



Moscow City Government

Department of Natural Resources Management and Environmental Protection of the city of Moscow

STATE ENVIRONMENTAL PROTECTION INSTITUTION "MOSECOMONITORING"



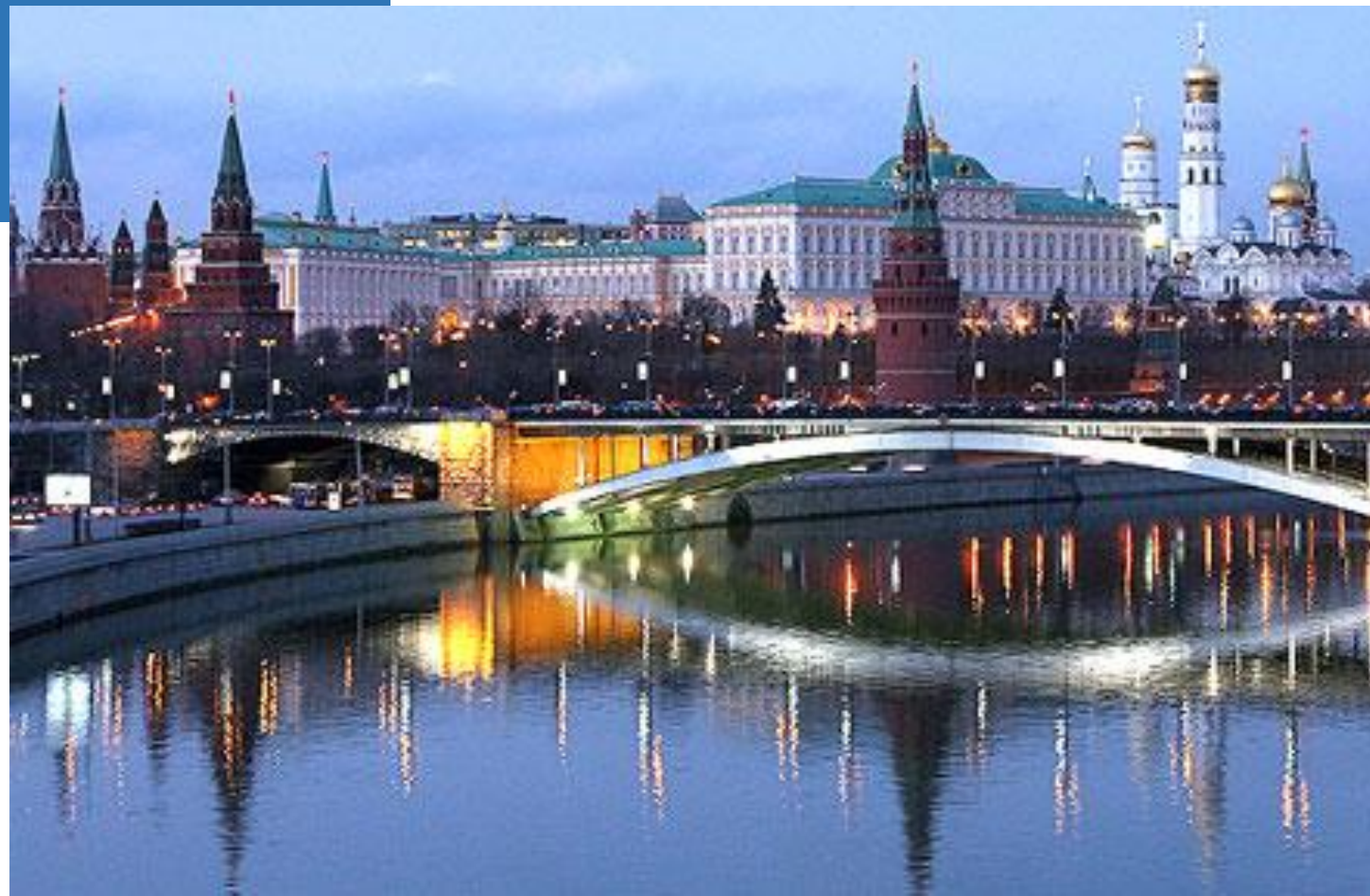
NORTHEAST ASIAN MAYORS' FORUM 2018
Low Carbon City Development: Improving Air
Quality and Reducing Greenhouse Emissions

June 18, 2018, Ulaanbaatar, Mongolia

Priorities of the climate policy of Moscow

Director,
State Environmental Protection Institution
"Mosecomonitoring"
Moscow, Russia

Zakharova Polina





The state programs of the city of Moscow are aimed at meeting those goals - there are **14** of them altogether



**MOSCOW GOVERNMENT DECREE
N 394-PP, as of July 10th, 2014
«On the main provisions of the new
environmental policy of the city of
Moscow for the period up to 2030»**

Support of a phased transition to a low-carbon economy

Transport system quality transformations

The need to use the best available technologies

and many others



РАСПОРЯЖЕНИЕ
ПРЕЗИДЕНТА РОССИЙСКОЙ ФЕДЕРАЦИИ

О Климатической доктрине Российской Федерации

В целях осуществления скоординированных действий, направленных на обеспечение безопасного и устойчивого развития Российской Федерации в условиях изменяющегося климата:

1. Утвердить прилагаемую Климатическую доктрину Российской Федерации.
2. Правительству Российской Федерации при проведении государственной политики Российской Федерации по вопросам, связанным с возможным глобальным и региональным изменением климата и его последствиями, руководствоваться положениями Климатической доктрины Российской Федерации.



Канцелярия Президента
Российской Федерации Д.Медведев

17 декабря 2009 года
№ 861-рп



2 100001 83687 0



Since 2006, Moscow is the first and so far the only Russian city participating in the Partnership of Large Cities in the fight against climate change C40.

C40CITIES

CLIMATE LEADERSHIP GROUP

- C40 LARGE CITY
- C40 AFFILIATE CITY





Nations Unies

Conférence sur les Changements Climatiques 2015

COP21/CMP11

Paris, France





CLIMATE RISKS OF CITY OF MOSCOW

Climate of Moscow- Temperate continental climate

Moscow is the coldest megacity in the world (In winter 4500 degree-day)

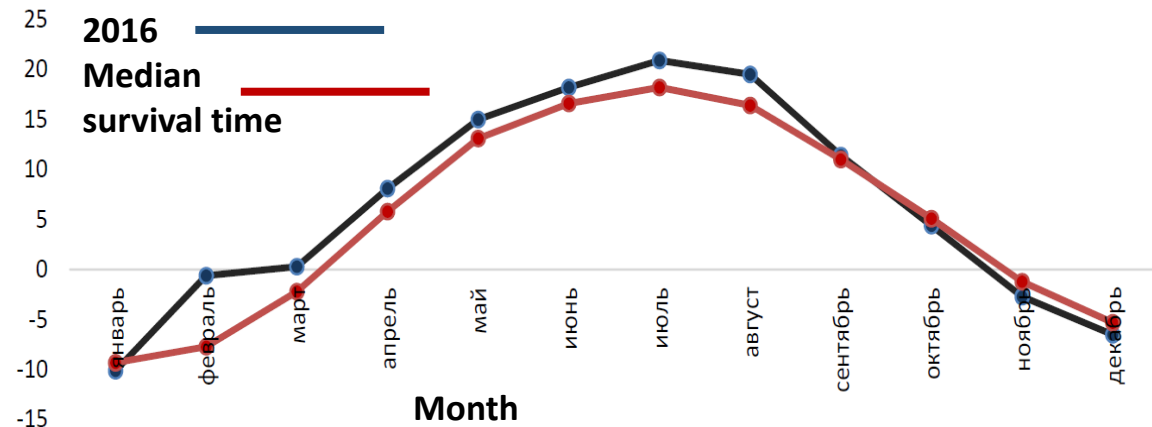
Temperature rise



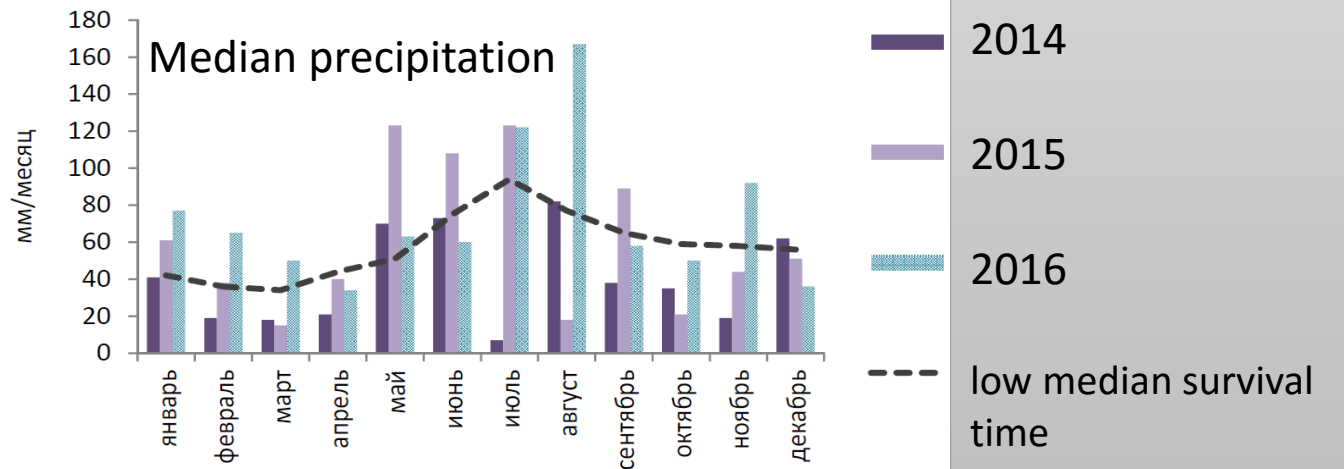
Trend



Climate instability



Dangerous nature phenomena of Moscow: tornado, hurricane, hail, hailstorm



Abnormal temperature in Moscow

- Abnormal cold weather
- Abnormal high temperature

Dangerous nature factors in 2016:

January – abnormal low temperature

14 degrees low median survival time

Main weathermaking factors of Moscow

- Physical and geographical environment
- City rising and the height of buildings
- Wide spaces of artificial turf
- Many heating stations, moisture and condensation-nucleus
- Inhomogeneous character of surface (green, water, ground, asphalt)



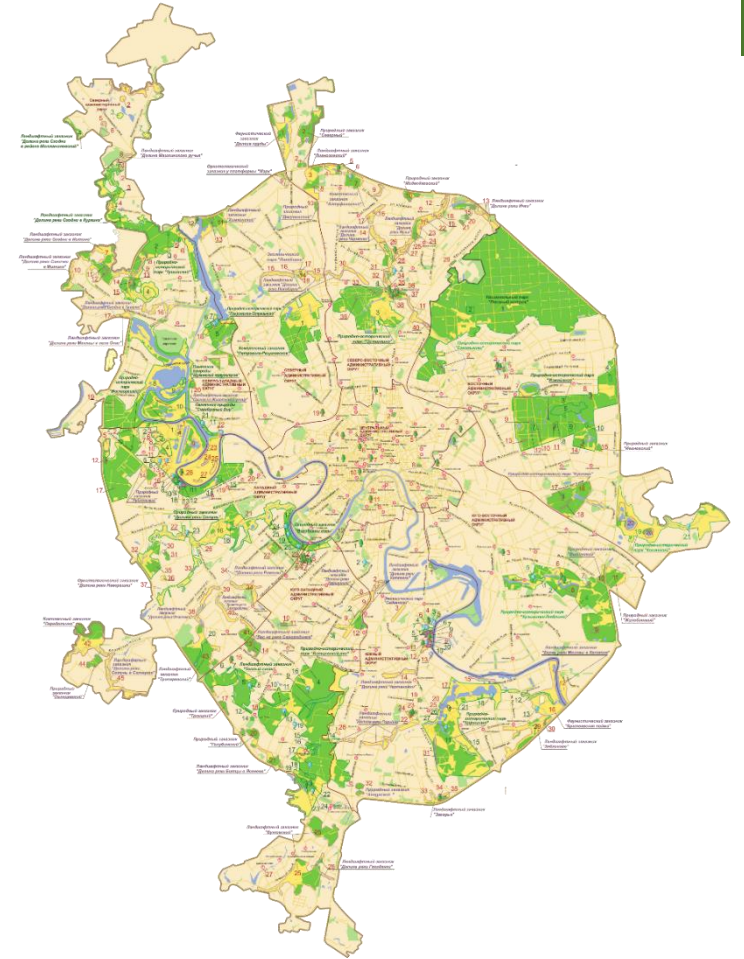
May 29, 2017 damaged the roofs of **243** houses, **135** lighting poles and about **2** thousand cars.

We still vividly recall the example of the summer of 2010, when there occurred heat waves in Moscow and the region, which became the source of numerous natural fires and thick smog.



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Specially protected natural territories of Moscow

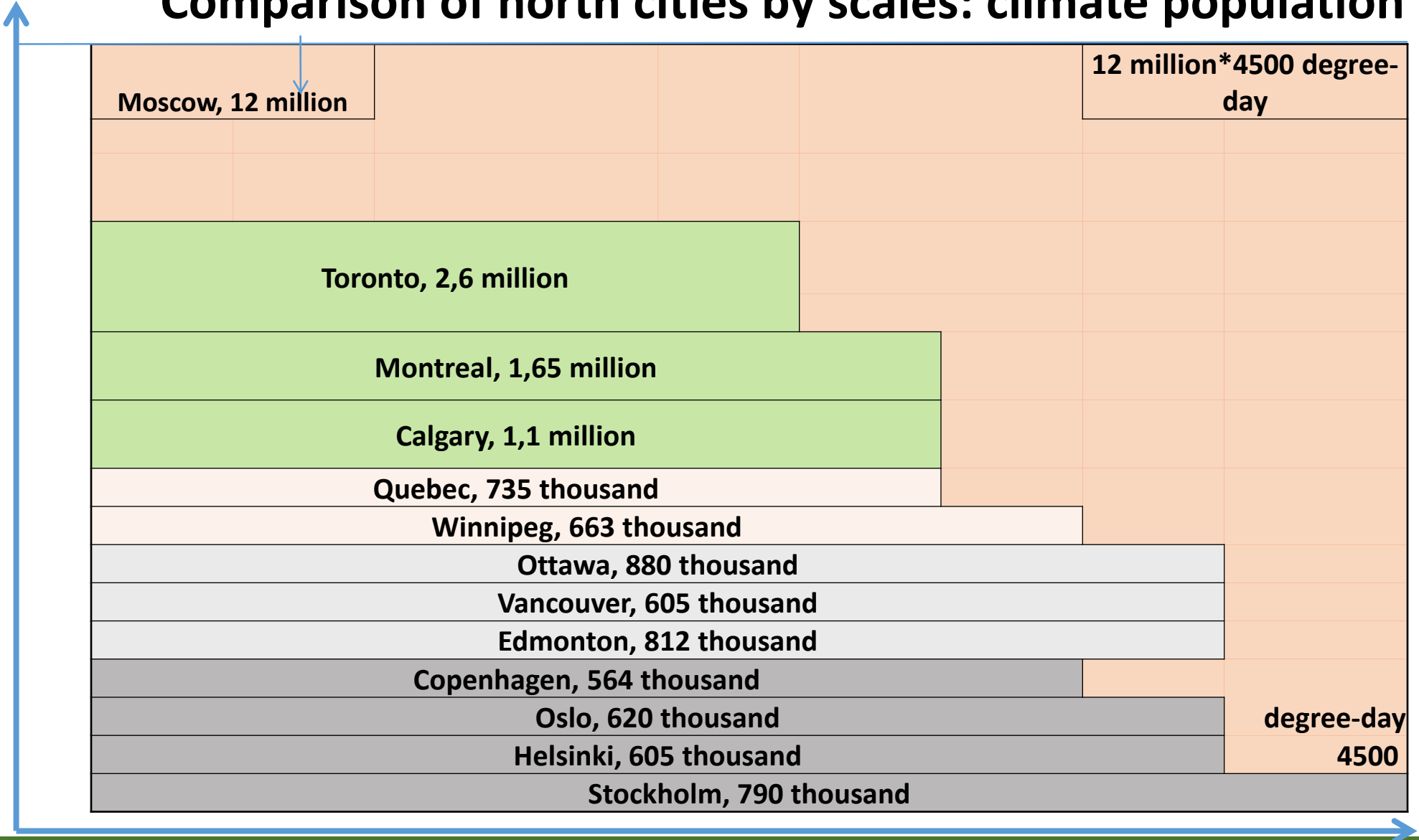


120 SPNRs - with total area of more than **17,500 ha**, which include:
1 national park,
4 state natural sanctuaries,
10 natural-historic parks,
4 protected landscapes,
100 natural monuments,
1 botanic garden

The annual volume of carbon assimilation by forest plantations is estimated at **73.8** thousand tons / year,
and the absorption of carbon dioxide - **270.2** thousand tons / year



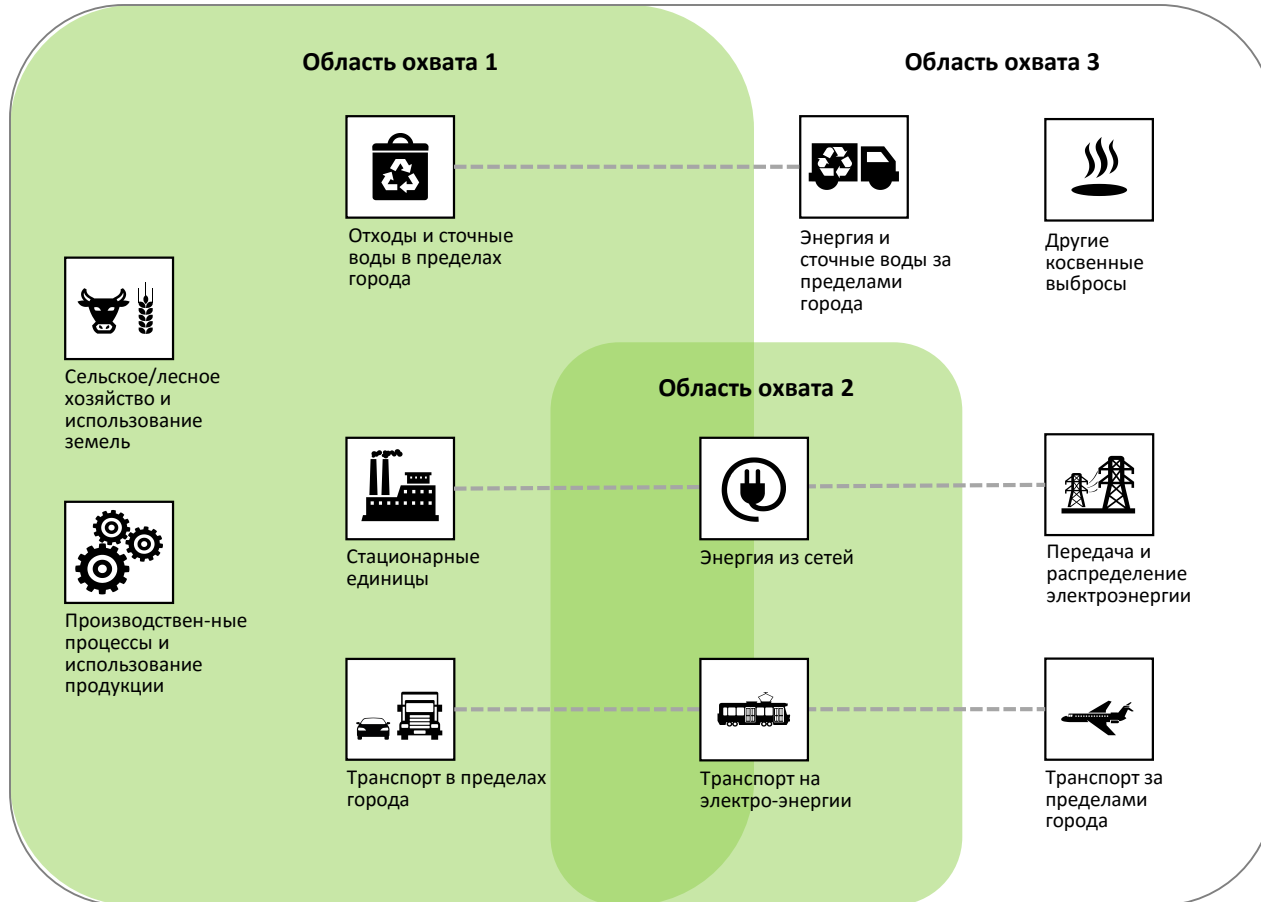
Comparison of north cities by scales: climate population



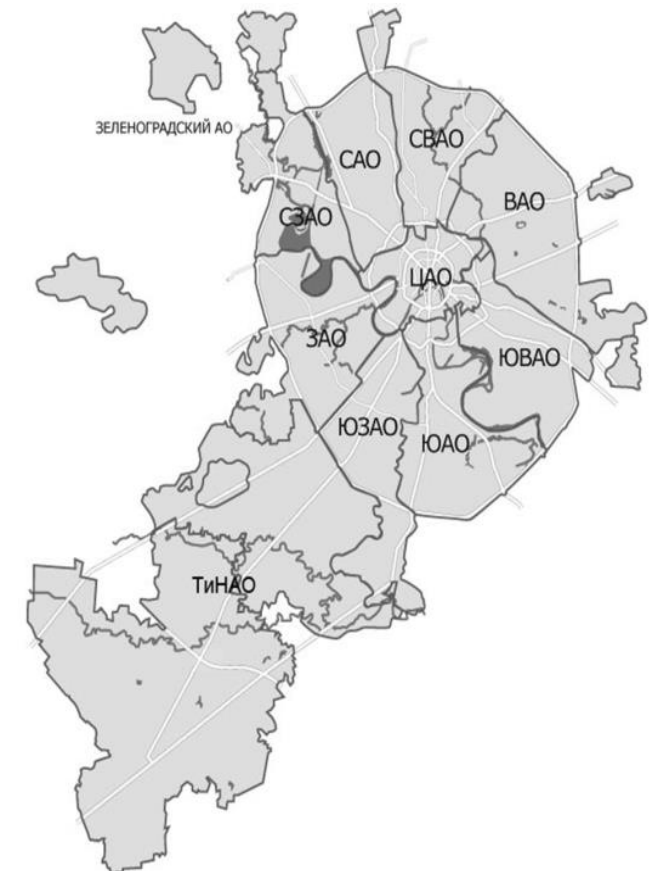


Calculation of greenhouse gas emissions in the city of Moscow is carried out using a methodology based on modern, generally accepted and open methods

Emission sources and scopes



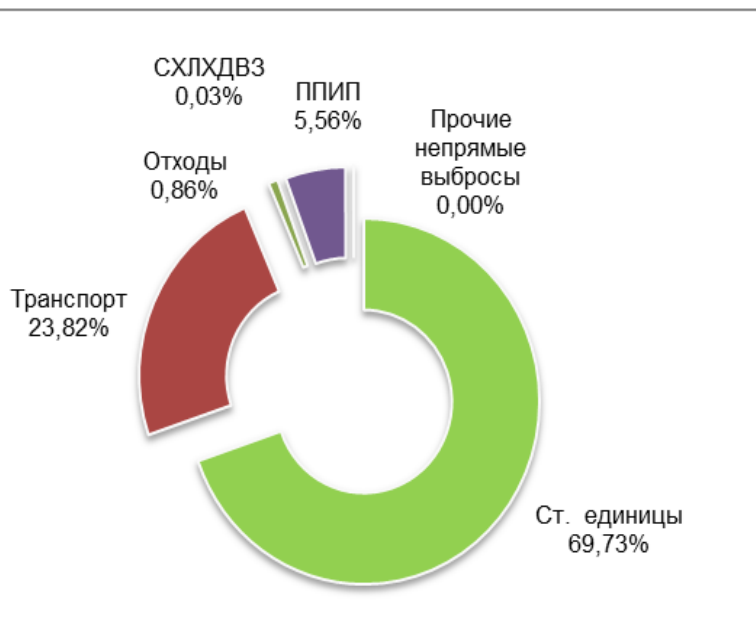
Geographical boundaries of the assessment



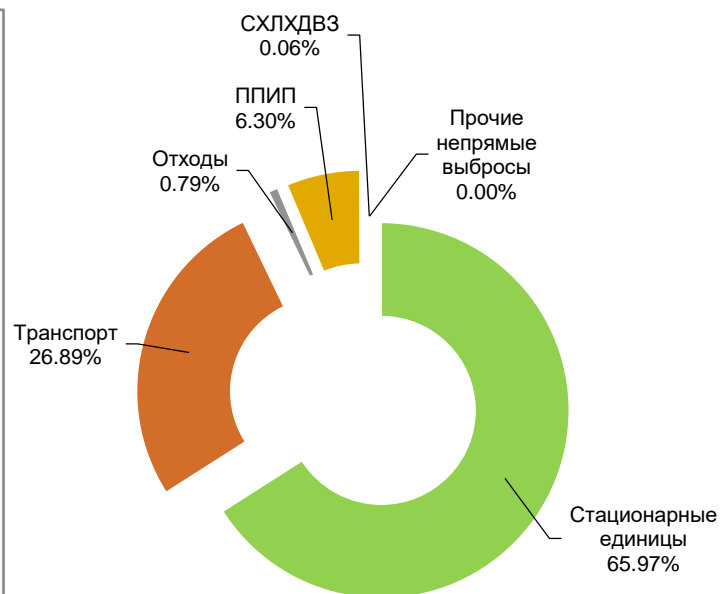


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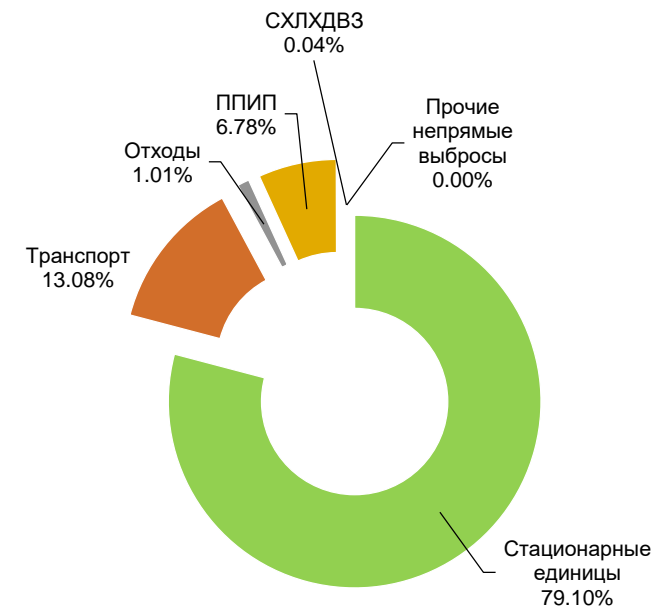
Валовые выбросы ПГ от жизнедеятельности г. Москвы в 2014 г. (область охвата 1) в разбивке по источникам выбросов



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Валовые выбросы ПГ от жизнедеятельности г. Москвы в 2016 г. (область охвата 1) в разбивке по источникам выбросов





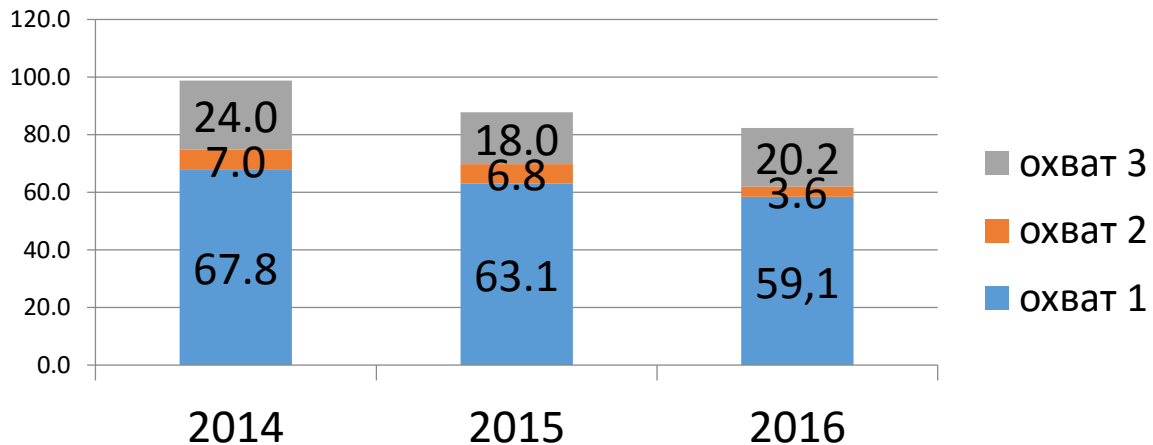
Russian Federation Presidential Decree № 752 «On Reduction of Greenhouse Gas Emission», as of 30.09.2013, has set a target **to reduce, by 2020**, the volume of **greenhouse gas emissions** to a level **not exceeding 75 percent** of the volume of such emissions **in 1990**





GHG emissions in Moscow

GHG emissions in Moscow, million ton CO₂ equivalent

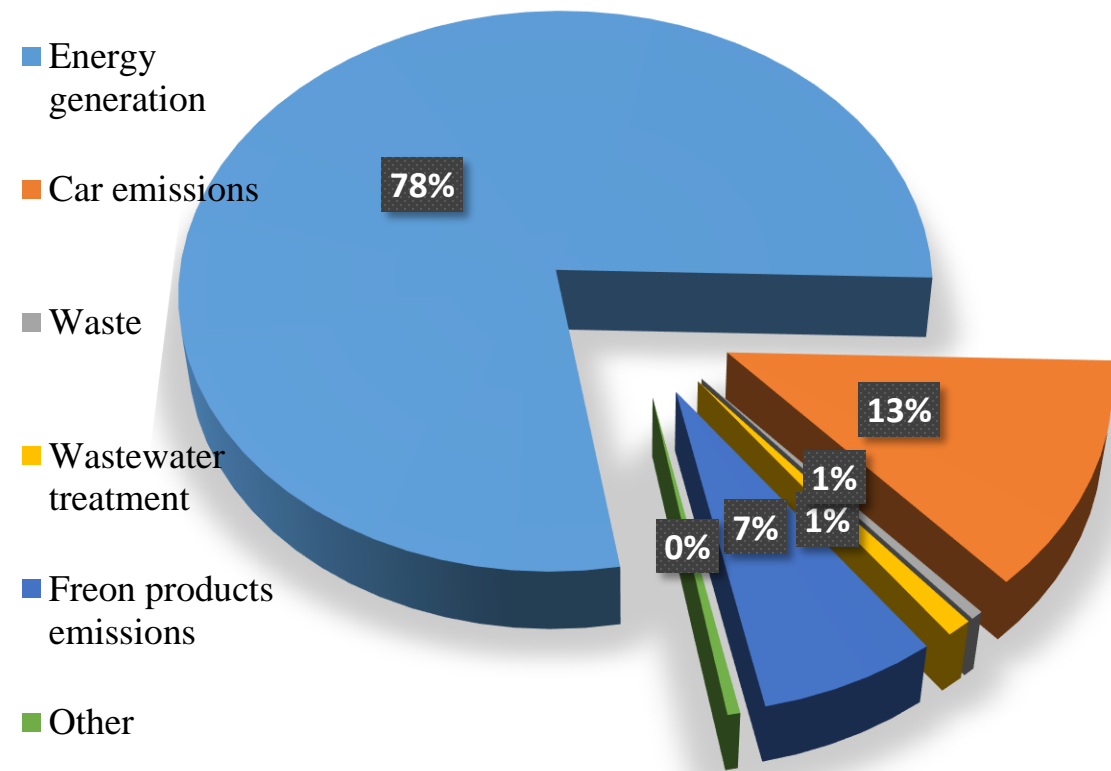


2016 год (First district)

59,1 million ton CO₂ equivalent

Information of Moscow greenhouse emissions is posted on the CDP

Input of economic branches in GHG emissions





List of possible city activities aimed at reducing GHG emissions



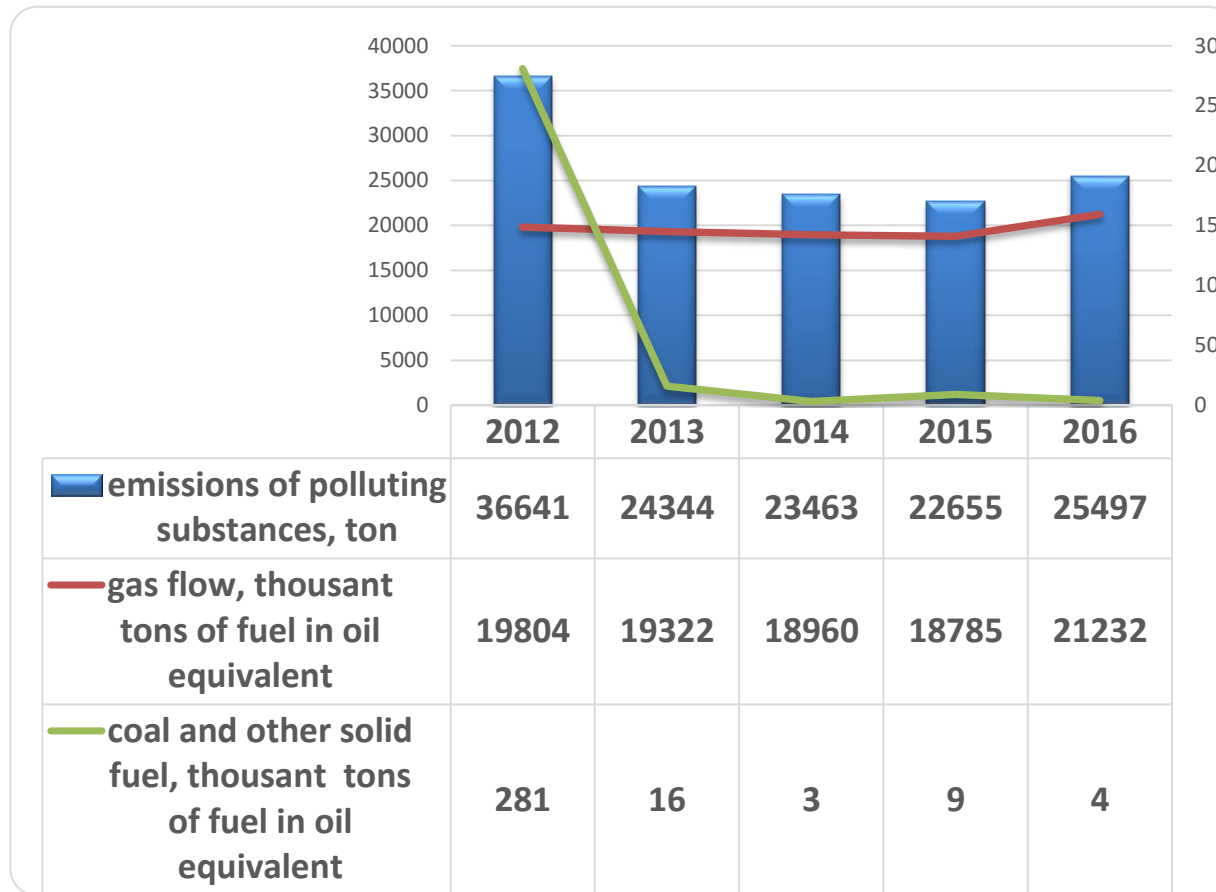
"short list"

The aggregate final potential for GHG emission reductions associated with the implementation of these activities is more than **30% of the 1990 level**

Activities of the "short list" events affect the scope of the city's heat and power complex, measures to reduce emissions in the transport system



Energy efficiency





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For 2017, the total electrical power of renewable energy reached **125 MW** of electrical and over **290 MW** of heat output

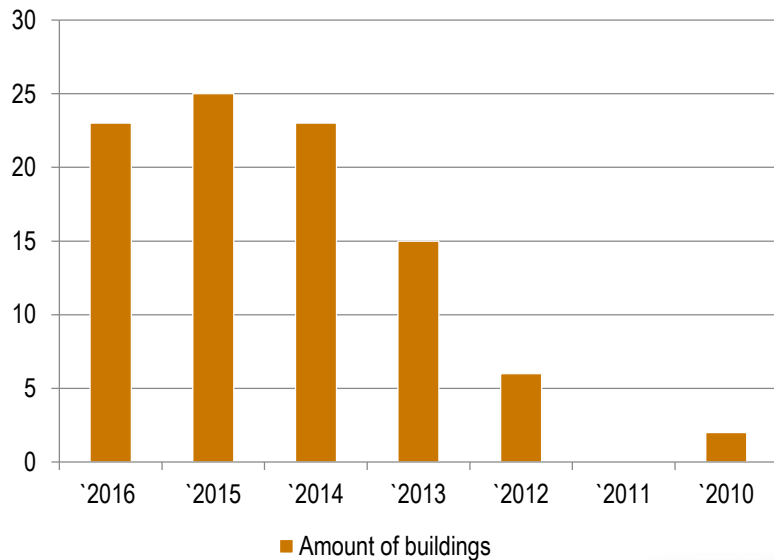
The share of renewable energy in Moscow's energy capacity is about **3%**



Green building market in Russia and Moscow

First 100 buildings were in 2010-2017, total square - **4 000 000 sq. m.**

62% - in Moscow region.

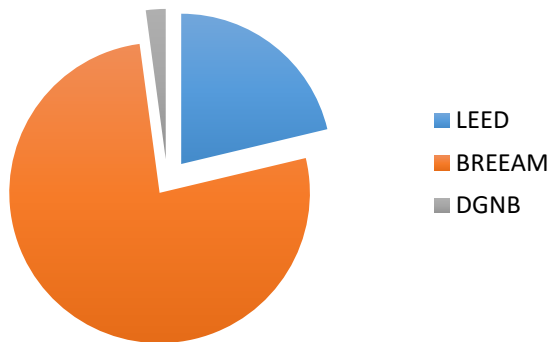


**Business centre
«White square»**

Other regions

St. Petersburg

Moscow



**Bisusiness centre
«Japanese house»**



**Bisusiness centre
«Kuntsevo Plaza»**



**Bisusiness centre
«North Tower»**



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Green real estate. Renovation

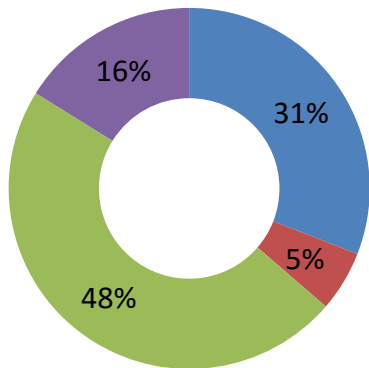




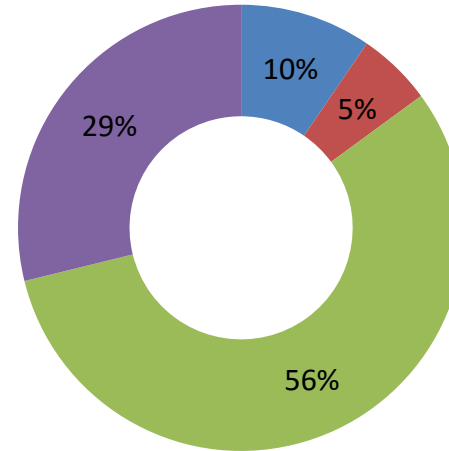
IMPACT OF VARIOUS TYPES OF TRANSPORT

- Passenger car
- Trucks < 3,5 ton
- Trucks > 3,5 ton
- Buses

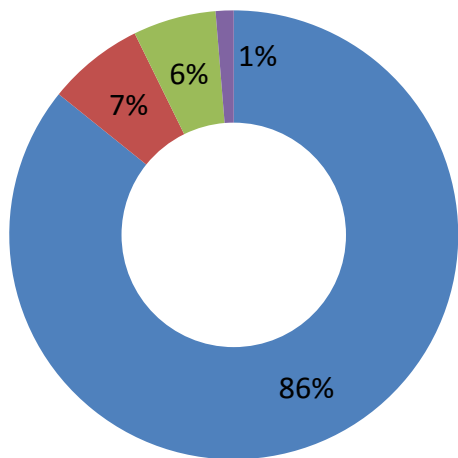
NOx



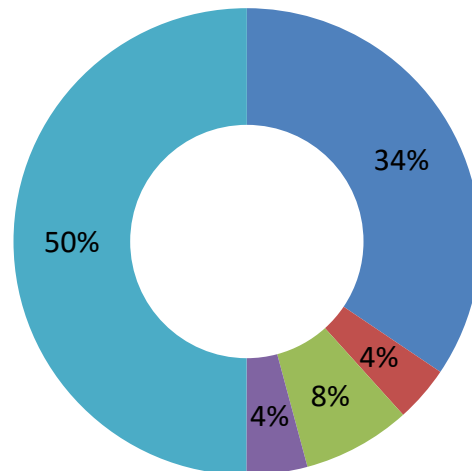
PM



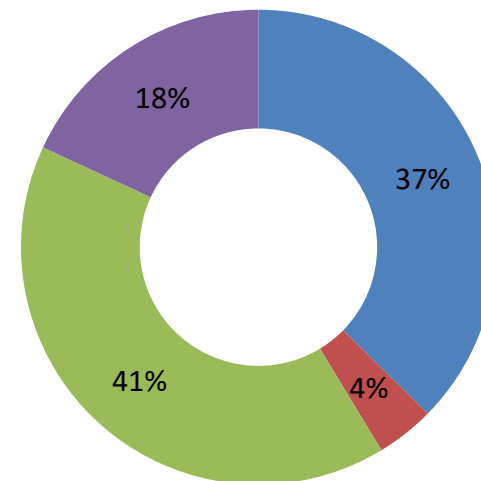
benzol



benzopyrene



formaldehyde





Comprehensive measures to reduce transport emissions

Since 2012, Moscow has reviewed the priorities for the development of transportation system. **The goal of reducing vehicle air pollution has been recognized as a first priority**

- public transport development: about 250 km of dedicated lanes have been allocated
- Moscow Central Ring became operational
- new metro stations are under construction
- paid parking zones have been introduced
- The "Truck Frame" project is being introduced to harmonize the truck traffic.
- specific traffic flow emissions are being reduced due to acquisition vehicles of 5th ecological class for urban public transport
- conversion to the fuel of at least Euro-5 Grade
- pedestrian public spaces are under development
- bicycle traffic is developing





Moscow action plan to reduce the impact of abnormal heat and air pollution on public health

The main measures to reduce the negative impact of heat on human health include:

- transfer of warnings about the occurrence of heat to the executive authorities;
- placement of warnings about the onset of heat and recommendations for reducing the negative effects of heat in the media;
- the equipment of air-conditioned premises for the population in the centers of social protection of the population, polyclinics and other public buildings;
- placement of information stands with recommendations for protection from heat;
- organization of additional water supply to persons without a specific place of residence.

Как легче перенести жару

- Больше пить
- Не передавать
- Носить головной убор
- Носить легкую свободную одежду из натуральных тканей
- Без необходимости не выходить из дома в самое тепло
- Не употреблять алкоголь
- Не курить
- Принимать прохладный душ

Как правильно питаться в жару

Включить в рацион

- 11% мясо, птица, рыба
- 14% молочные продукты
- 74% овощи, фрукты, зелень

Исключить из рациона

- жареное
- жирное
- копченое

Что лучше пить

- Традиционные национальные напитки (квас, махым)
- Травяные настои
- Чистую воду
- Кисломолочные напитки
- Зеленый чай

Ледяные, а также сладкие газированные напитки лишь увеличивают жажду

Источник: www.facebook.com/vecherka.kg @vib_kg



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Our task is to protect urban green spaces from the effects of climate change, to ensure the safety of their ecosystem functions, visual attractiveness



The 2nd Moscow Climate Forum

An international climate change event, bringing leading scientists and practitioners under one roof to discuss the key environmental, social and economic challenges we face due to climate change

September 6th-7th 2018, Moscow

At the leading exposition, museum and recreational complex of Russia – VDNH



CLIMATE FORUM' 18



2-days business program includes:

- 3 plenary sessions
- 15 round tables
- Public lectures
- Exhibition

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