

*Central Scientific and Design Institute of Urban Planning of the
Ministry of Construction of the Russian Federation*

**ECOSYSTEMS OF A MEGALOPOLIS: STATE
REGULATION DYSFUNCTIONS**

*K.V. Kivva
Leading Researcher
PhD in Geographi*

Epigraph:

*«... Denn, Herr, die großen Städte sind
verlorene und aufgelöste;
wie Flucht vor Flammen ist die größte, -
und ist kein Trost, dass er sie tröste,
und ihre kleine Zeit verrinnt...»*

Rainer Maria Rilke, 1903

Conceptually, at this stage, there are three blocks of problems that have a socio-cultural, geopolitical, and taking into account the vast territory of Russia biosphere dimension:

- 1. Development and implementation of strategic and pre-project research into a **risk-based approach** (to assess risks and answer the question “What happens if ...”?);**
- 2. Problems of uncontrolled growth of cities, primarily megacities;**
- 3. Problems of **sustainable (balanced)** and environmentally sound territorial development of the country.**

The risk-based approach de jure and de facto becomes one of the main tools of public administration and control

Decree of the Government of the Russian Federation of October 25, 2017 No. 1294 “On Amending the Regulation on the Implementation of State Construction Supervision in the Russian Federation”. Clause 7: “a risk-based approach is applied in organizing regional construction supervision”.

Key terms and concepts:

Socio-ecological (living) environment - a combination of three elements: socio-cultural, economic and natural-ecological.

Town-ecological “Risk factors” - risks determining the probability of occurrence of events that significantly (significantly) affect the safety status.

Dysfunctions of state regulation - violation, disorder of functions of predominantly qualitative nature.

Renovation is the process of improving the territorial structure, in our case, in order to overcome acute urban and environmental problems and transport.

EXAMPLES

main urban ecological "Risk factors":

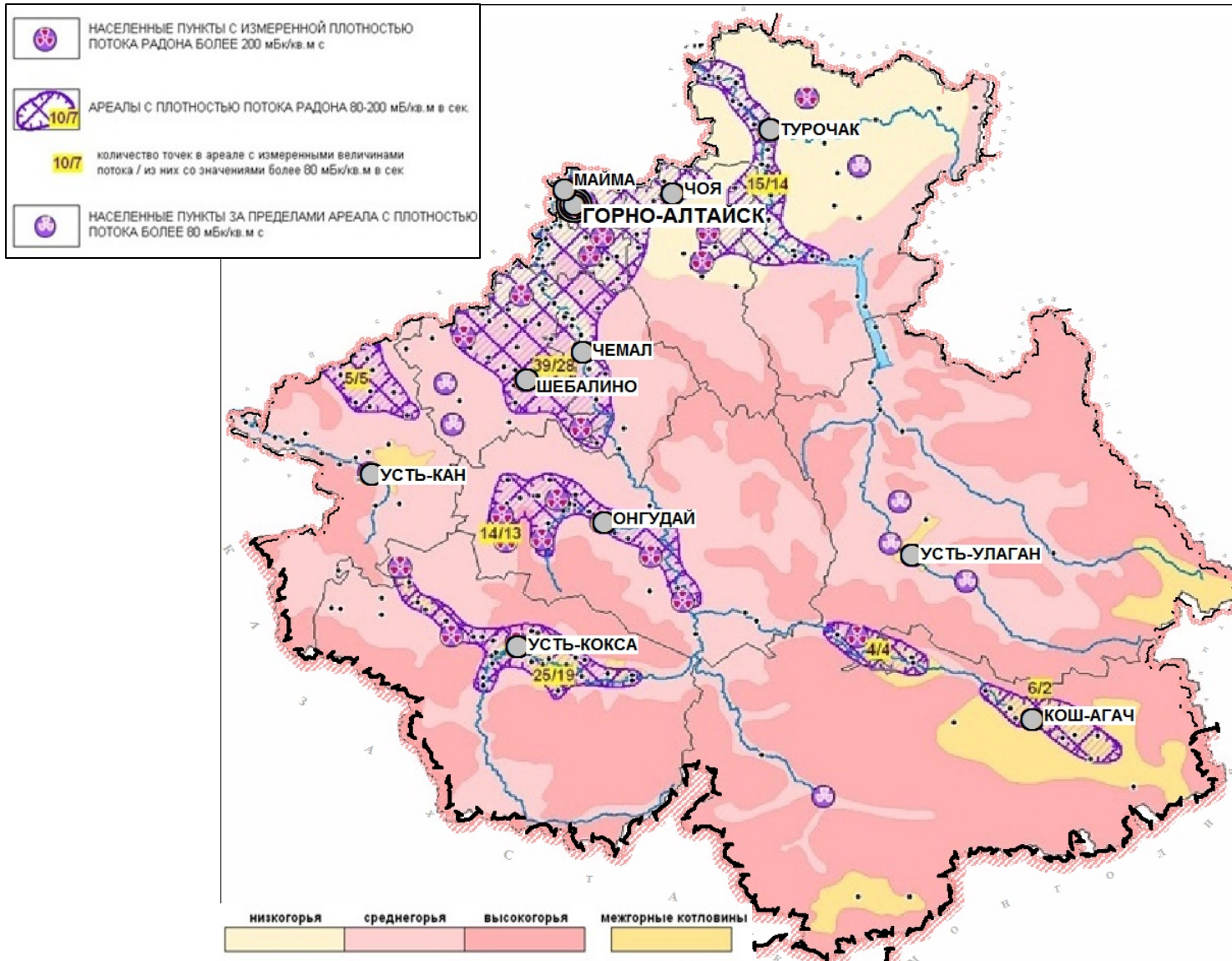
Naturally conditioned

Sanitary and epidemiological

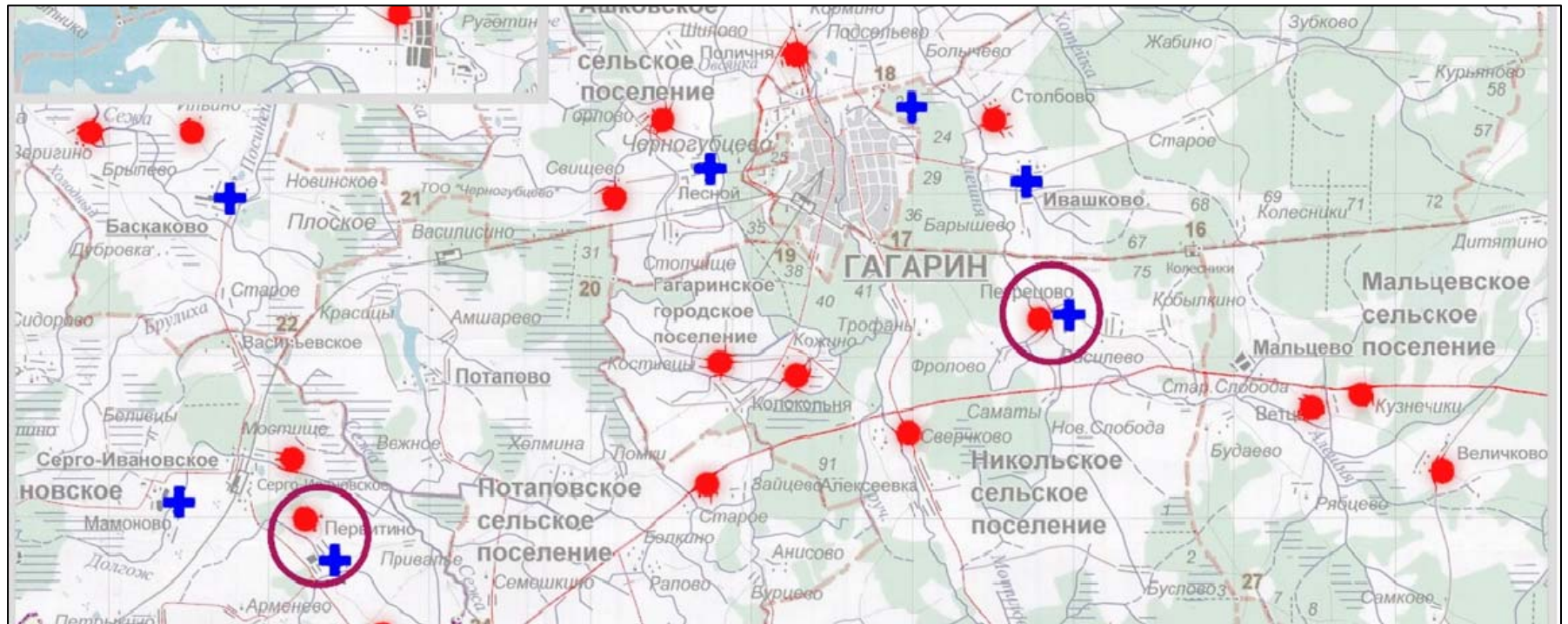
Anthropogenic and technogenic




Risk Factors of Planning and Management

Naturally-determined “risk factors”: (radon hazard of the Altai Republic)

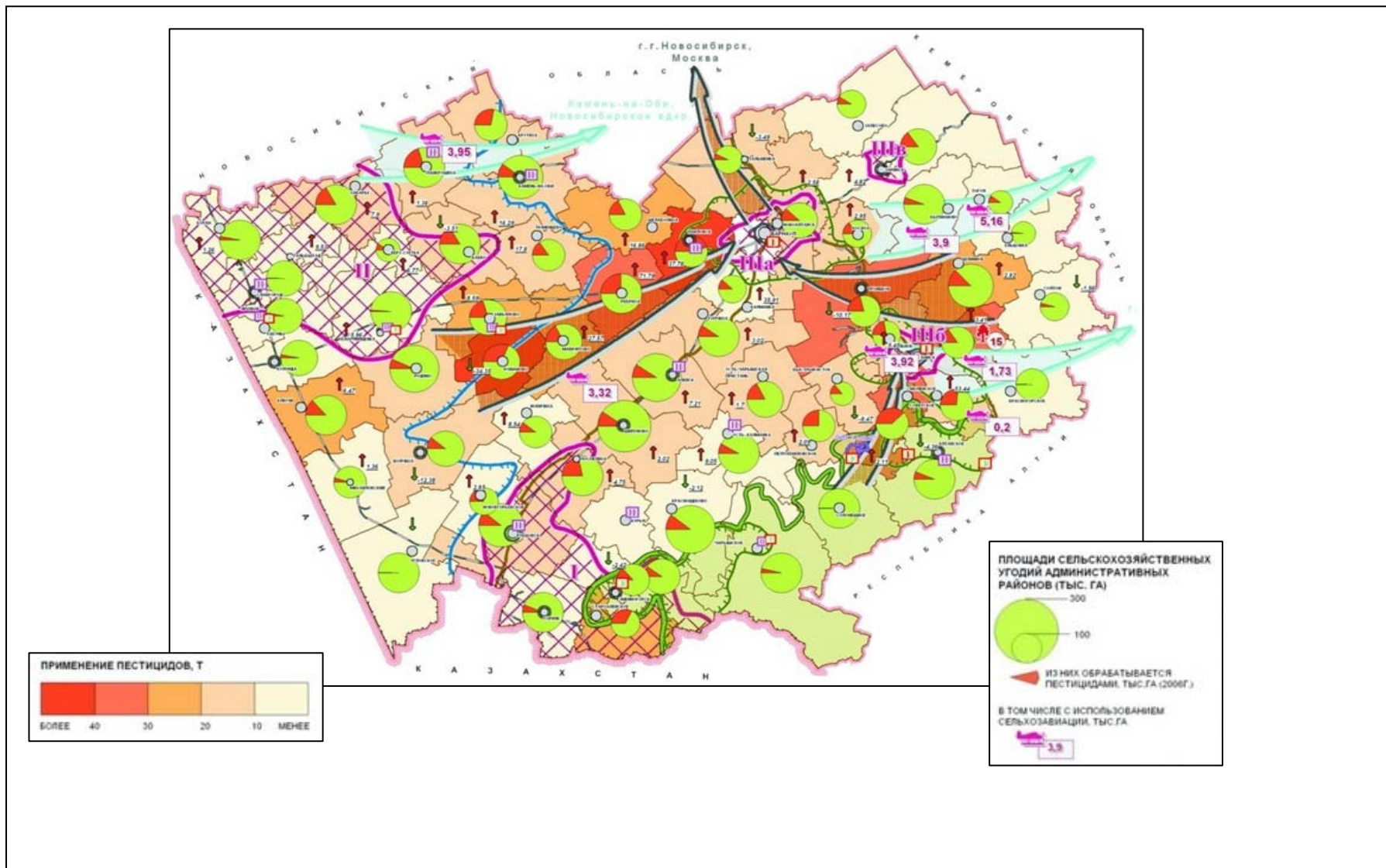


Sanitary and epidemiological risks: (anthrax, STP Gagarinsky district, Smolensk region)

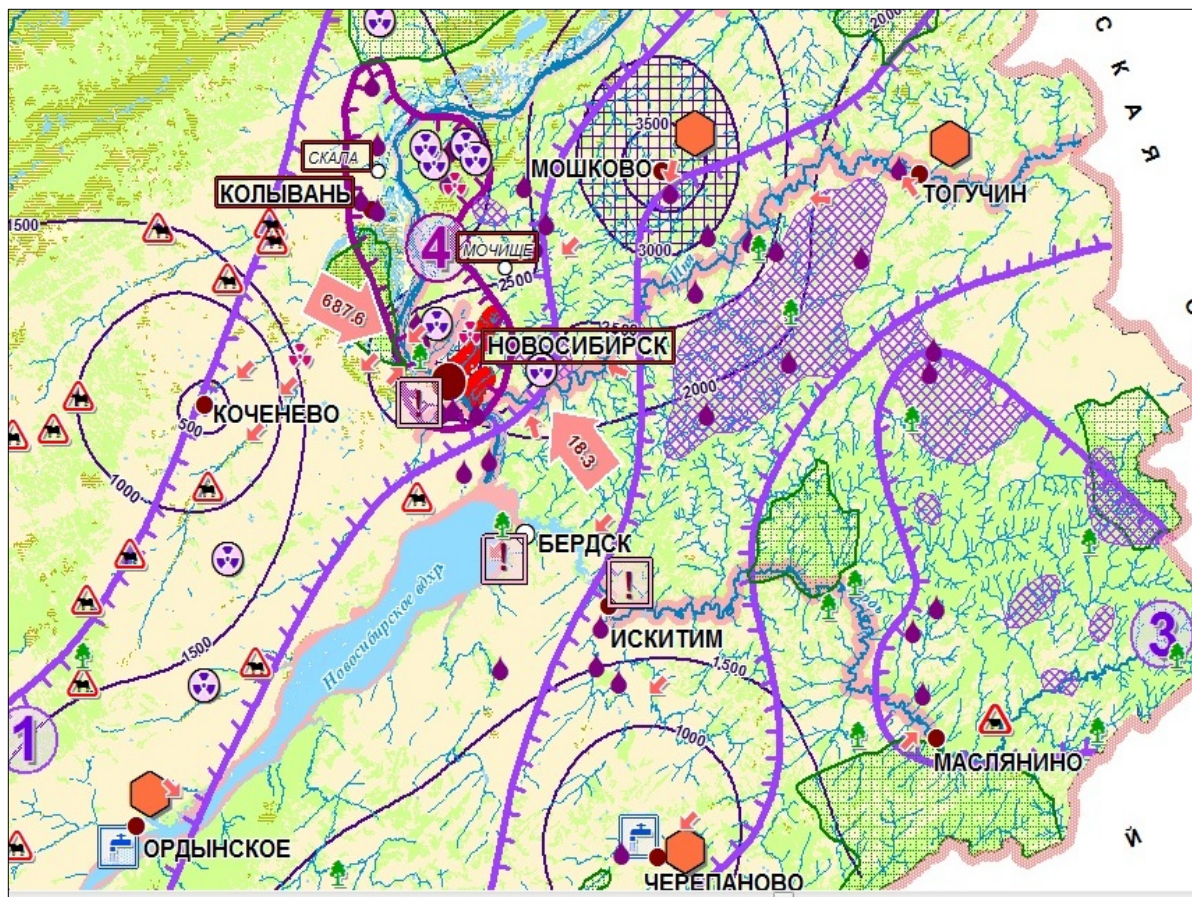


-  вспышки сибирской язвы
-  действующие скотомогильники
-  вспышки заболеваемости вблизи скотомогильников прежних лет

Anthropogenic and technogenic “risk factors” (territory contamination with pesticides, STP Altai Territory)



Risks of planning and management (problem areas, STP of the Novosibirsk region)



ОЦЕНКА РАДОНОПАСНОСТИ ТЕРРИТОРИИ



-  ОБЛАСТИ С РАДИОАКТИВНОСТЬЮ БОЛЕЕ 30 МКР/ЧАС
-  ПРОЯВЛЕНИЯ УРАНОВОЙ МИНЕРАЛИЗАЦИИ
-  РОДНИКИ, КОЛОДЦЫ С АКТИВНОСТЬЮ РАДОНА БОЛЕЕ 120 БК/Л
-  НАСЕЛЕННЫЕ ПУНКТЫ, В ЗДАНИЯХ КОТОРЫХ УСТАНОВЛЕНЫ ЗНАЧЕНИЯ ЭКВИВАЛЕНТНОЙ АКТИВНОСТИ РАДОНА, ПРЕВЫШАЮЩИЕ 200 БК/КУБ.М
-  ЗОНЫ С НАПРЯЖЕННОЙ ЭКОЛОГИЧЕСКОЙ ОБСТАНОВКОЙ
1 - ОБСКАЯ, 2 - ИСКИТИМ-ТОГУЧИНСКАЯ, 3 - ПРИСАЛАИРСКАЯ,
-  ЗОНА С КРИТИЧЕСКОЙ ЭКОЛОГИЧЕСКОЙ СИТУАЦИЕЙ
4 - НОВОСИБИРСК-КОЛЫВАНСКАЯ

СОСТОЯНИЕ ПОДЗЕМНЫХ ВОД




МИНЕРАЛИЗАЦИЯ ПОДЗЕМНЫХ ВОД ПИТЬЕВОГО ВОДОСНАБЖЕНИЯ (Г/КУБ.ДМ)

-  1 - 1,6
-  1,6 - 3,0

СОСТОЯНИЕ ПОЧВЕННОГО ПОКРОВА

-  ЗАГРЯЗНЕНИЕ ПОЧВ ЦЕЗИЕМ-137, ПРЕВЫШАЮЩЕЕ ФОНОВЫЕ ЗНАЧЕНИЯ
-  ИЗОЛИНИИ УДЕЛЬНОЙ АКТИВНОСТИ ЦЕЗИЯ-137 В НЕНАРУШЕННЫХ ПОЧВАХ (БК/КВ.М)

ЭКОЛОГИЧЕСКИ ОПАСНЫЕ ПРЕДПРИЯТИЯ И ОБЪЕКТЫ

-  ХРАНИЛИЩА ЯДОХИМИКАТОВ, ЗАПРЕЩЕННЫХ И (ИЛИ) С ИСТЕКШИМИ СРОКАМИ ХРАНЕНИЯ
-  РАДИАЦИОННООПАСНЫЕ ОБЪЕКТЫ
-  СКОТОМОГИЛЬНИКИ (СИБИРСКАЯ ЯЗВА)

Risks of planning and management (Big Moscow - a megacity)

In the Moscow region, already now, about 20% of the country's population lives on 0.27% of the territory of Russia, and in 30 years up to 60% of the population will be concentrated here, which is absolutely unacceptable in all respects.

By the middle of this century, the expansion of Moscow, in fact, could lead to the implementation of the “Chinese model” of transforming cities into megacities with a population of about 100 million people.

“The megacities, uniting several cities and even provinces, have become a new Chinese urban development phenomenon
Megacities create megawalls for the economy, ecology, and the transport system of municipal and city administration ”

FINDINGS:

- 1. The spatially polarized and essentially uncontrolled, uncontrolled territorial development of the country poses all kinds of **development risks** - from industrial and economic to social and geopolitical.**
- 2. Renovation of megacities of Russia as a **process of improving their territorial structure** in order to overcome acute urban and transport problems should be considered as system-forming projects at the macro-regional level.**
- 3. The Government of the Russian Federation, together with other federal departments, needs to organize an examination of the main title documents related to ecology, nature and resource use: **(Land, Water, Forest and Urban codes)** in order to improve the urban ecological safety of the living environment of Russia.**

CONCLUSIONS (continued):

4. The project of forming a **system of multifunctional rural settlements** (ecological villages) by Professor M.Ya. Lemesheva, in the case of his deep scientific study and subsequent implementation, we consider as one of the promising areas of modernization of the socio-ecological (living) environment.
5. The transition from the paradigm of **"urban development security"** to the paradigm of **"Risk Concept"**, in the near future, is a prerequisite for the prevention of large-scale regional disasters in our country.

“Caring for people is central to efforts to ensure **sustainable development. They have the right to a healthy and fruitful life in harmony with nature. ”**

*Principle 1 of the Rio De Janeiro Declaration
on environment and development*

THANK YOU FOR ATTENTION

K.V. Kivva
E-mail: kivva44@mail.ru