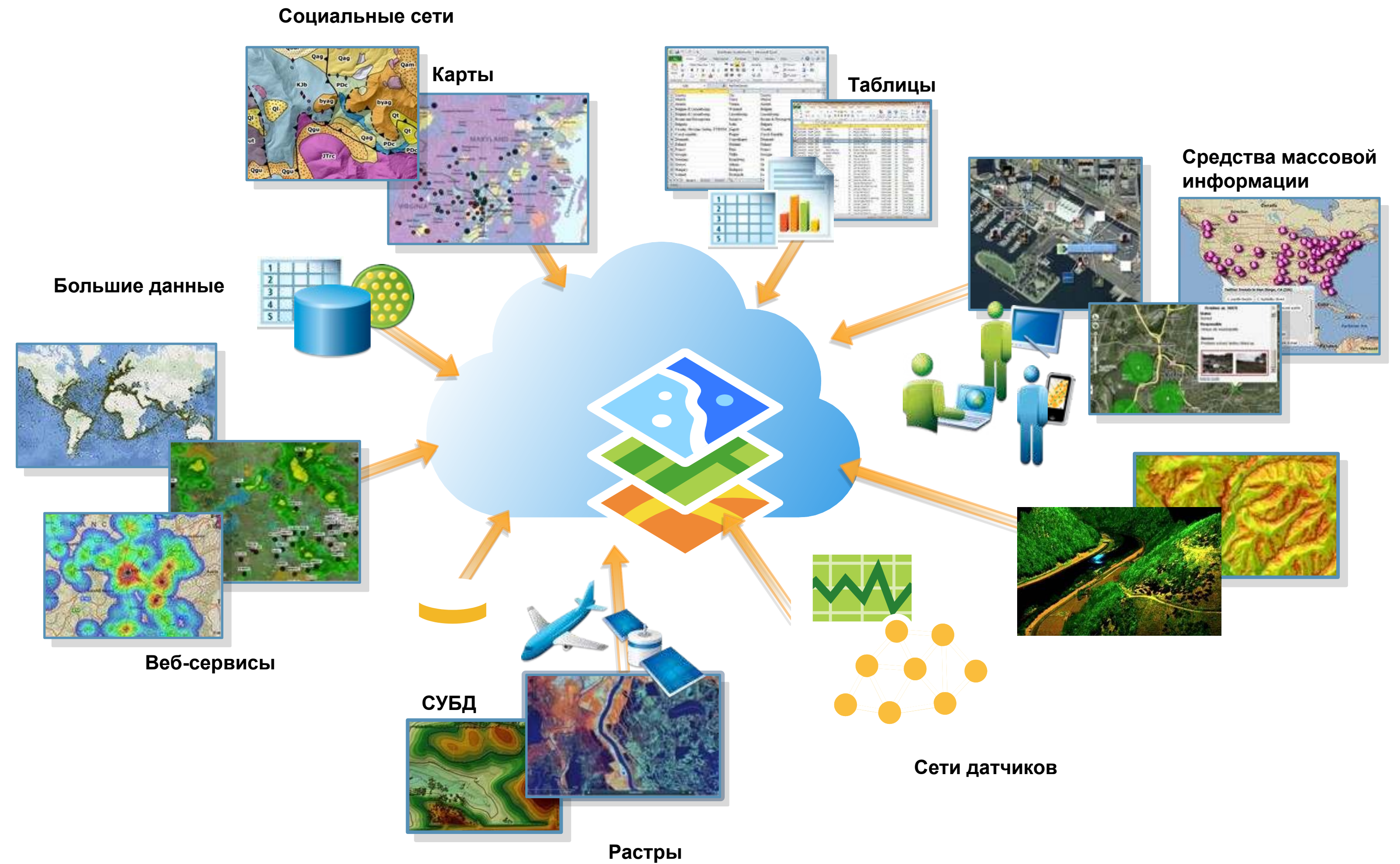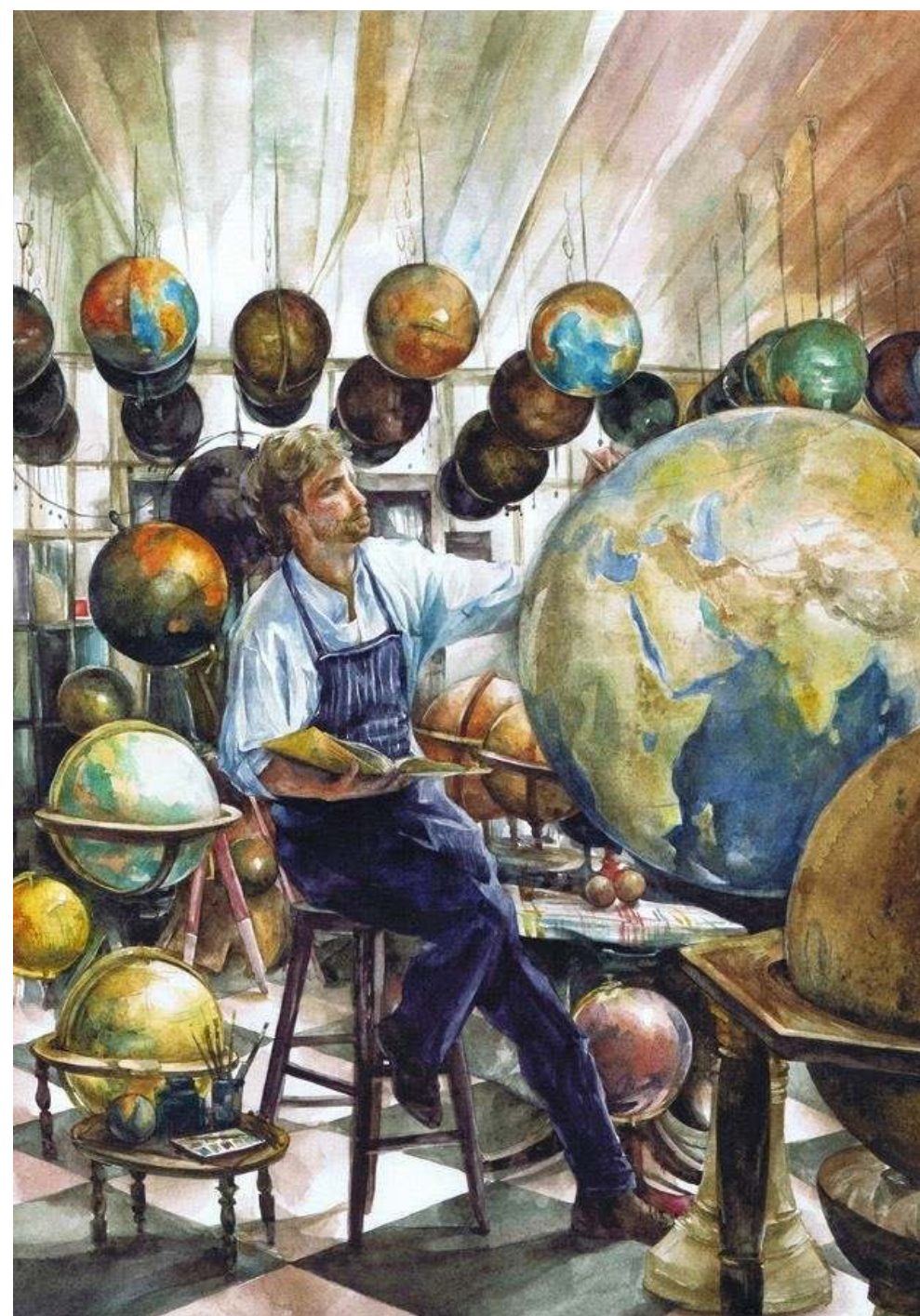# City cartography

ethno-demographic and economic gradients of an urban environment

Geoinformation technologies as the basis for the development of Smart City
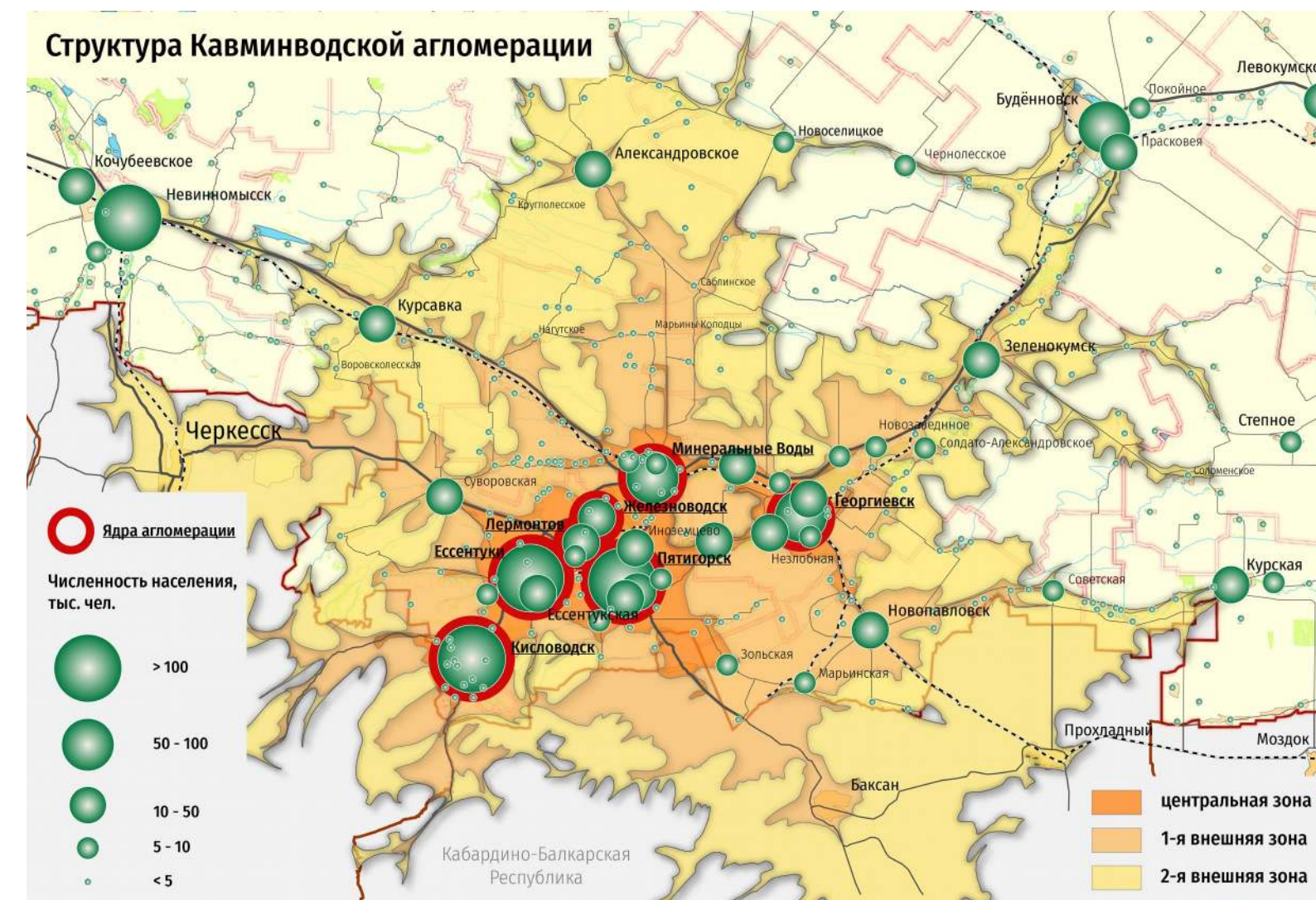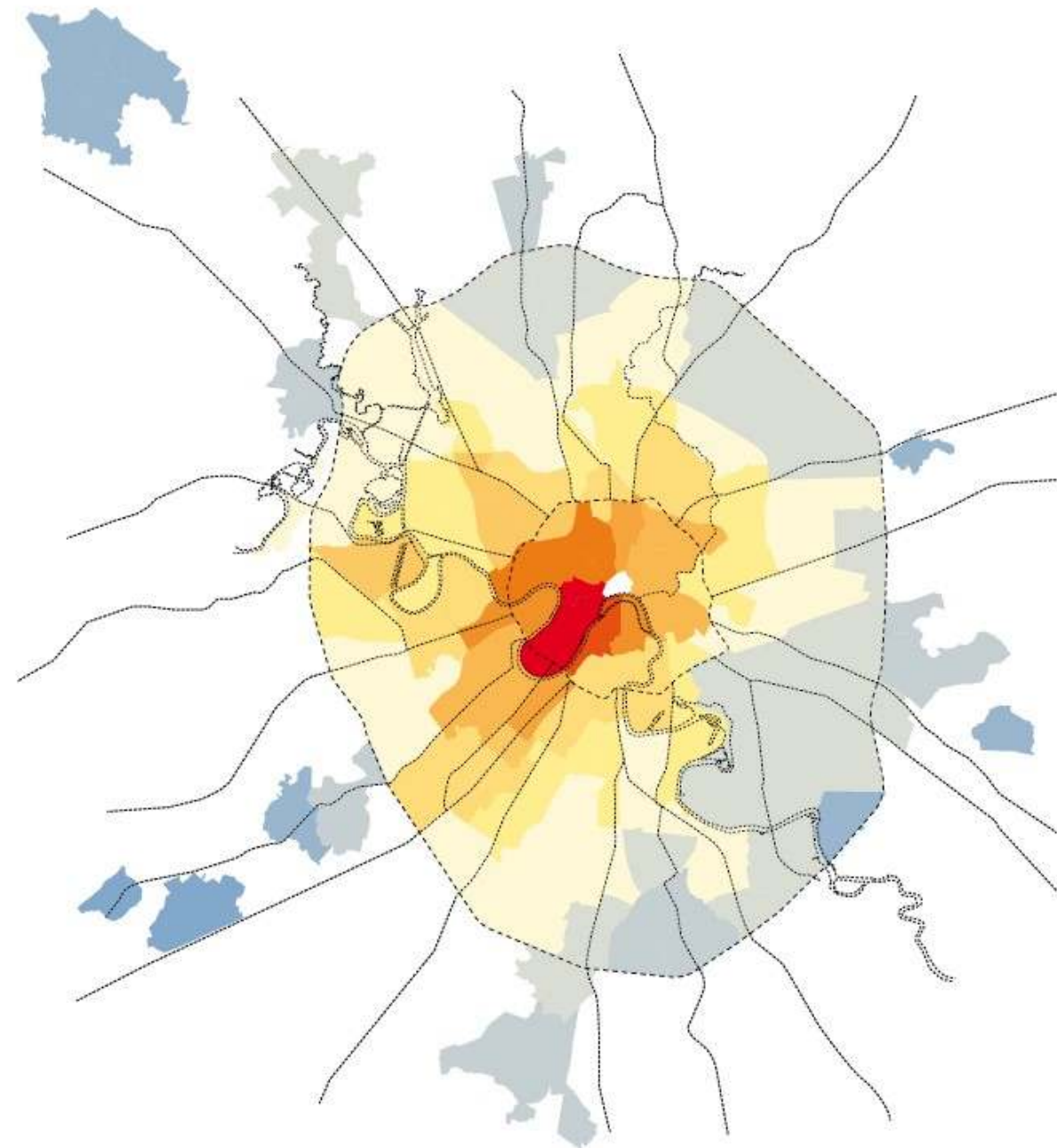
The temptations and trials

Maps this:

1. Maps are a method of studying reality based on the analysis of spatial distributions: densities, relations, estimates, ratings, etc.

2. Visual image of the space. Man does not live in the world of numbers, but in the world of his ideas. "Image space" is beginning to determine behavior people.

Map as a political act

Residents of Ingushetia against the new border with Chechnya

Map - a tool for urban communities
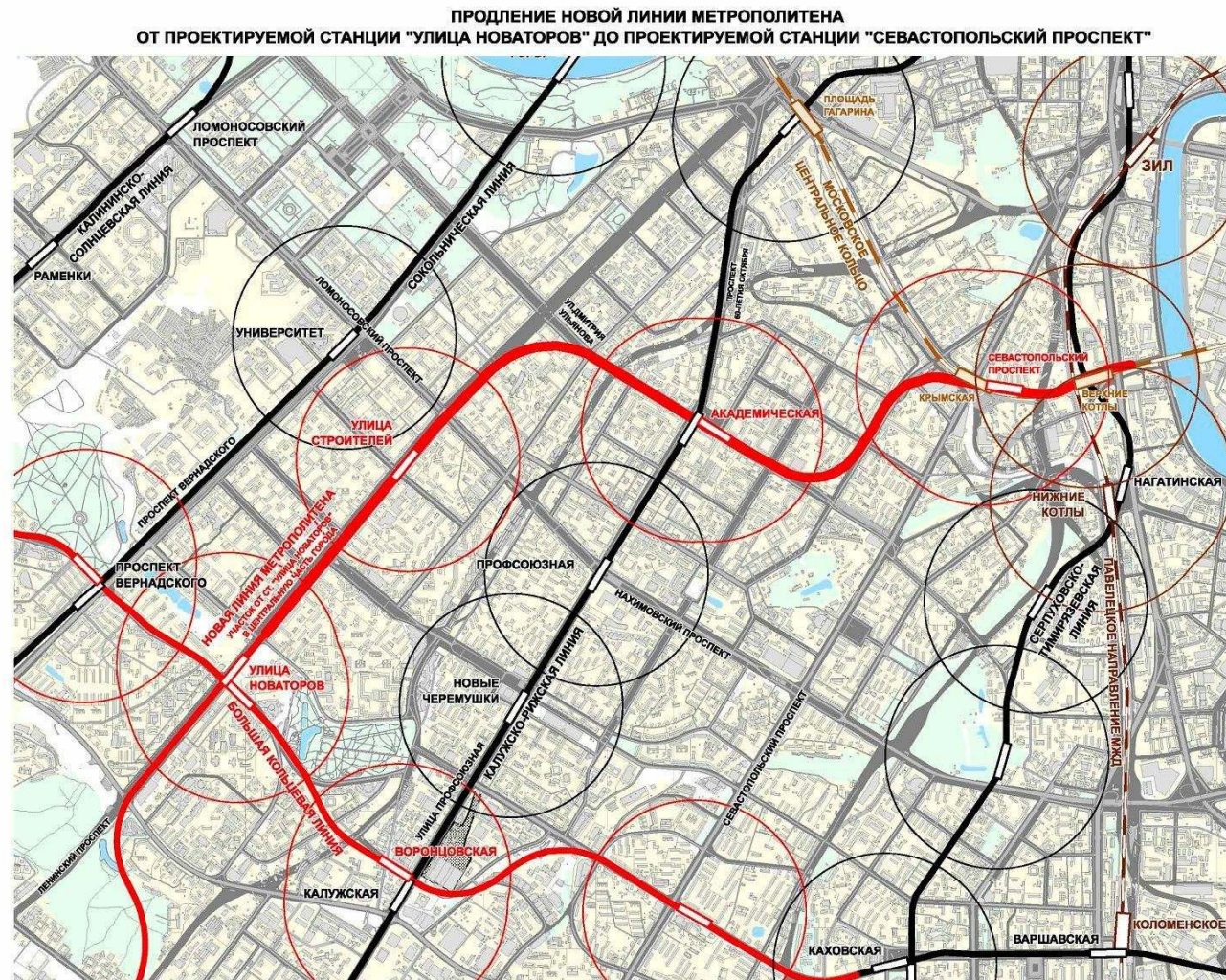
Citizens against the construction of the subway

On the migration of the city meet neighborhood development

Urban and rural population in Russia

rural population

25%

75%

urban population
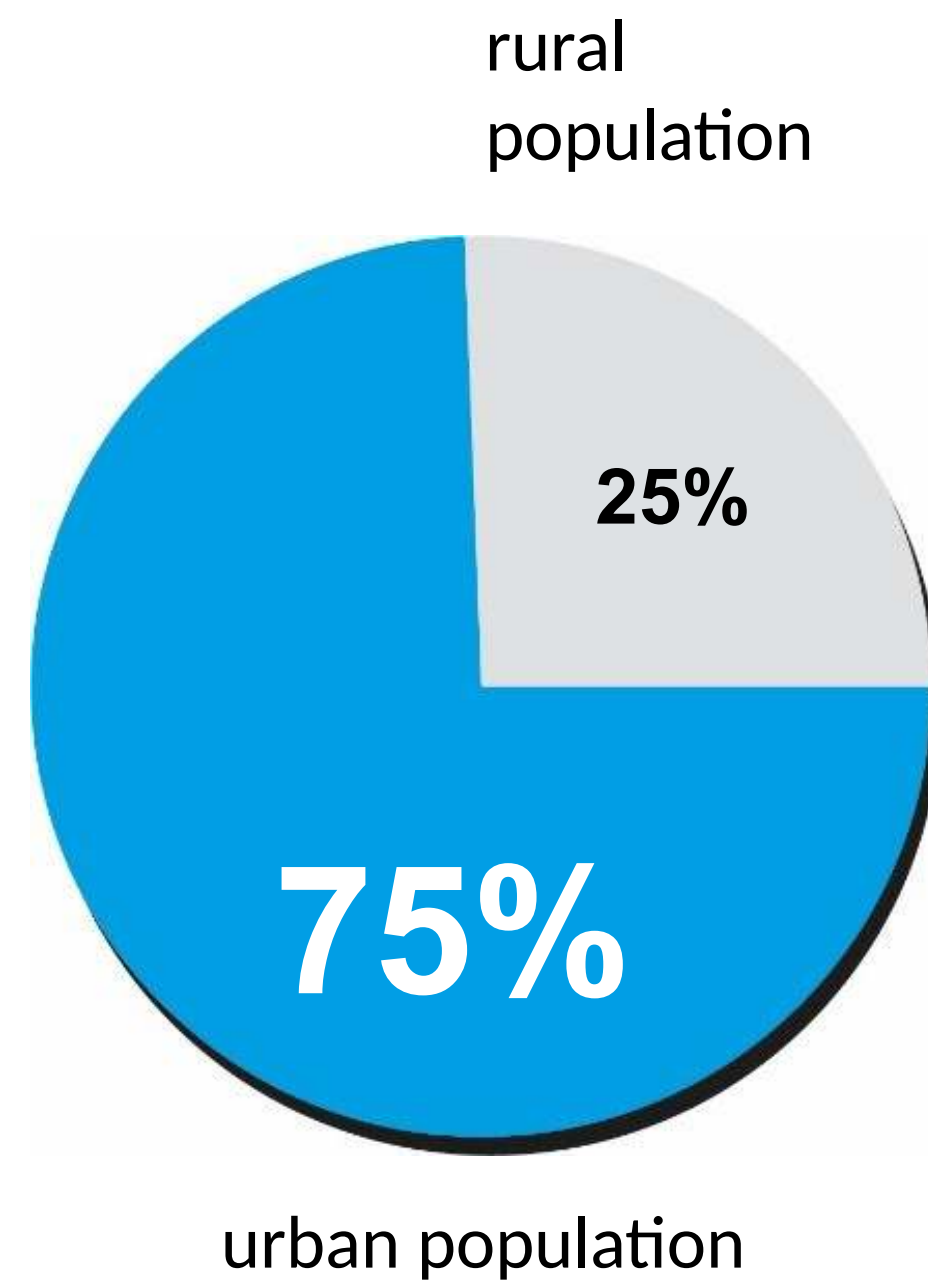
Cities are becoming polarized and dangerous, and spatial analysis is more difficult

Легенда:

- пивные и бары
- продуктовые магазины
- детский сад «Юсишка»
- детские площадки
- рекреационные зоны
- открытые спортплощадки
- закрытые спортплощадки

	70		
			64
	50		
		6	
	Пивные магазины	Пивные бары	Продуктовые магазины

Sources of information about the population of Russia
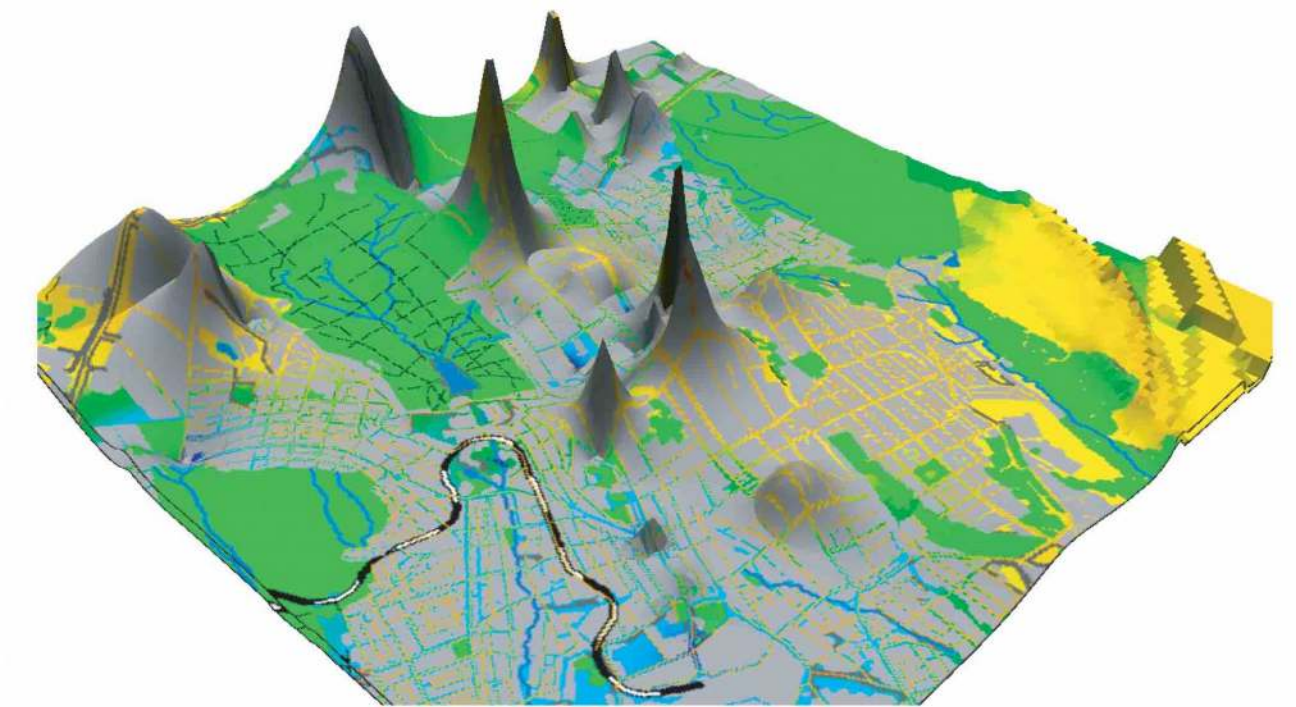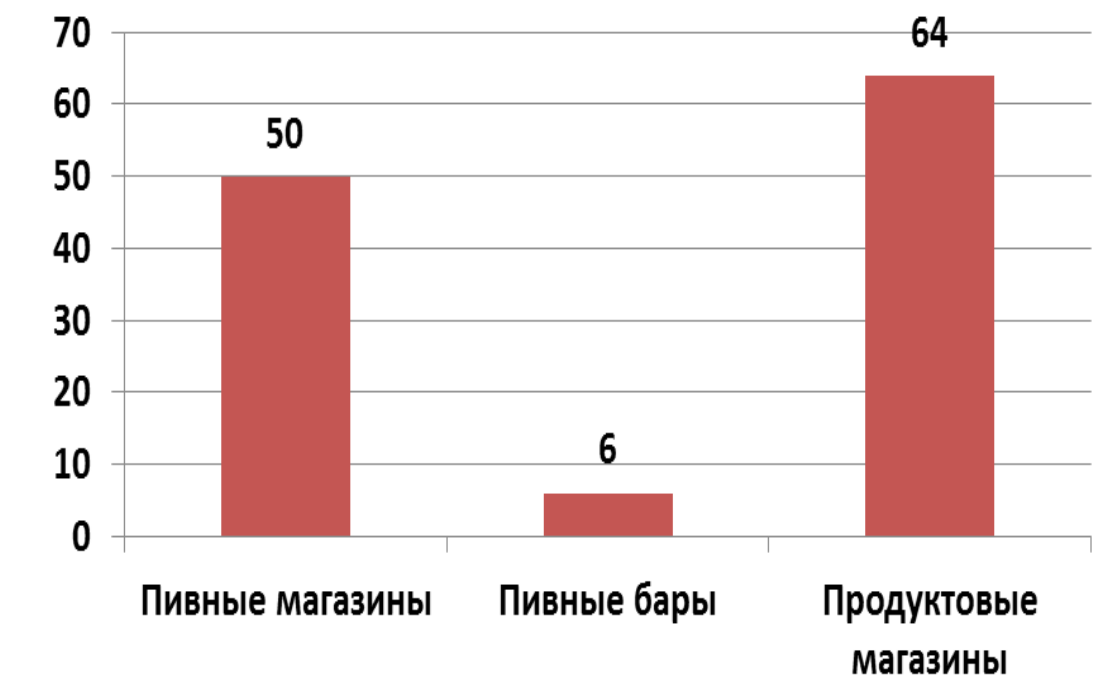
Problems!

"Housing accounting" of the population	There is no accounting for whole groups of indicators (national composition of migrants, ethnic characteristics of the natural movement of the population, etc.). Data on the ethnic composition of the Russian population can be obtained once every 10 years.
Official statistics	
Sociology	Sociology is important, but it allows to measure the "average temperature" on the territory.
Expert opinion	Currently, this source is preferred. At the same time, it has problems of relevance, objectivity and scalability of information.
MEDIA	One of the most trusted sources of information. But also one of the most subjective.
BIGDATA	New technologies for collecting a variety of information about the population: data from social networks, mobile operators, CCTV cameras, etc.

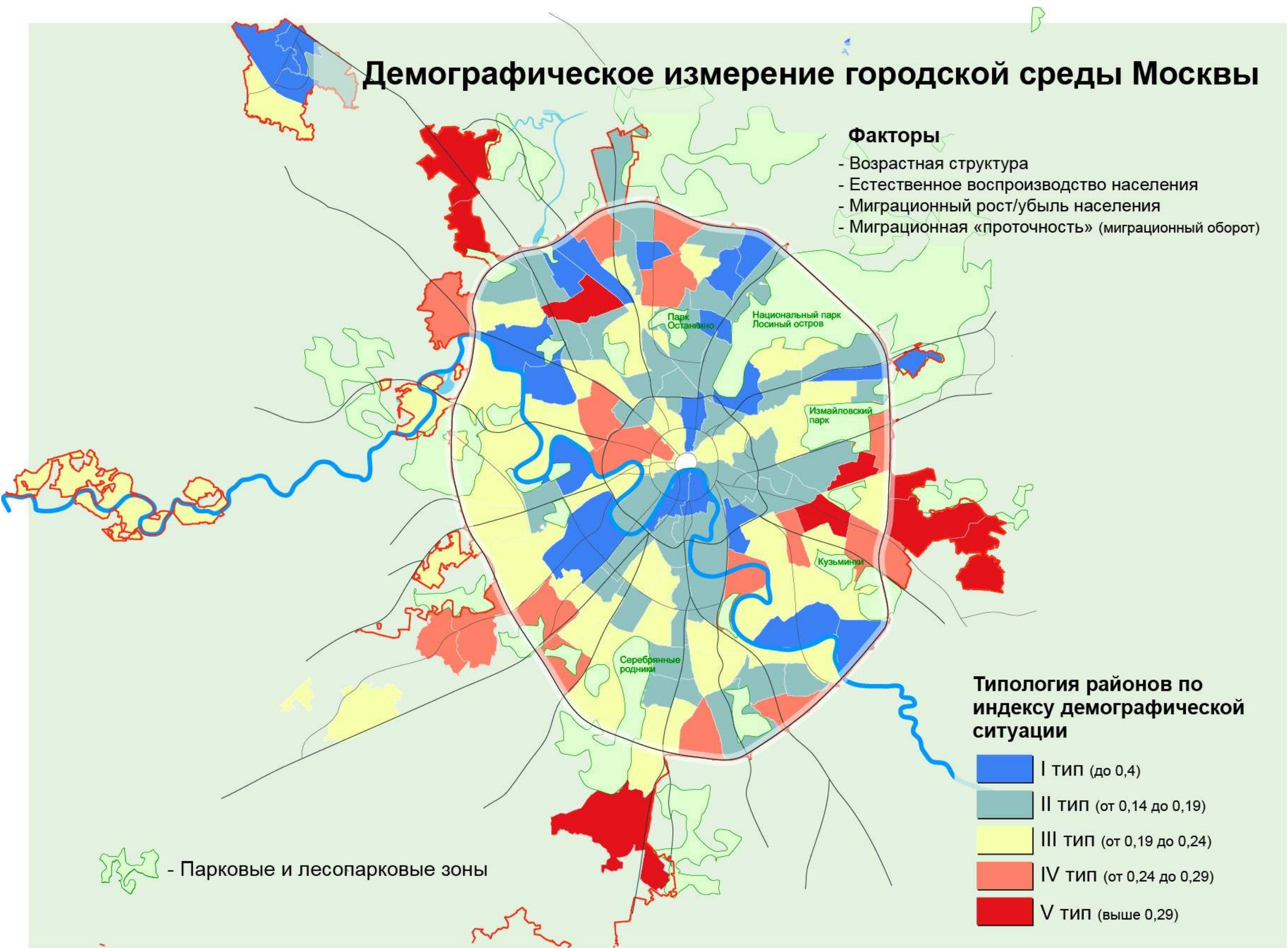**EXISTING INFORMATION ABOUT THE POPULATION IS FRAGMENTED!**

Demography

Mean values of demographic indicators, characterizing different types of districts of Moscow

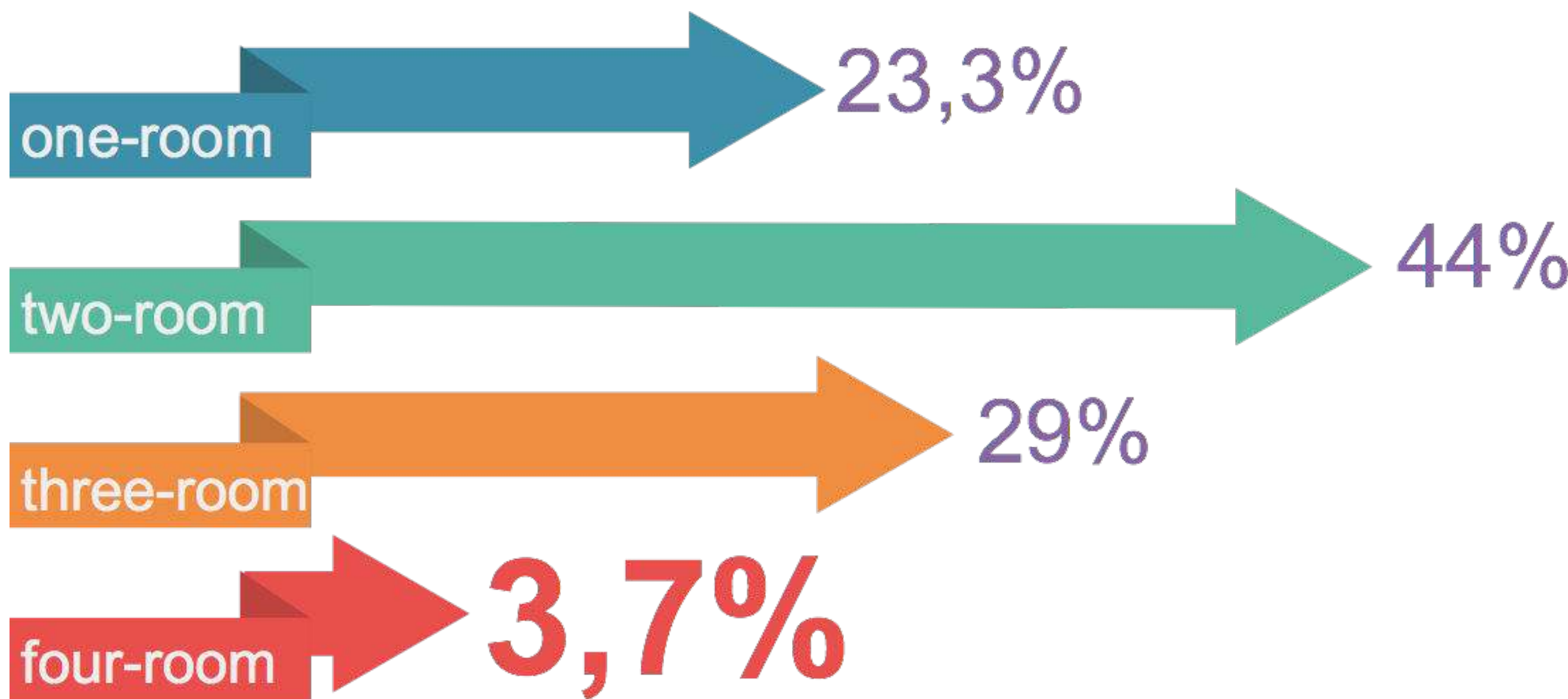| Type of area	Share of young ages (20-34), %	The proportion of older (55 и старше), %	The rate of natural reproduction, ‰	Migration growth rate, ‰	Migration turnover, people.
I	22, 97	38,40	- 0,85	1,10	1584
II	24,51	36,59	- 0,79	5,08	2497
III	25,96	34,24	0,43	5,84	3322
IV	27,69	30,95	2,14	11,85	3579
V	29,52	27,10	3,10	17,12	4379

The largest number of Moscow districts falls into the middle third type, which defines a stable view of the Moscow society as aging, with difficulty providing a simple reproduction of the population, growing due to migration and experiencing the pressure of migration circulation as pendulum, and seasonal or episodic.

Демографическое измерение городской среды Москвы

Факторы
- Возрастная структура
- Естественное воспроизводство населения
- Миграционный рост/убыль населения
- Миграционная «проточность» (миграционный оборот)

Парк Останкино

Национальный парк Лосиный остров

Измайловский парк

Кузьминки

Серебрянные родники

Типология районов по индексу демографической ситуации
- I тип (до 0,4)
- II тип (от 0,14 до 0,19)
- III тип (от 0,19 до 0,24)
- IV тип (от 0,24 до 0,29)
- V тип (выше 0,29)

- Парковые и лесопарковые зоны

Moscow is not ready for large families

Apartments in Moscow

one-room — 23,3%
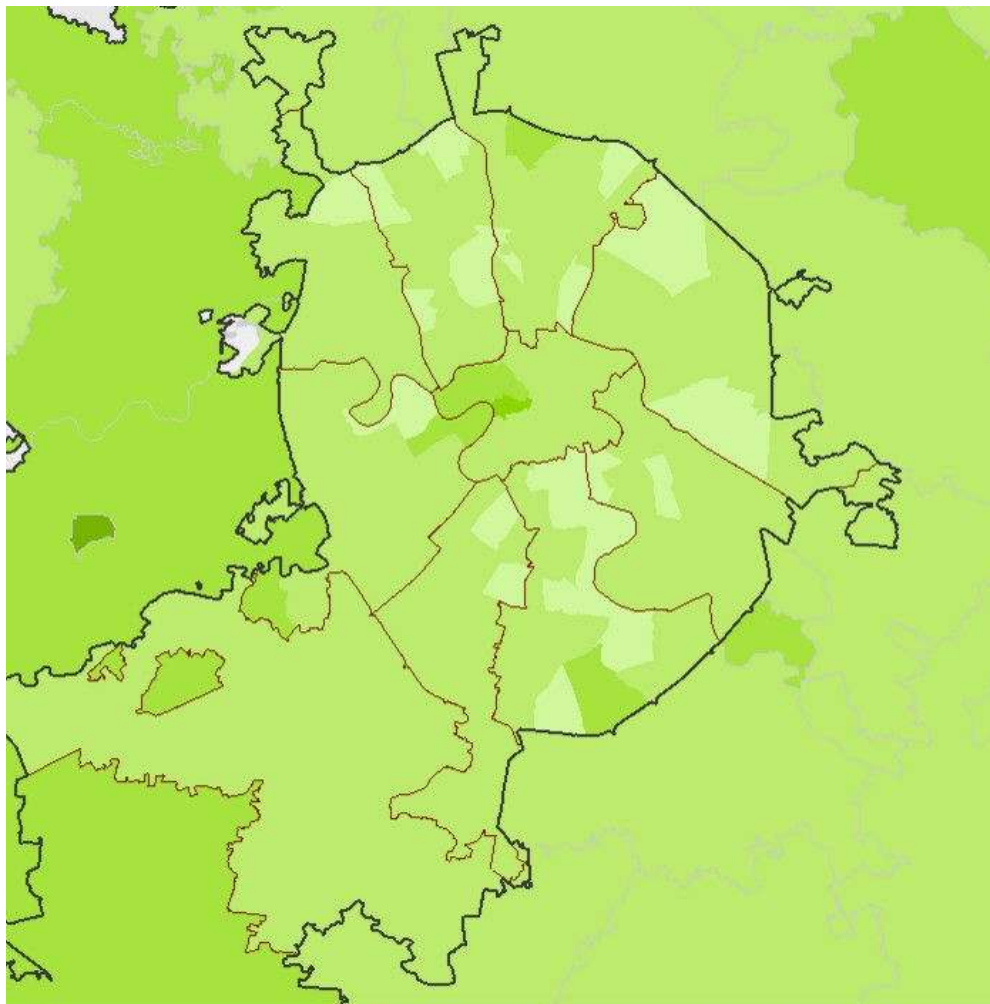
two-room — 44%

three-room — 29%
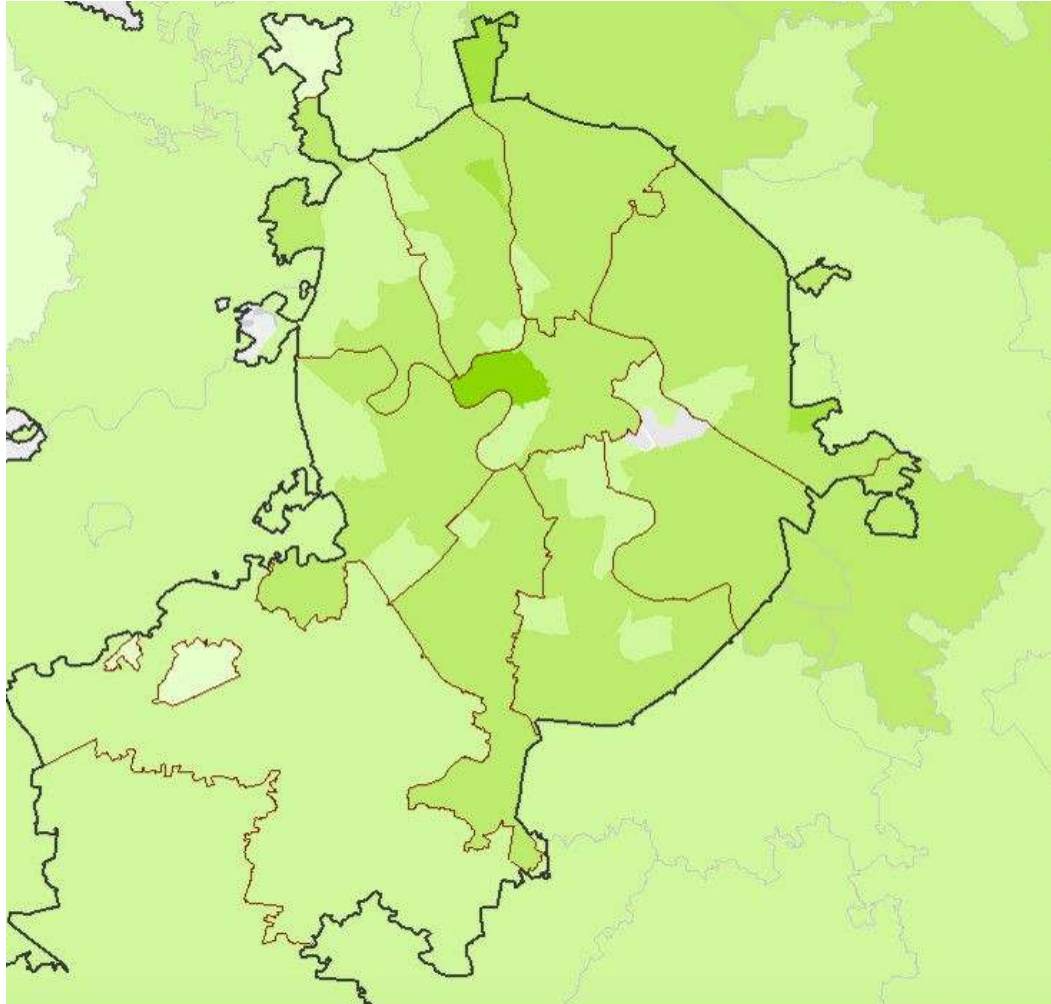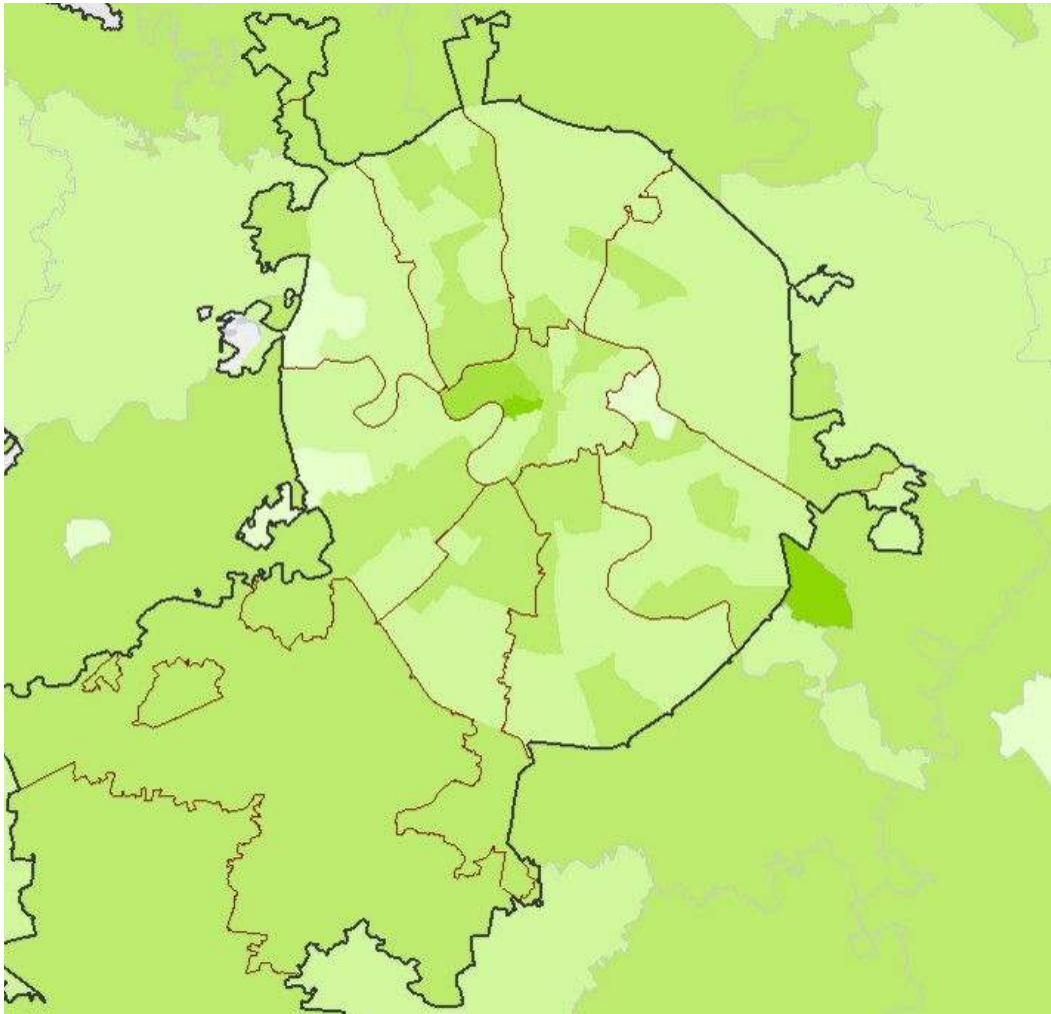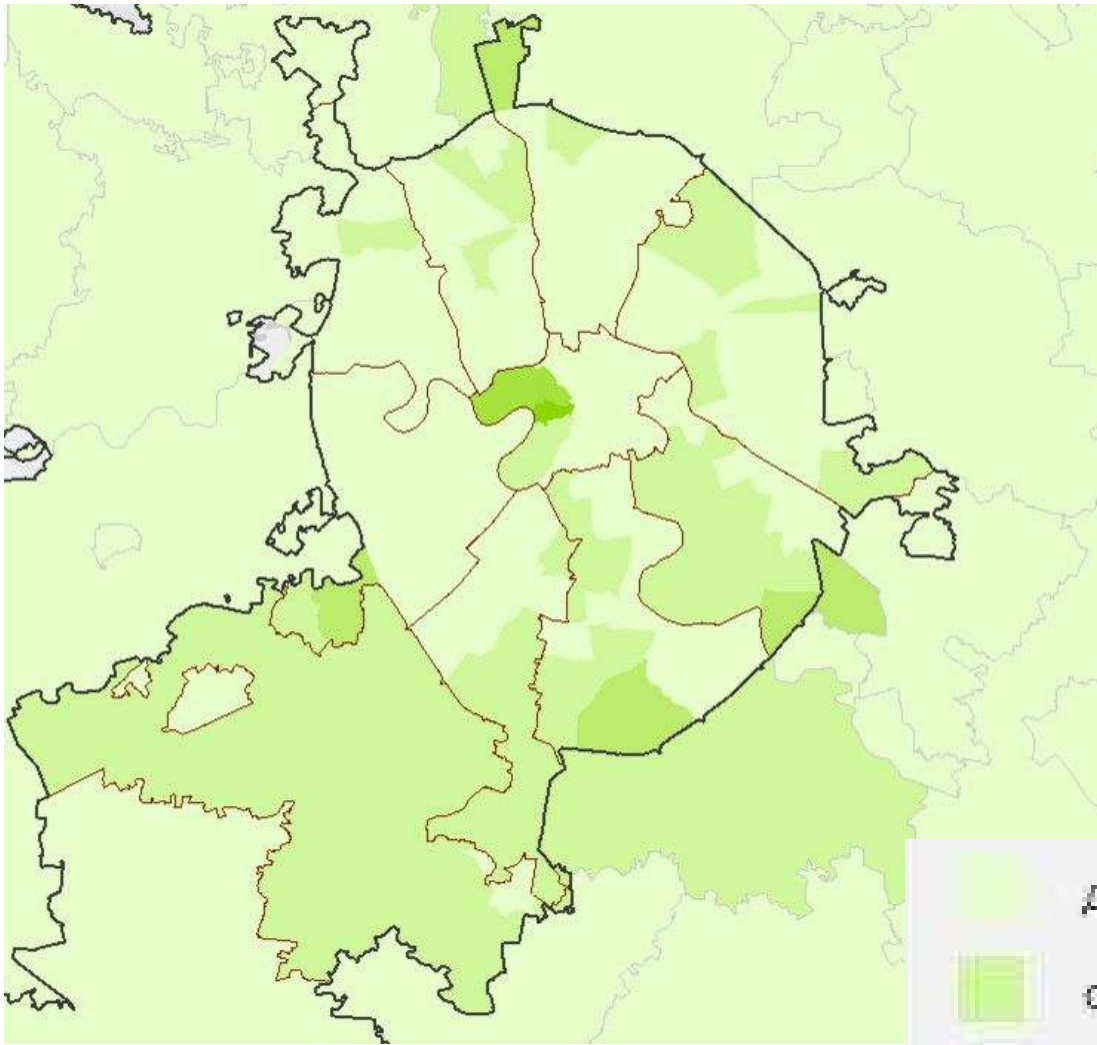
four-room — 3,7%

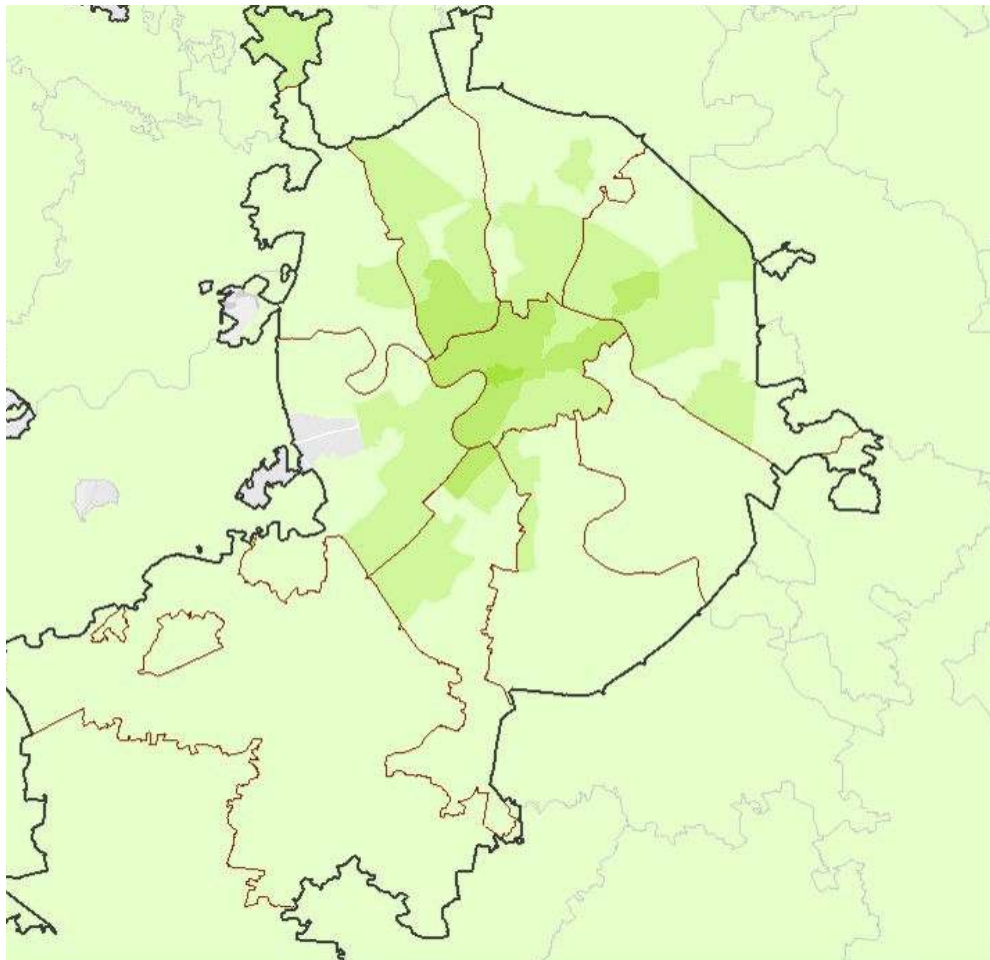Total fertility rate in Moscow, 2018

1,3

Ethnic map of Moscow

Ukrainians

Tatars

Armenians

Azerbaijanis

Jews

Georgians

Uzbeks

Tajiks

до 0,5

от 0,5 до 1

от 1 до 2

от 2 до 3

свыше 3
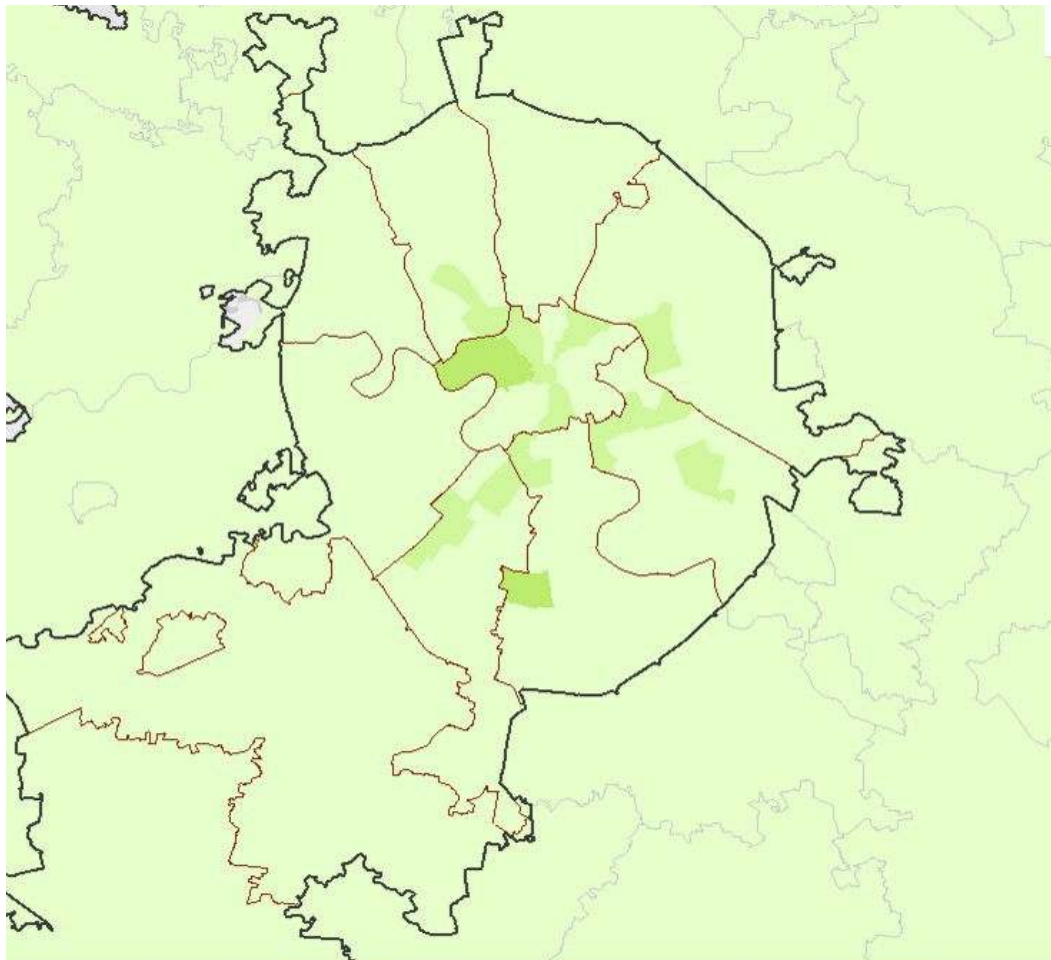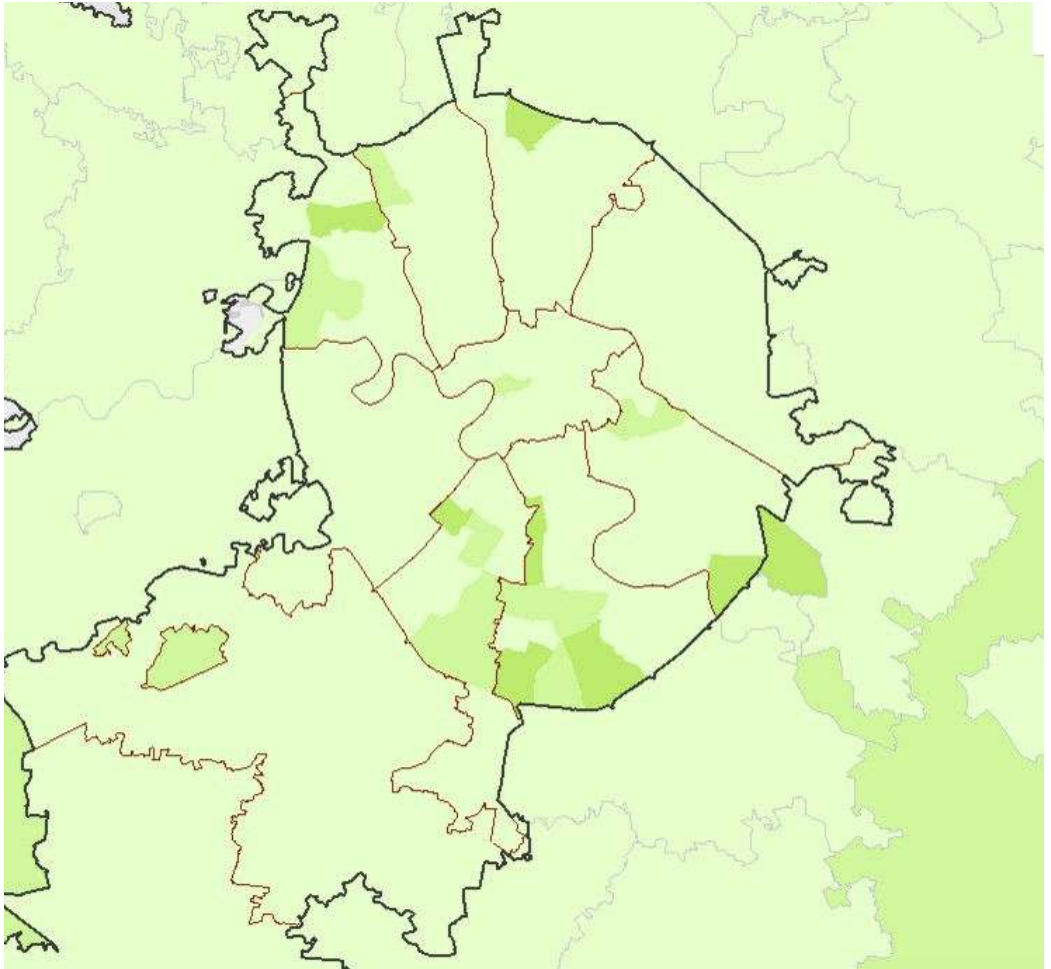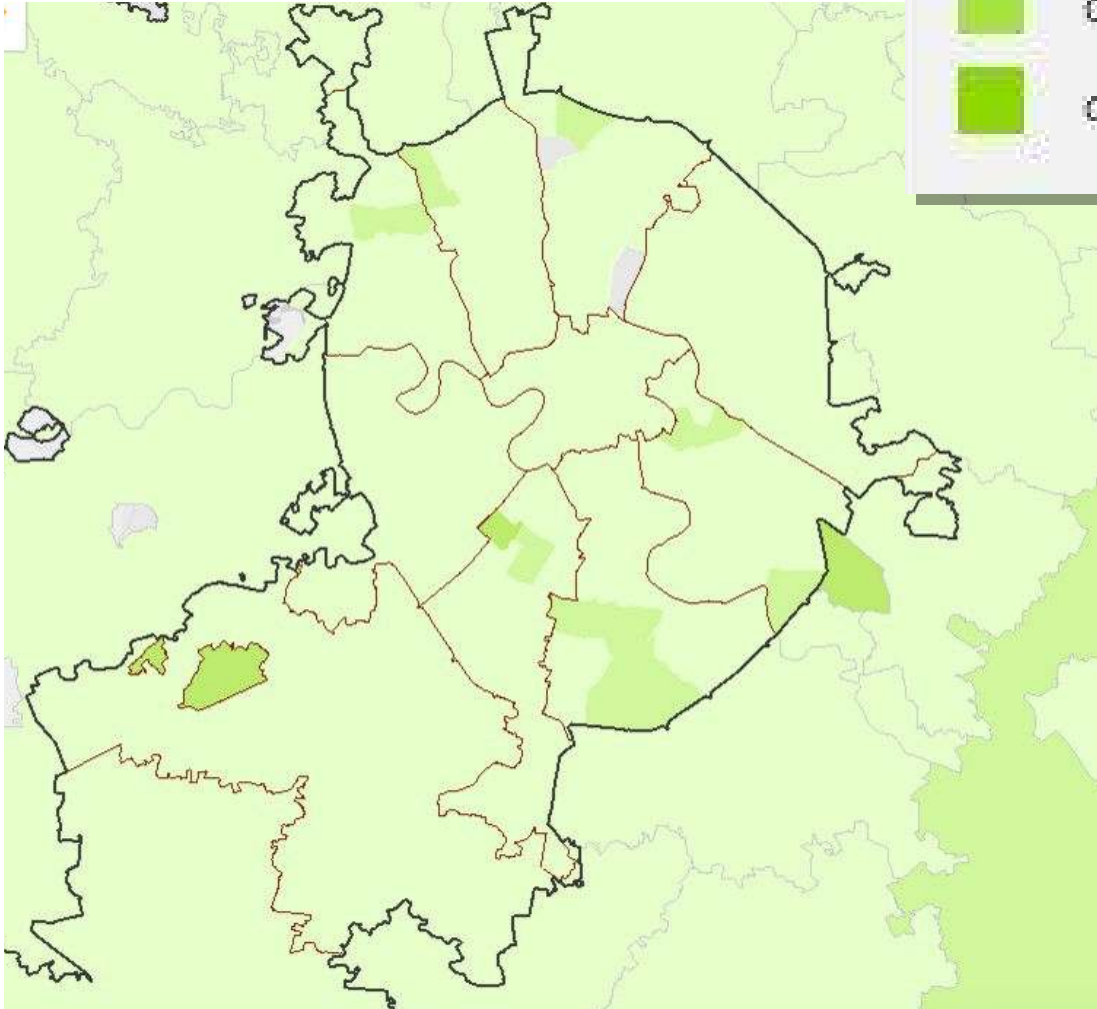
Ethnic mosaic

Dorogomilovsky, Troparevo-Nikulino and Biryulevo, falling into the category of the most mosaic, have different reputations. In a sense, these are symbols of bureaucratic, intelligent and dysfunctional Moscow.

Индекс этнической мозаичности Москвы

расчитано по данным ВПН-2010

Парк Останкино

Национальный парк Лосиный остров

Измайловский парк

Кузьминки

Серебряные родники

- Парковые и лесопарковые зоны

Значение индекса

менее 0,12

от 0,12 до 0,14

от 0,14 до 0,18

от 0,18 до 0,20

выше 0,20
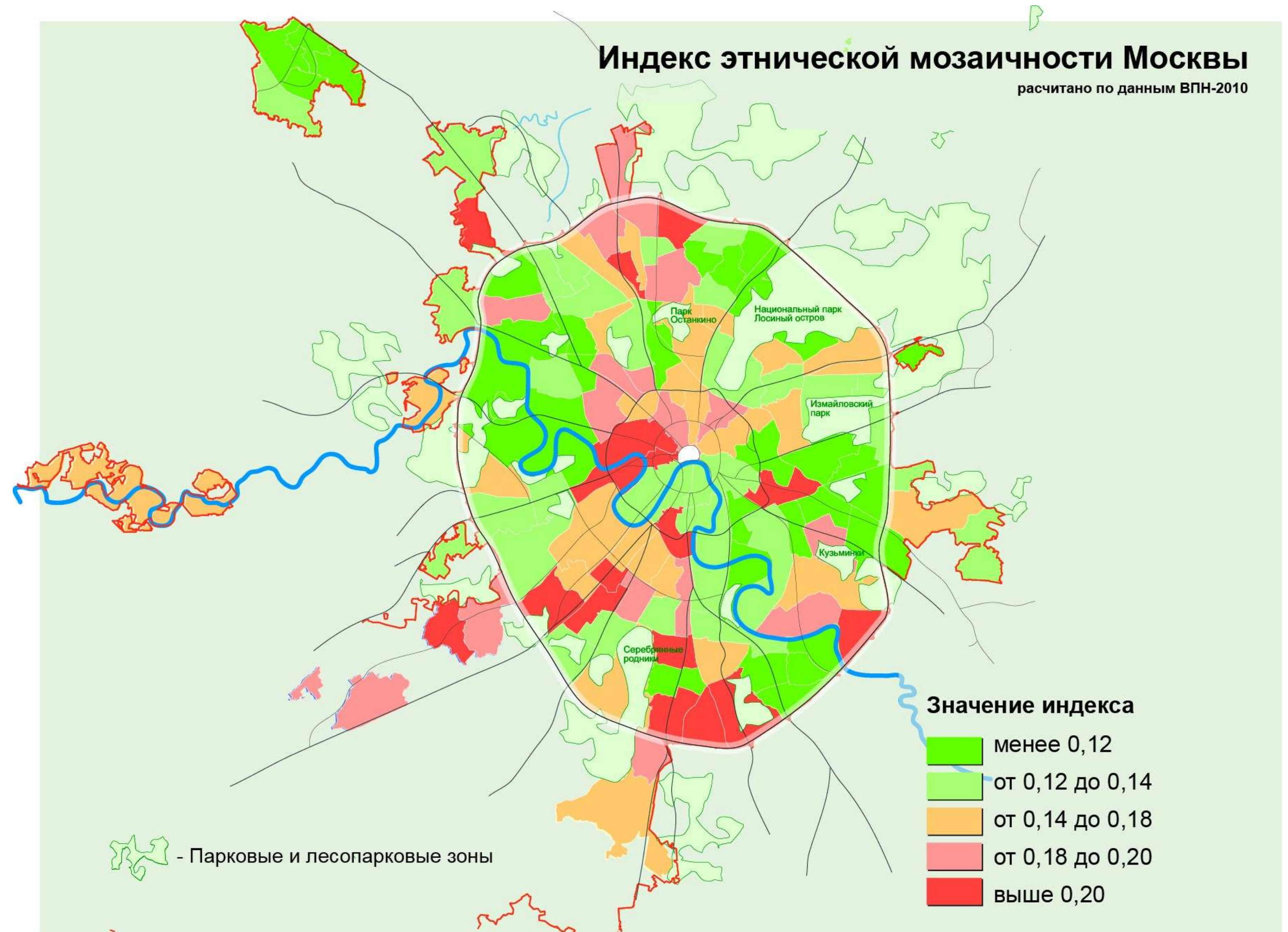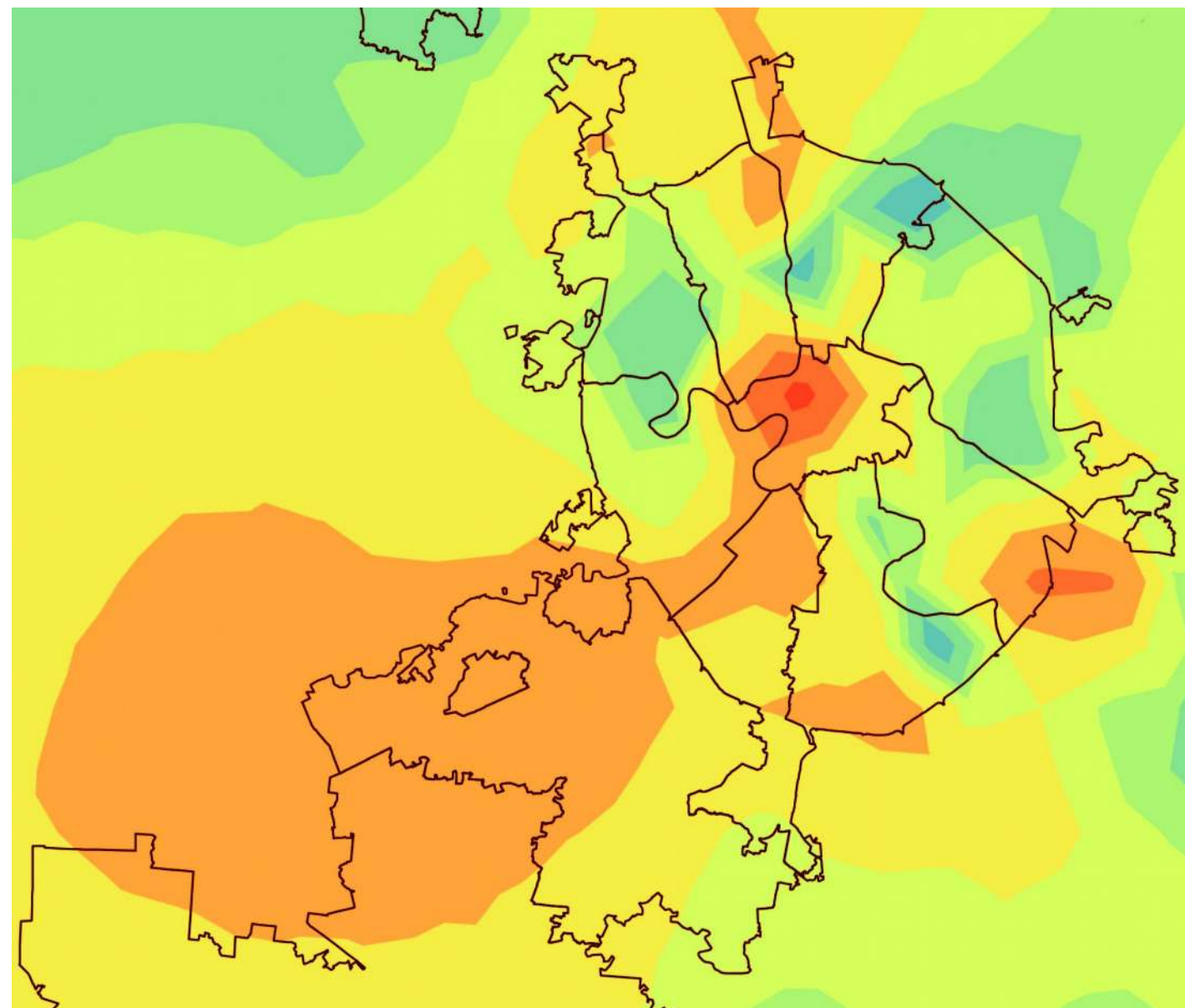
Settlement of ethnic groups from Central Asia
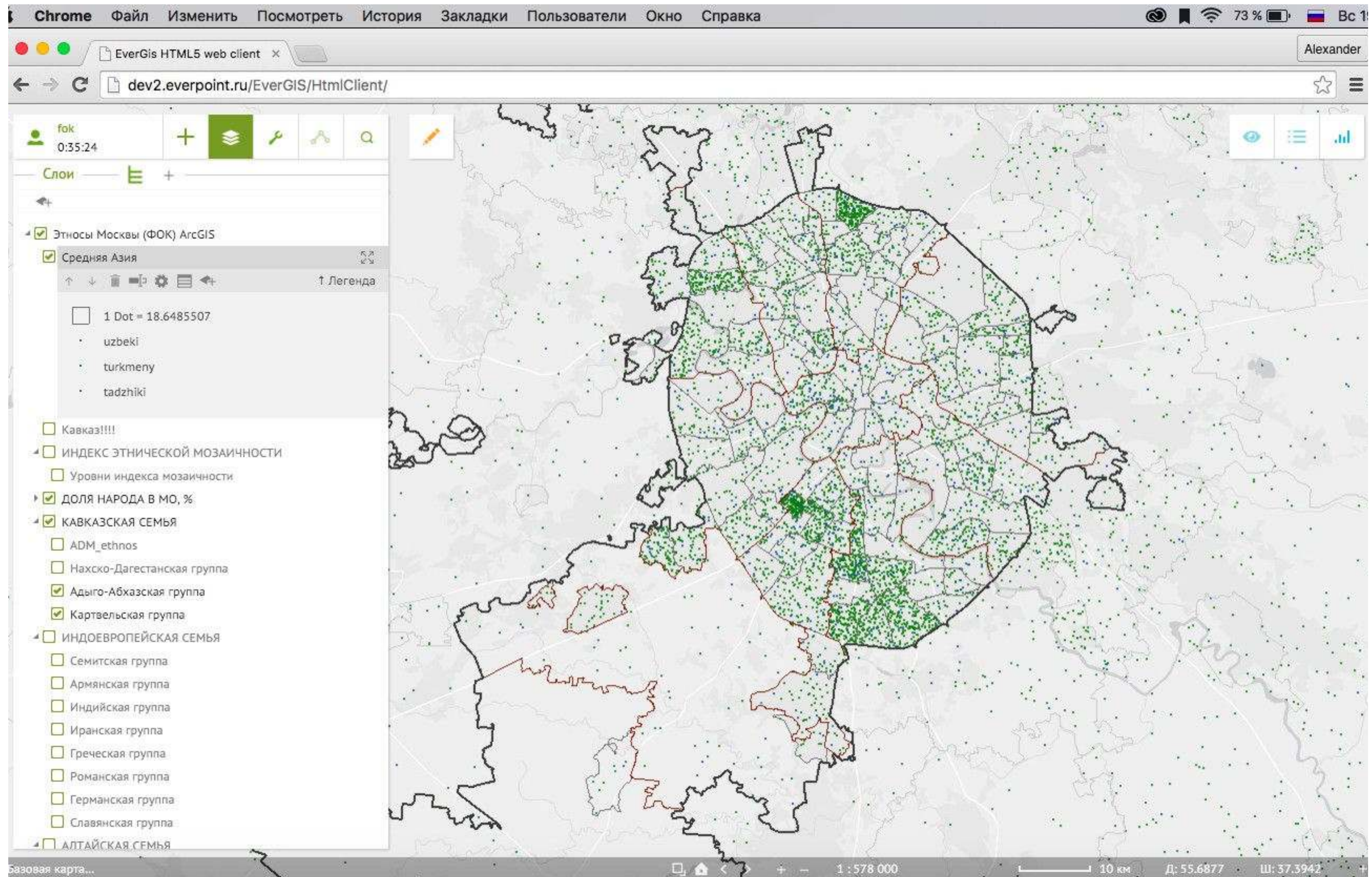
Ethnic cafes in Moscow

National cuisine

- 🟢 Azerbaijani
- 🔴 Armenian
- 🔵 Georgian
- 🟢 North Caucasian
- 🟠 Central Asian

Hot spot

2015
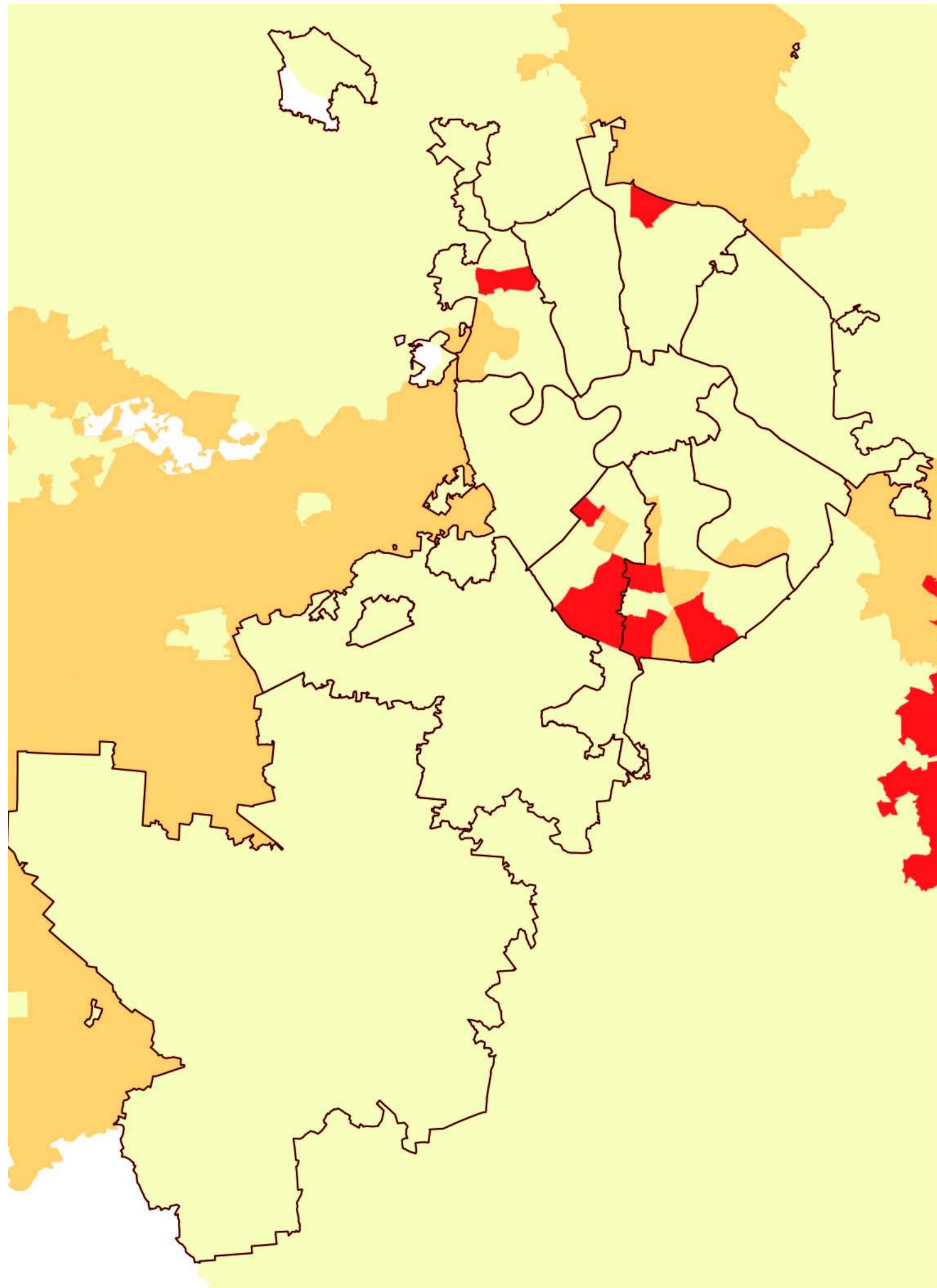
2018
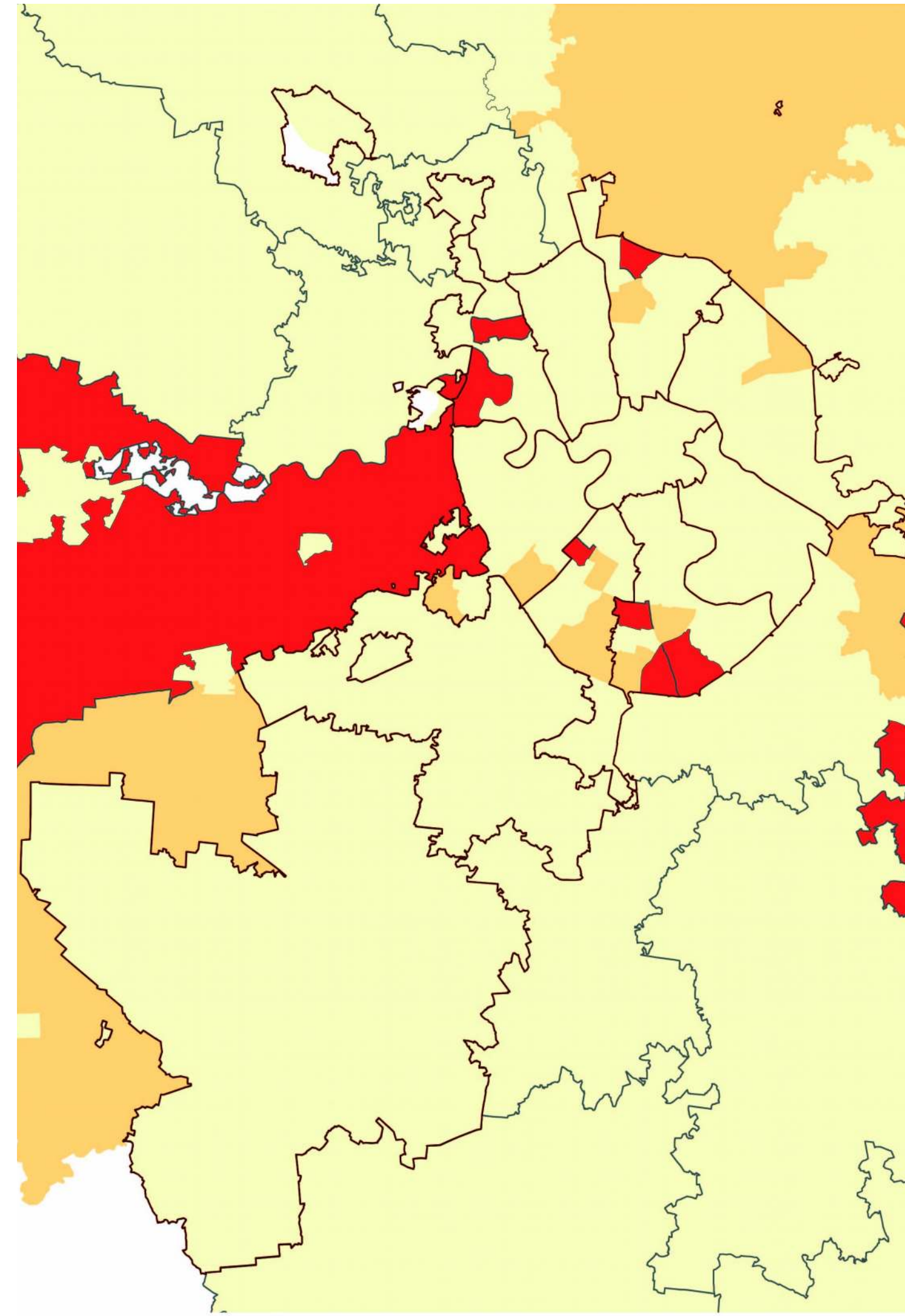
Fears of citizens

On the "Arbat", for example, it is unsafe to walk during the day, due to the huge crowd of people in a small area of the area.

In the outskirts of the "East" – fears caused by the relative transport isolation of the village and the isolation of the life of its population.

In "Kurkino" – unfavorable neighborhood: forced active contacts with migrants living in the near Moscow region and are working in the neighboring agglomeration of shopping centers and markets.

In the South, South-East and North-East of the city – there are several causes of dissatisfaction. The reputation of industrial, criminal, migrant and "bad" dist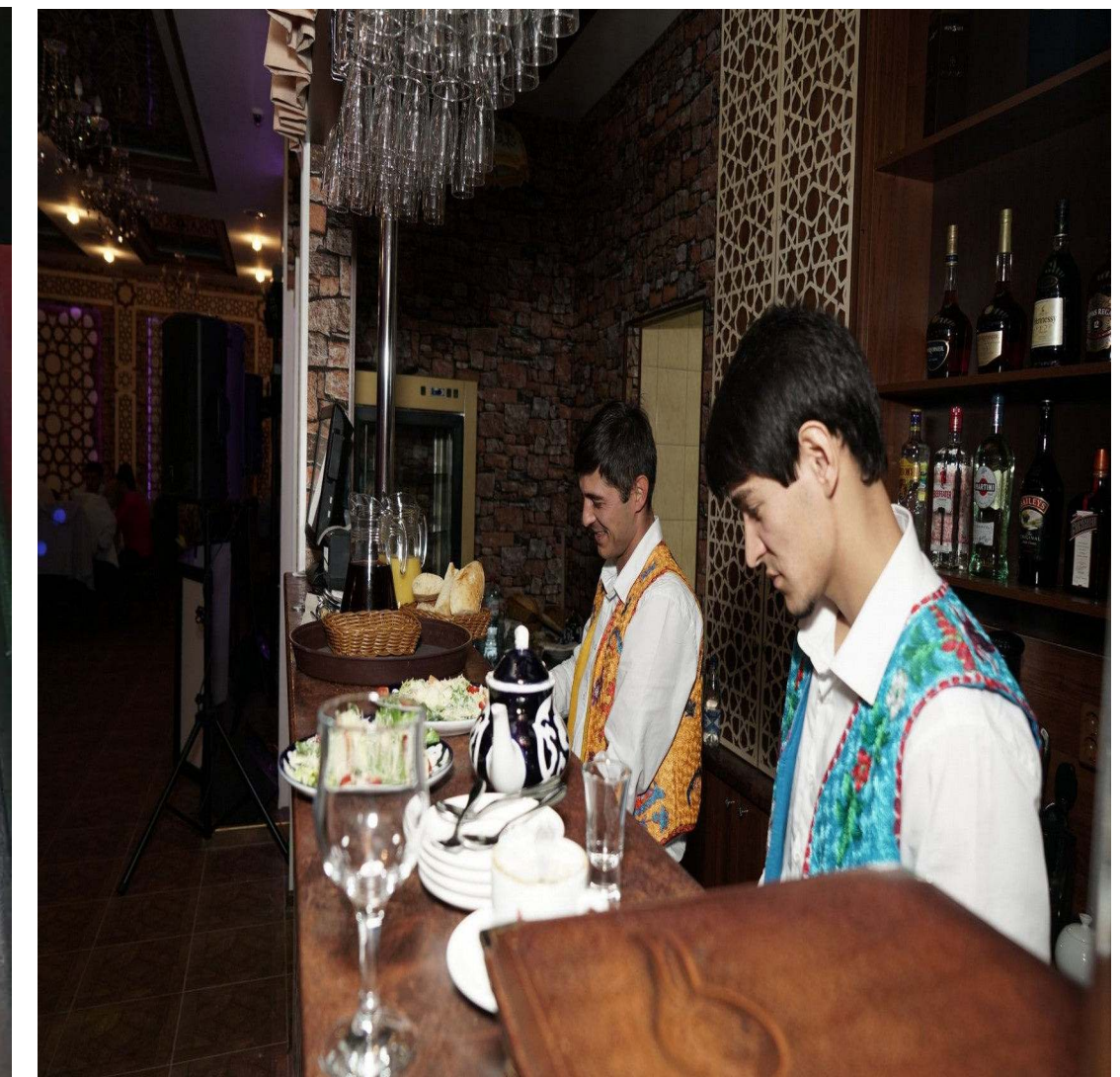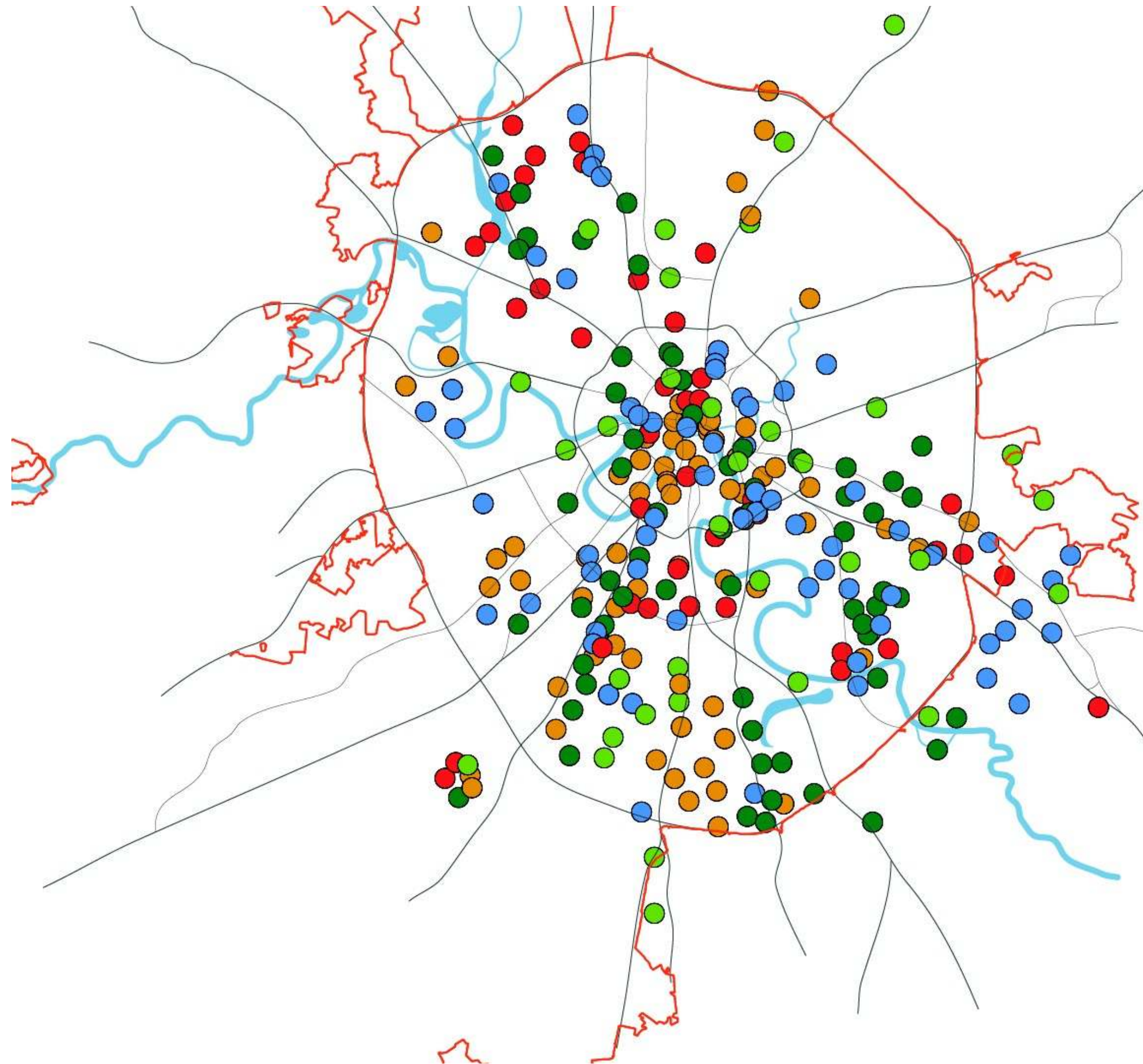ricts of the capital, resulting in a reduction in the cost of housing, which has also been assigned to the southern and Eastern sectors of the city.

Индекс опасений и недовольства жителей Москвы

по данным исследования «Механика Москвы», 2015

Факторы

- Низкая/высокая мобильность
- Опаснось/безопасность ночных прогулок
- Опаснось/безопасность дневных прогулок
- Непосредственные контакты с мигрантами (в подъезде)
- Опосредованные контакты с мигрантами (в районе)

Парк Останкино

Национальный парк Лосиный остров

Измайловский парк

Кузьминки

Серебрянные родники

Индекс опасений

I тип (до 0,15)
II тип (от 0,15 до 0,18)
III тип (от 0,21 до 0,24)
IV тип (от 0,24 до 0,31)
V тип (выше 0,31)

- Парковые и лесопарковые зоны

Everyday life environment

F1 – tightness of living conditions, affecting the mood of the person and reflecting the quality of his life,

F2 – saturation of the area with leisure and cultural institutions,

F3 – variety of consumption infrastructure (shops, shopping centers, megamalls),

F4 – variety of communication and food infrastructure (cafes, restaurants, canteens, etc.)),

F5 –investments in the district. The statistical information was supplemented with the address data on the networks of ethnic cafes in Moscow.

Среда повседневной жизни Москвы

Факторы

- Стесненность жилищных условий
- Насыщенность учреждениями досуга и культуры
- Разнообразие инфраструктуры потребления
- Разнообразие инфраструктуры общения
- Инвестиции в район

Типология районов по интегральному индексу развитости среды

- I тип (до 0,15)
- II тип (от 0,15 до 0,20)
- III тип (от 0,20 до 0,25)
- IV тип (от 0,25 до 0,30)
- V тип (выше 0,30)

- Парковые и лесопарковые зоны

Reputation of Moscow districts

F1 – Prestigious/non-prestigious address
F2 – Housing resources
F3 – Capital of higher education,
F4 – Electoral behavior (openness to change/stability)

The areas that fall into the first and fifth types, localized on the outskirts and in the Central part of the city, are most different. They are characterized by almost three times the difference in the cost of housing and almost twice – in the shower provision of living space. The proportion of people with higher education in the first type of areas is lower than the average for Moscow and is 38.5% of the adult population, and in the fifth type of areas – 58.1%; on the outskirts support the existing government, seeing in it the support of their own lives, and in the center share liberal views and opposition.

Репутационное «давление» места Москвы

Факторы
- Престижный/непристижный адрес
- Ресурсы жилищной обеспеченности
- Капитал высшего образования
- Открытость изменениям/стабильность

Парк Останкино
Национальный парк Лосиный остров
Измайловский парк
Кузьминки
Серебрянные родники

Индекс социальных позиций
- I тип (до 0,24)
- II тип (от 0,24 до 0,3)
- III тип (от 0,3 до 0,36)
- IV тип (от 0,36 до 0,42)
- V тип (выше 0,42)

- Парковые и лесопарковые зоны