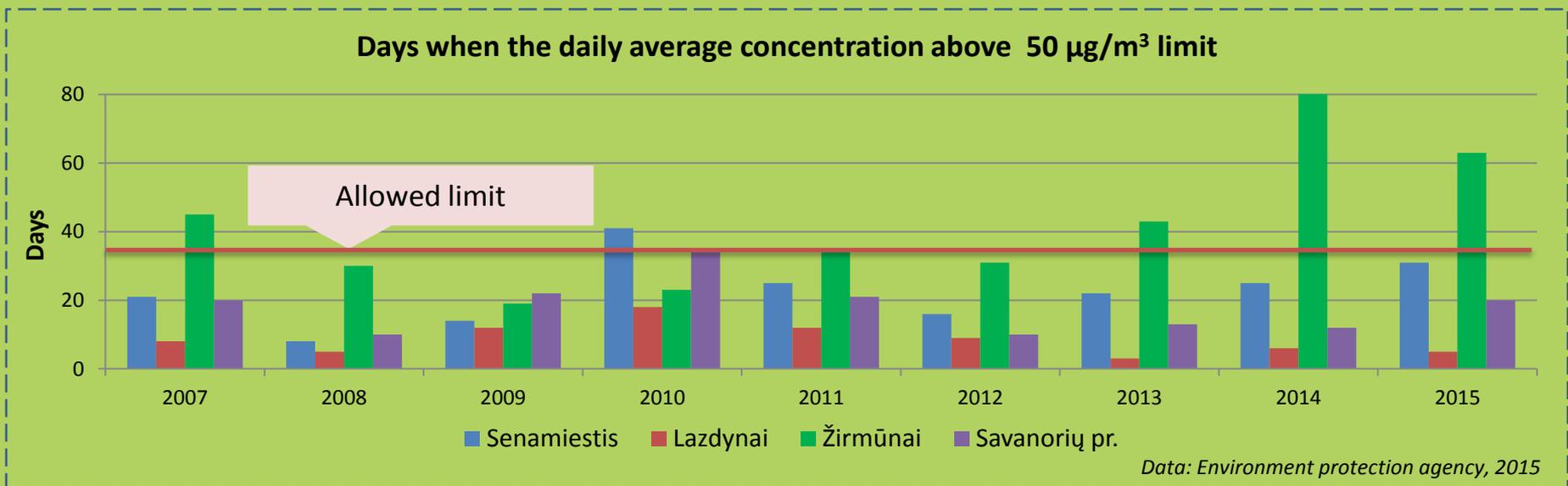


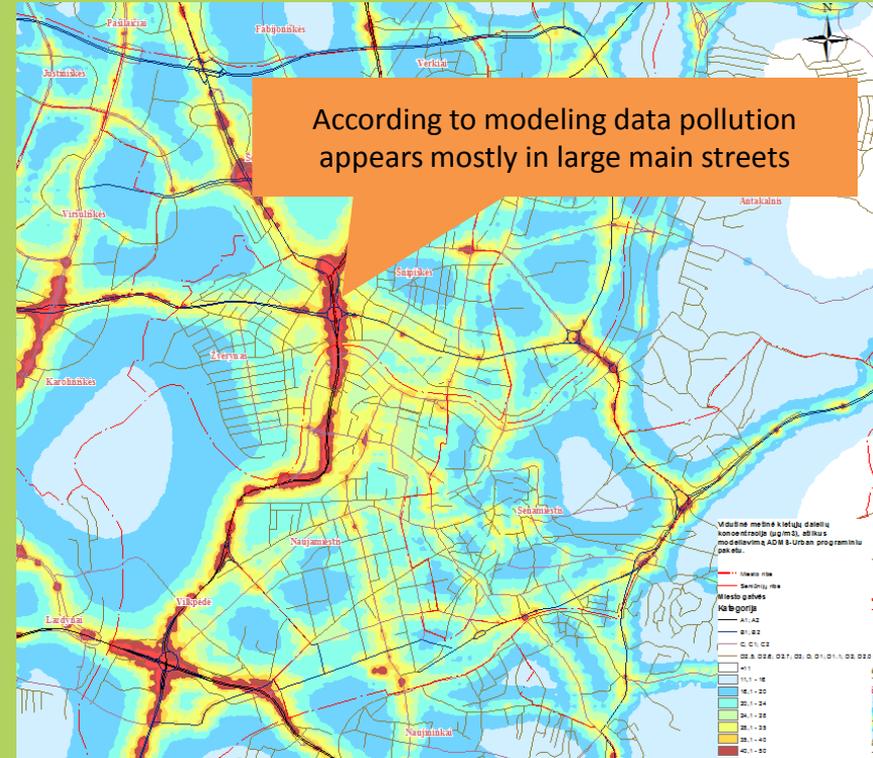
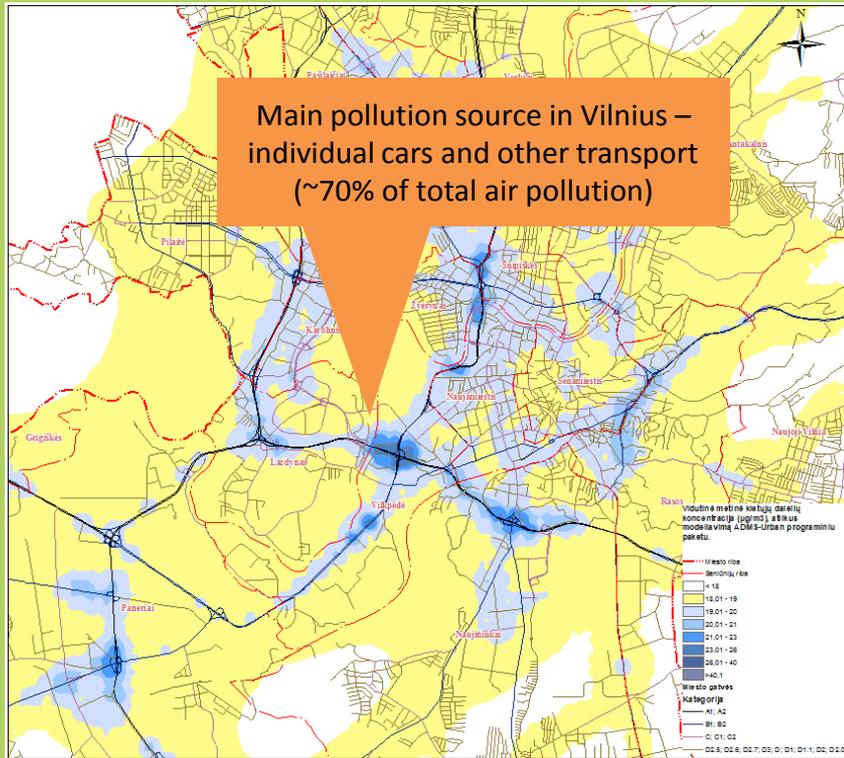
# Improvement of air quality in Vilnius city

# Current situation

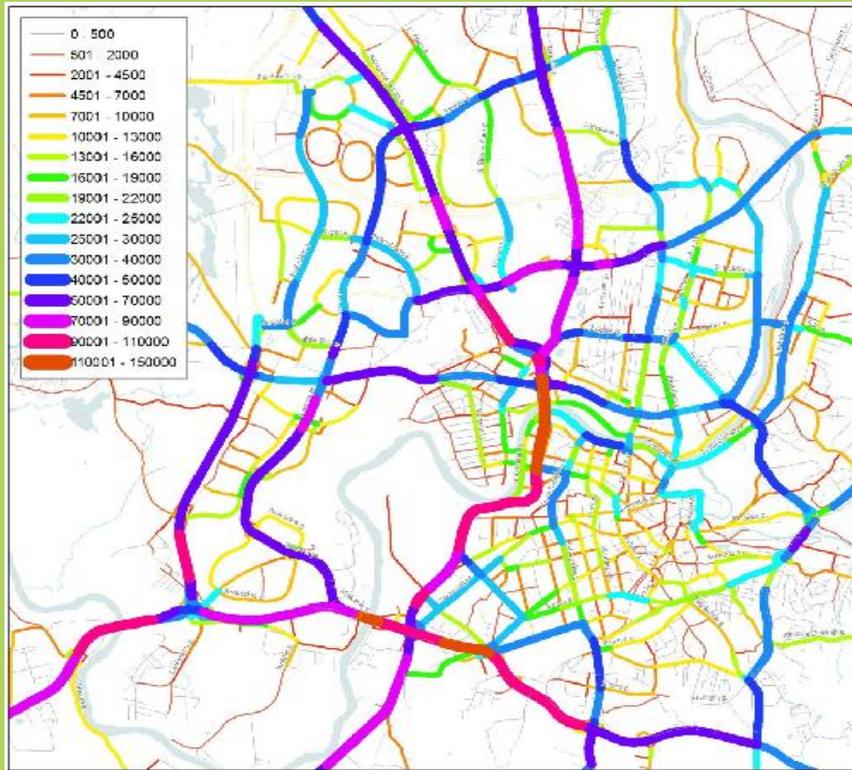
- ▶ Air pollution is still a major and main environmental problem in most big cities in Lithuania, including Vilnius. Particulate matter (PM) – air pollutants, that poses the greatest concern.
- ▶ Air is mostly polluted in cold season by centralized power heating plants & individual heating sources;
- ▶ In spring time air pollution is mainly caused by motor transport and untreated streets, where particulates are lifted from the street surfaces ;
- ▶ In 2015 daily average PM<sub>10</sub> values of Vilnius Zirmunai district exceeded the limit for 63 days (for the third year in a row).



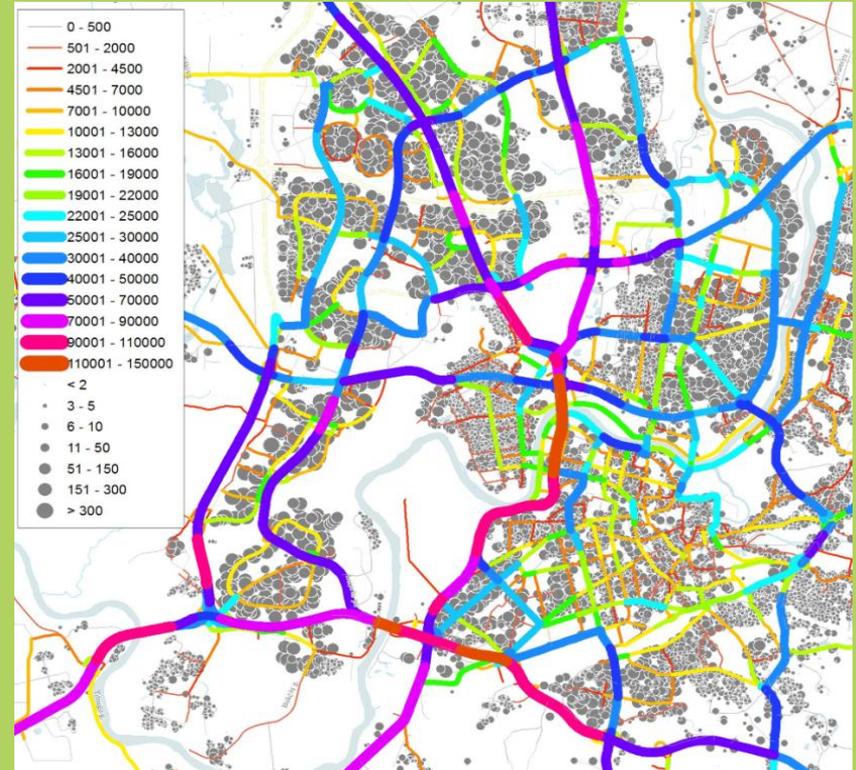
# Air pollution distribution modeling



# Transport flow modeling



“Vilnius planas” updates ~30% of transportation flow in modeling system each year;  
Data from 650 crossroads is no older than 3 years



Air pollution is high in populated areas

# Use of EU<sup>1</sup> funds for better improvement of air quality.

In order to reduce negative PM<sub>10</sub> impact to the health of Vilnius citizens, EU funding program will be utilized:

- ▶ Air quality management plan preparation;
- ▶ Acquisition of modern street sweeper technology;
- ▶ Informing the public on possibilities of air pollution reduction, air quality improvement and possible consequences of irresponsible behaviour;

Main aim of these actions is to reduce ambient air pollution by particulate matter in order to ensure that their concentration do not exceed human health and environment hazardous ambient air pollution levels.



*Illustrations*



1 – 2014-2020 EU funding action program, Priority 5:  
“Environmental protection, sustainable use of natural resources and adaptation to climate change”.

# Air quality management plan

- ▶ Measurement of PM<sub>10</sub> and PM<sub>2,5</sub> concentrations before and after street sweeping using mobile laboratory. Research analysis and evaluation measures for resuspended (from the street surface) PM pollution reduction;
- ▶ Preparation of proposals for continuous air quality improvement;
- ▶ Individual heating sources (furnace chimneys in households) impact assessment. Analysis of used fuel type for air quality impact;
- ▶ Evaluation of Vilnius city central heating system;
- ▶ Distribution of users in different territories where solid fuels are used for heating;
- ▶ Air pollution distribution modeling;
- ▶ Modeling of impact of stationary air pollution objects;



*Illustrations*



# Acquisition of modern street sweeper technology

Vilnius city municipality, with the EU investment, plans to acquire 7 new street sweeping machines, which will be carried out in an effective street cleanup and reduction of PM pollution from the street surfaces.

4 of them - compact, with an effective dust collection and filtration equipment, mainly will be used for the Old Town and the city center;

The rest – bigger bunker size street sweepers, will be used for urban residential districts, main and arterial street cleaning.

The newly acquired machine engines will be in line with the Euro 6 standard and particulate matter collection equipment efficiency will be no less than 90 percent.



Old vacuum street sweeper (1996)

Source: [heavycherry.com](http://heavycherry.com)



Street sweeper that meets the Euro 6 standard with effective PM collection equipment.

Source: [press.lectura.de](http://press.lectura.de)

# Informing the public

- ▶ To inform Vilnius public on individual transport (cars) pollution impact to air quality;
- ▶ To promote sustainable mobility measures in Vilnius;
- ▶ To inform public on solid fuel burning impact to air quality;
- ▶ Ways of reducing air pollution for residential customers;
- ▶ To inform public on impact of irresponsible burning of dirty fuels;

Information will be provided on TV, radio, public transportation, advertising areas in the city, newspapers and internet.



*Illustrations*





# Thank you, for your attention!

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