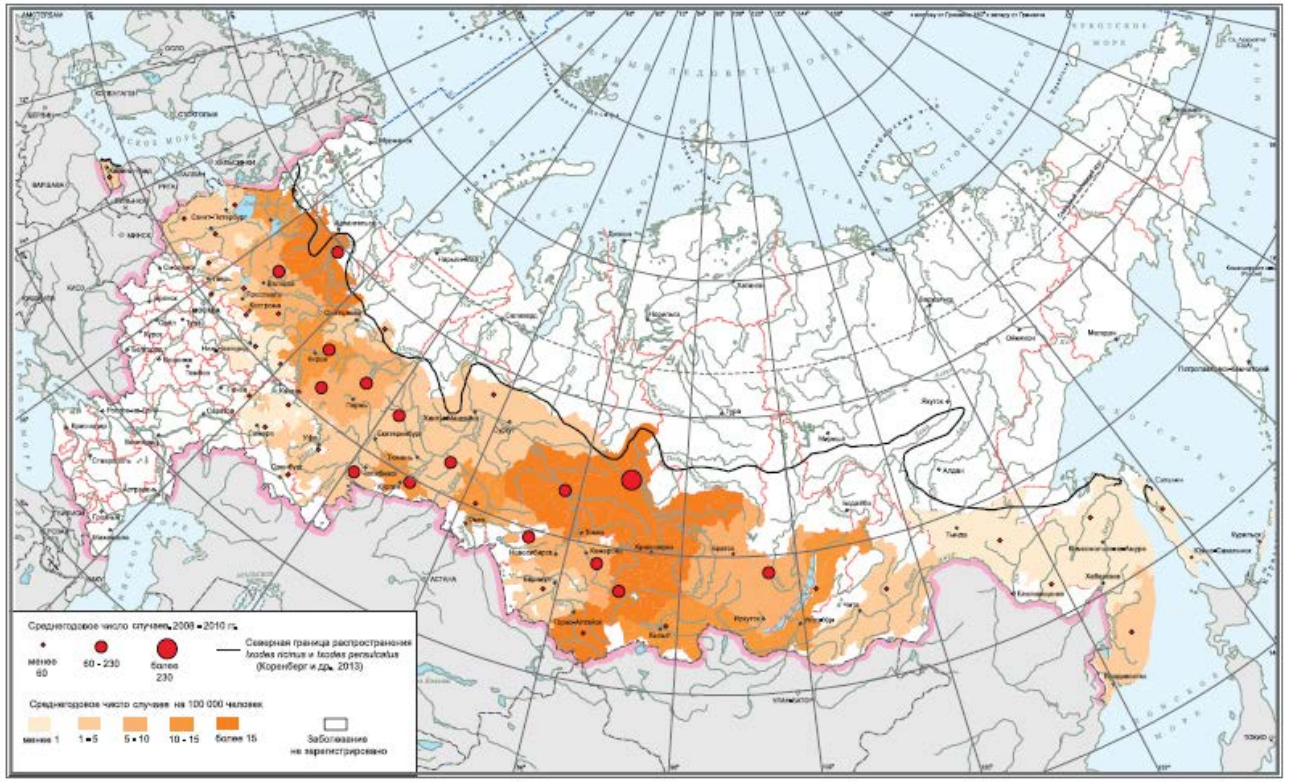






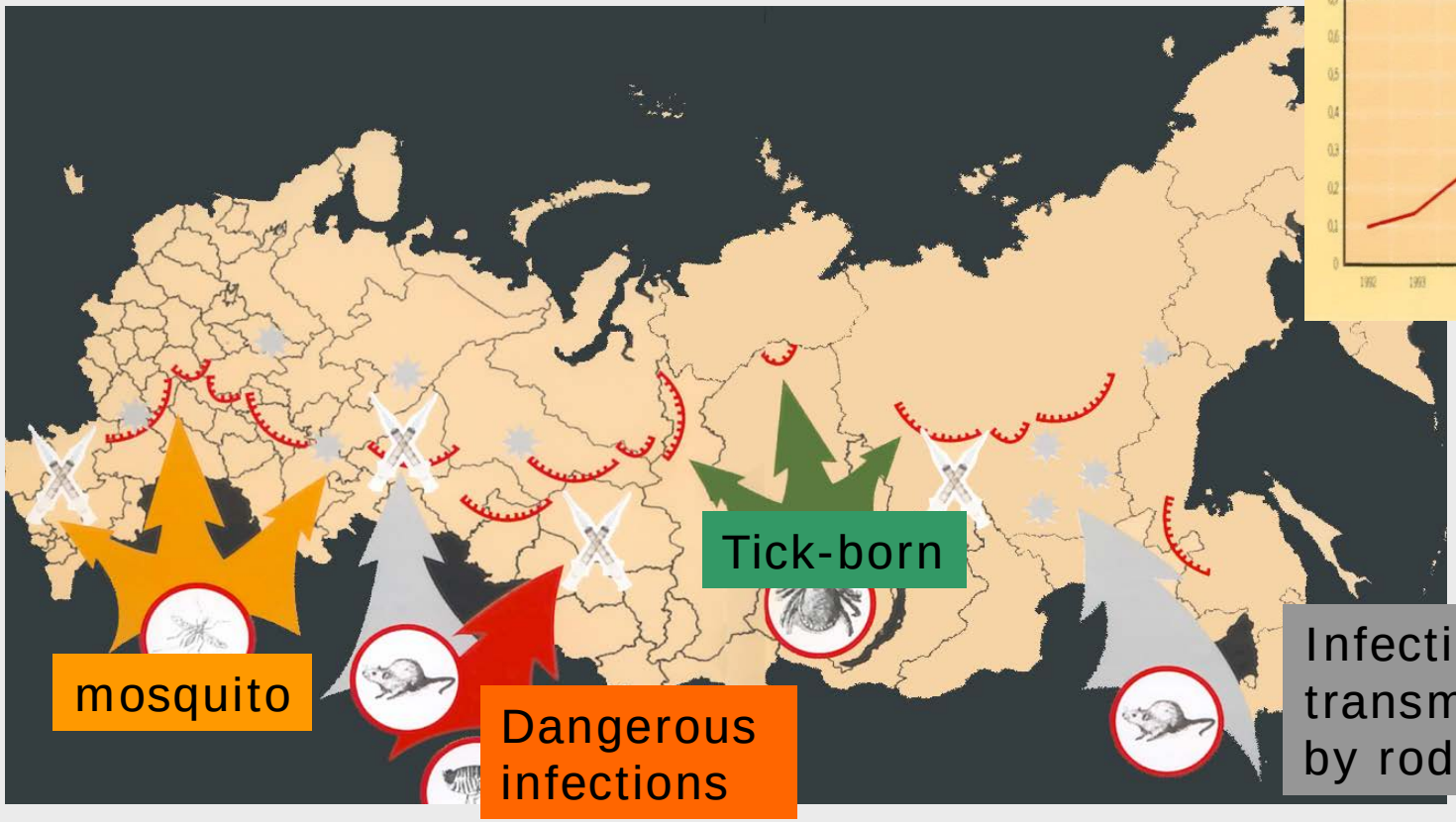
Tick-Borne Encephalitis

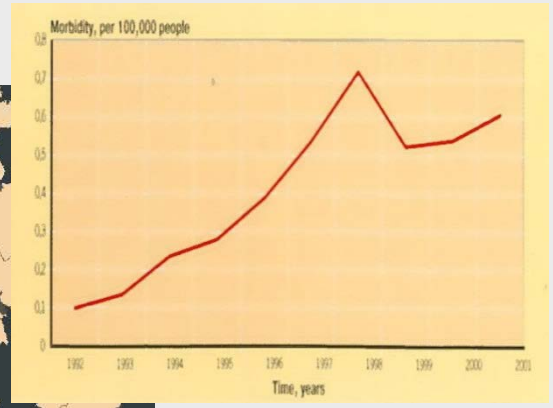




IMPACT OF GLOBAL WARMING

new threats are influenced by climate change





Malaria dynamics in Russia

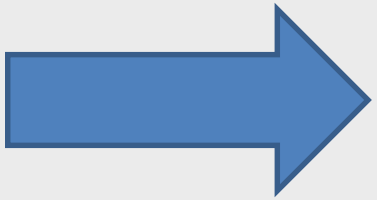
The above examples illustrate that climate warming has already affected the population health in Russia

Prognostic model of malaria risk based on *climate scenario IPCC "A2"*

Climate data for three analyzed periods:

Modern climate

1961 -1989

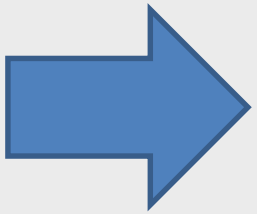


Average daily temperature

Prognostic climate

2046-2065 *the middle of century*

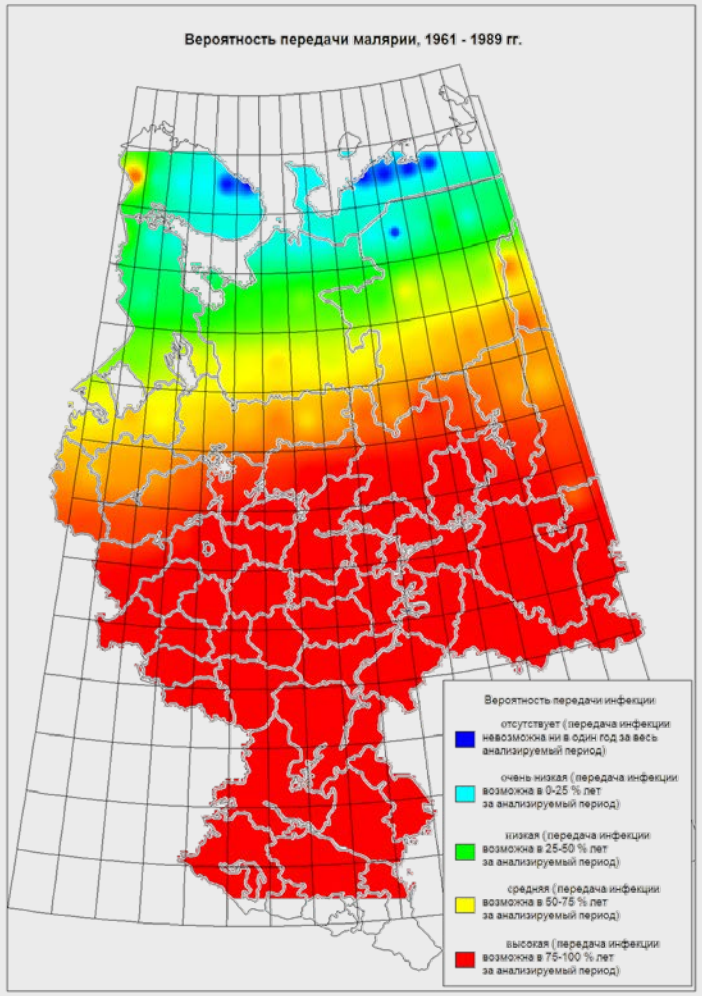
2089-2100 *the end of century*



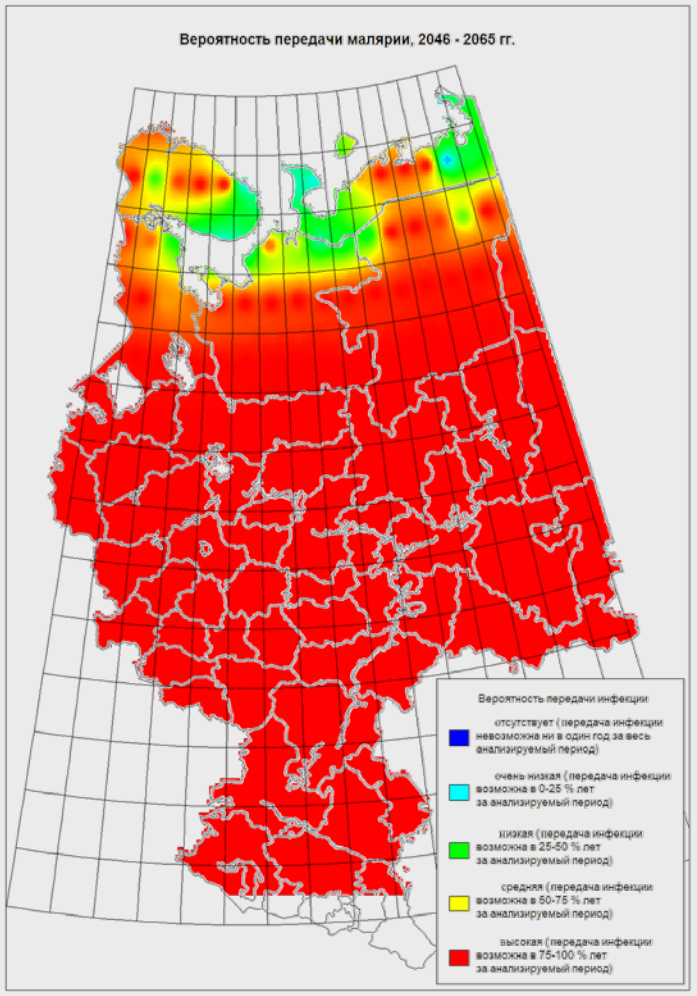
Predicted daily average temperatures

Probability of malaria transmission (21th century)

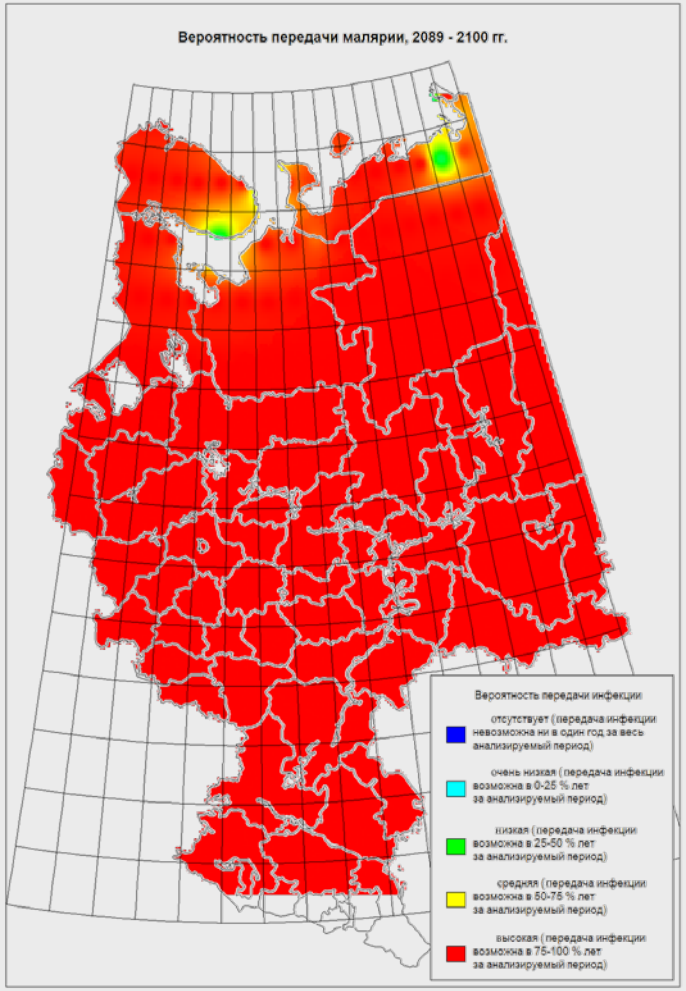
Modern climate



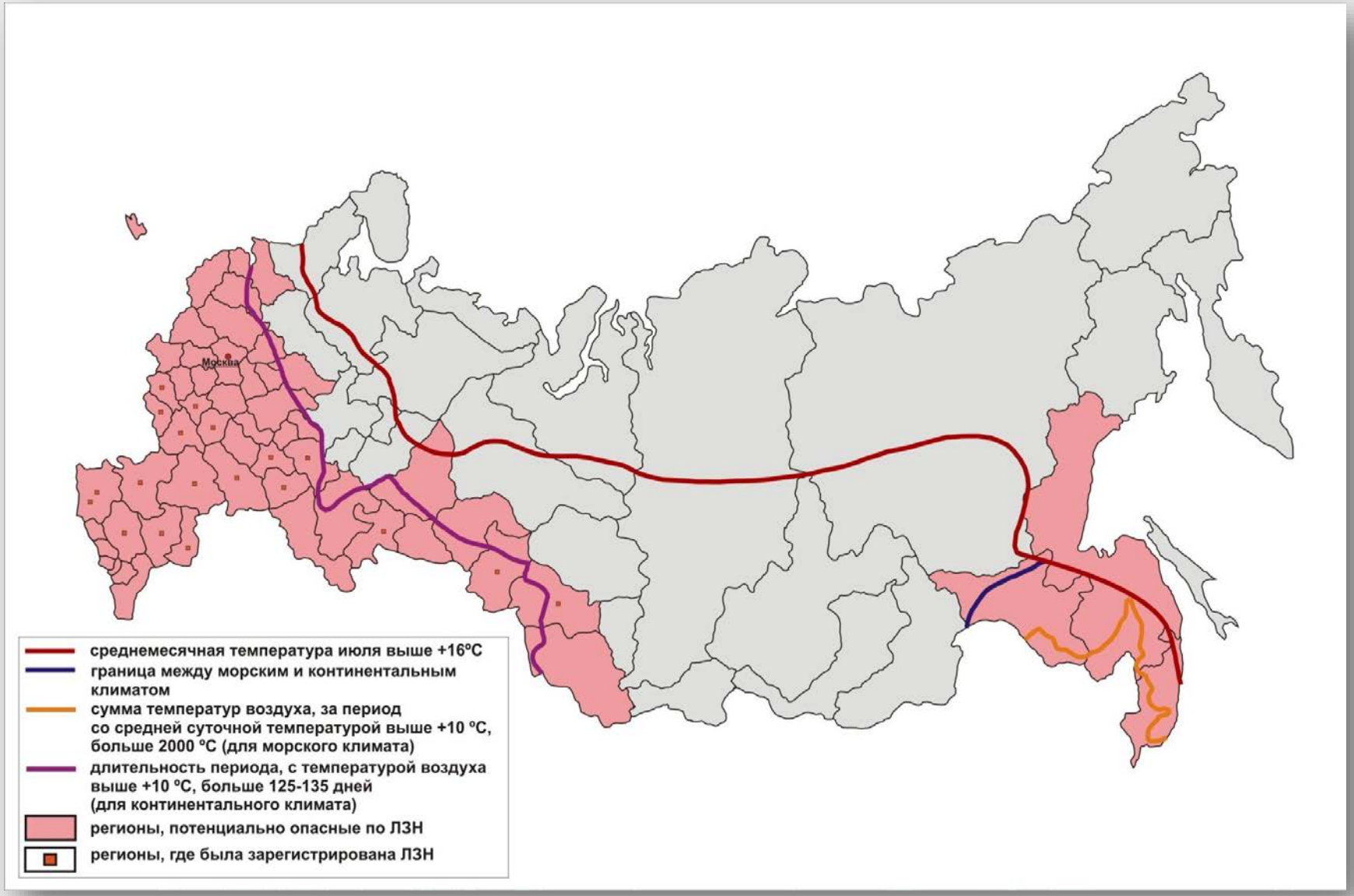
Middle of century



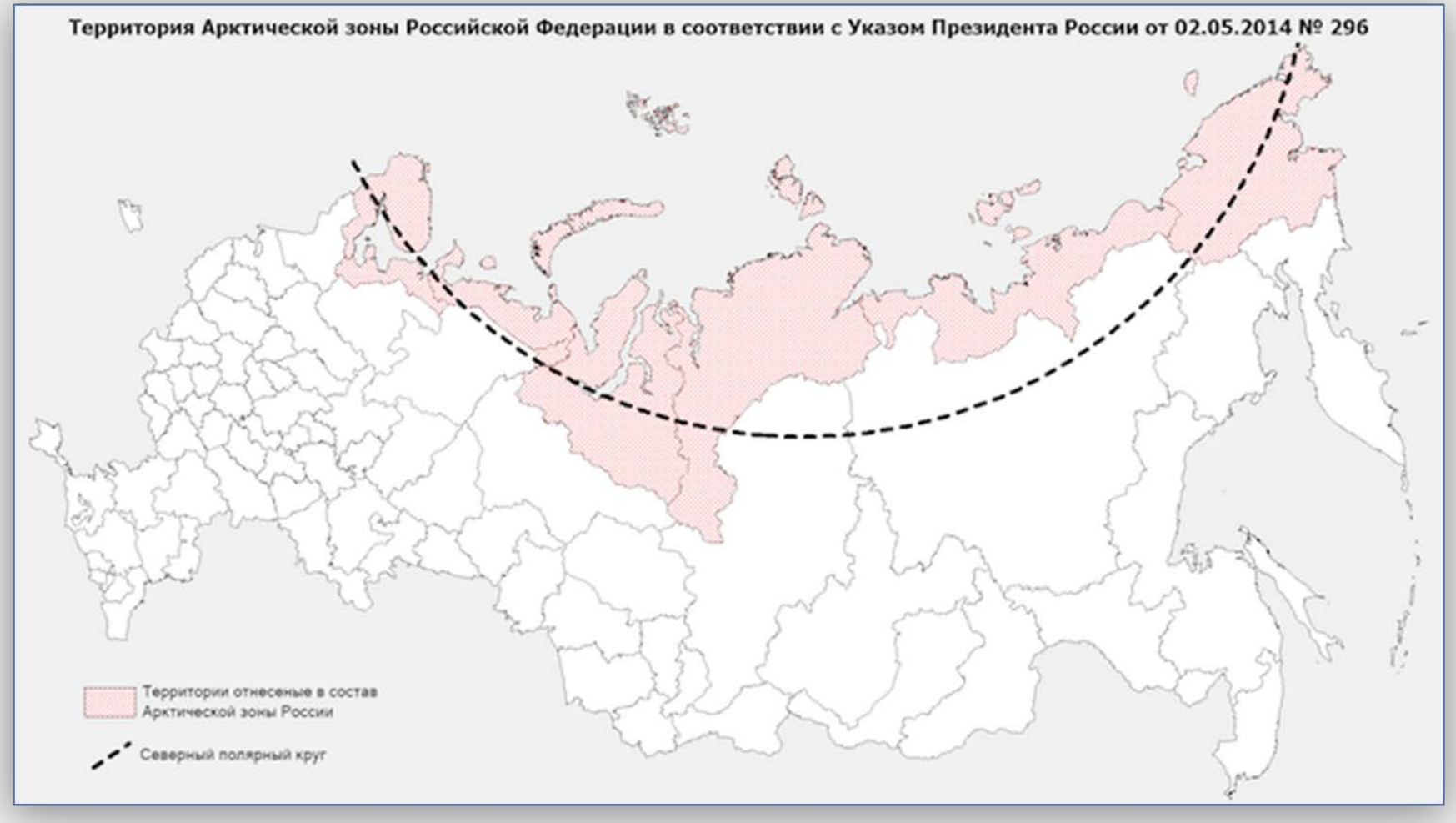
End of century



West Nile Fever



Russian Arctic



Anthrax
Tularemia
Leptospiroses

Opisthorchiasis
Diphyllobothriases
Trichinosis
Echinococcosis
Toxocariasis


THANK YOU
FOR YOUR ATTENTION