

ITALY & SERBIA: BUILDING TOGETHER

CITY OF BELGRADE
SECRETARIAT FOR ENVIRONMENTAL PROTECTION



СЕКРЕТАРИЈАТ ЗА
ЗАШТИТУ ЖИВОТНЕ СРЕДИНЕ
ГРАД БЕОГРАД

19-20. ОКТОBAR 2016

FACTS ABOUT BELGRADE

Surface **322 268 ha**

Urban municipalities **17**

Population (1991.) 1.552.151

Population (2002.) 1.576.124

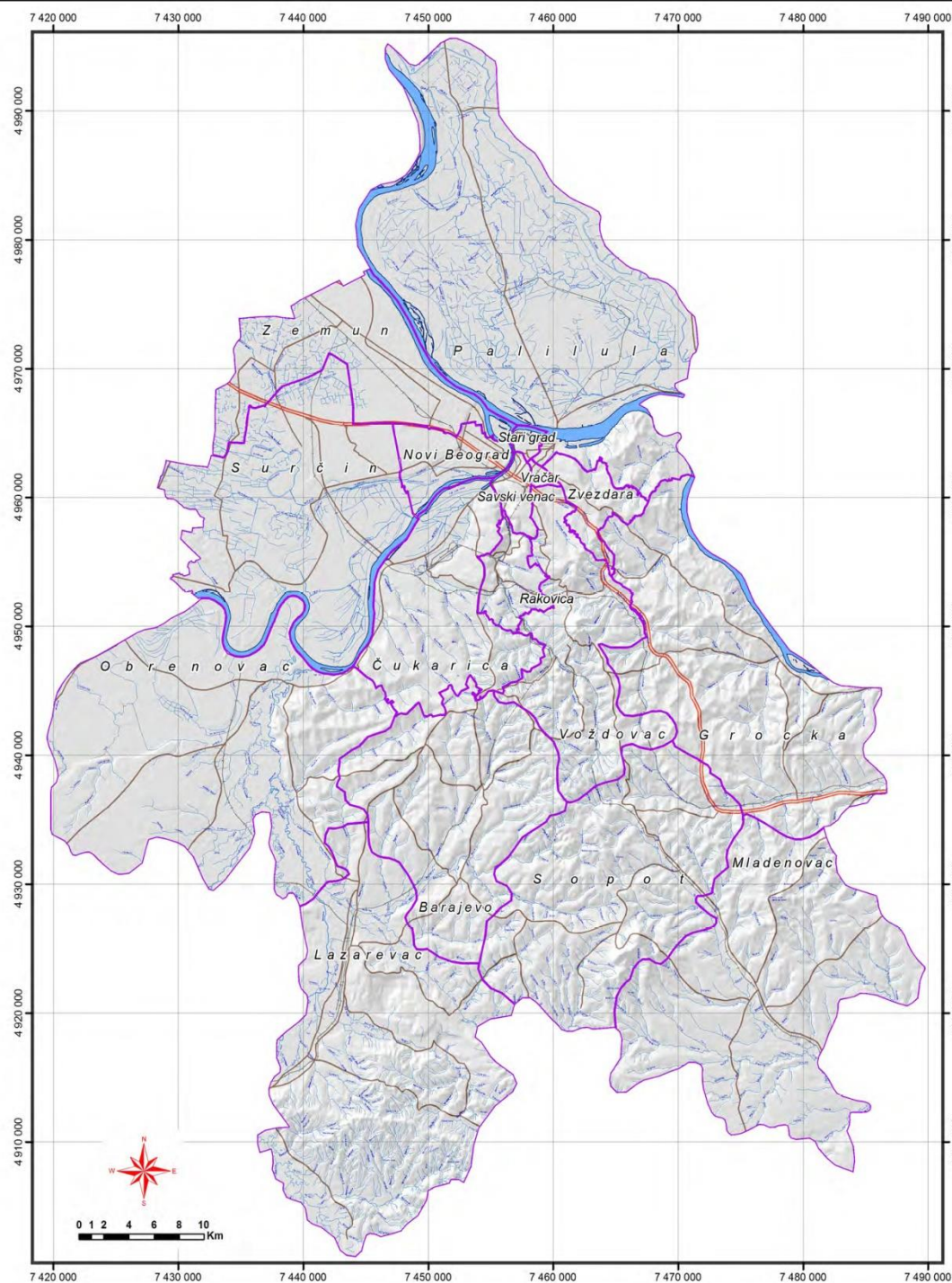
Population (2011.) **1.639.121**

About 23% of Serbia's population
lives in the capital Belgrade

Agricultural land 219.418 ha

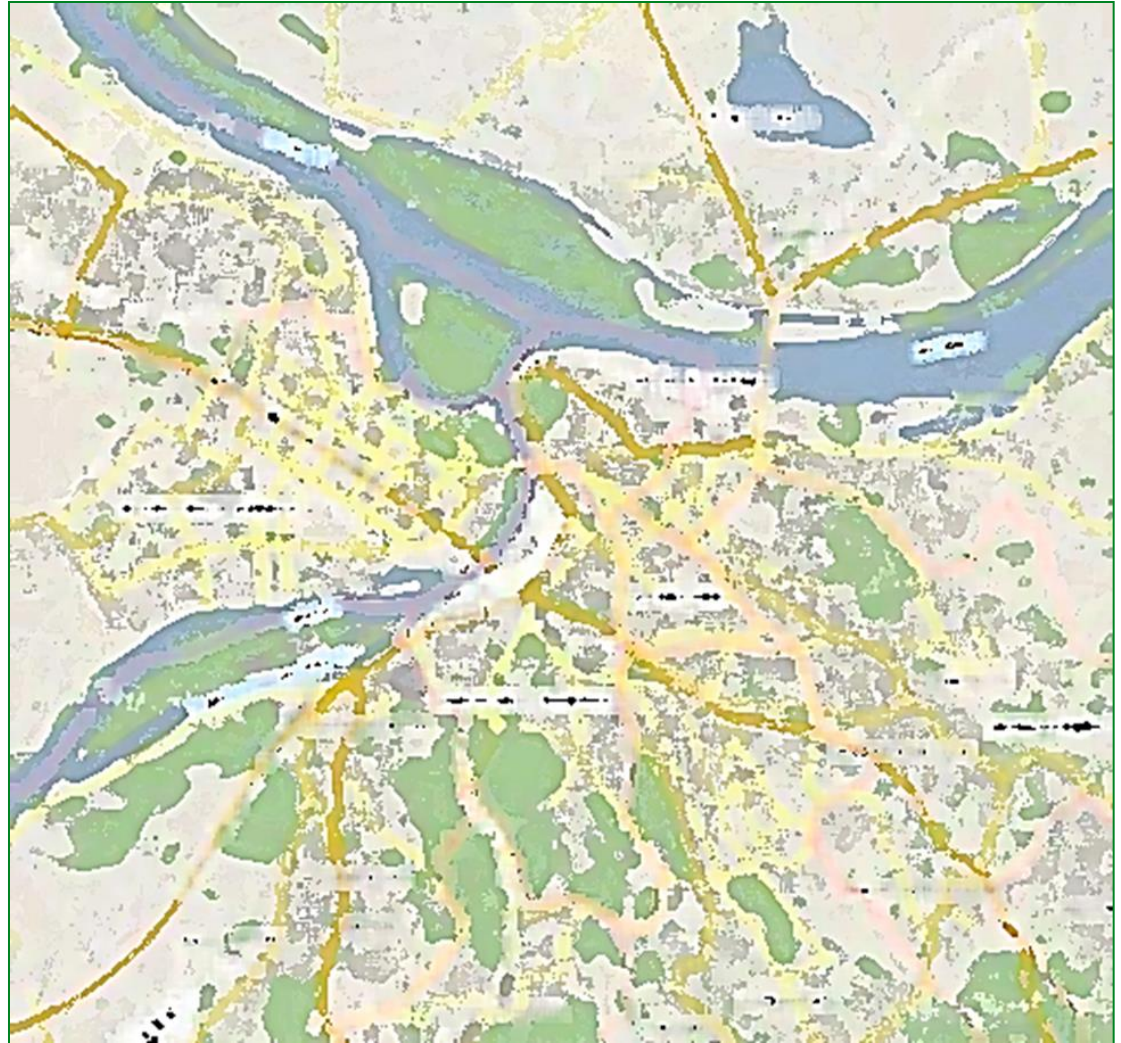
Forest area 37.443 ha

Length of roads 912 km



KEY ENVIRONMENTAL PROBLEMS IN BELGRADE

- Air pollution
- Water pollution
- Noise
- Inadequate waste management and recycling
- Unsustainable green management
- Loss of biodiversity
- Spatial planning
- Climate change and climate variability



A BRIEF HISTORY OF SECRETARIAT...

In 1974. in Belgrade, as the competent administrative body in charge of environmental protection, established a Committee on Planning and Environmental Protection

In 1990. year - Department of Environmental Protection has set aside in a separate organizational unit of the City Administration
- Secretariat for Environmental Protection.

THE SECRETARIAT IS RESPONSIBLE FOR:

- **Continuous monitoring of the situation in the environment** (systematic monitoring of air quality, monitoring of river-water quality , water quality, monitoring of pollution levels in land, measurement of noise pollution and ionising and non-ionising radiation;
- **Protection of the natural environment**, preservation, utilization and development of natural resources of special value;
- **Establish of pollution register and inventory**, drafting and implementation of plans of action and revitalisation, and programs and projects in the area of environmental protection

- **Establishing environmental protection restrictions and measures during the urban and spatial planning process**
- **EIA** - evaluation and approval of environmental impact studies for specific construction projects planned on the territory of the City. It also carries out procedures for the assessment of new facilities;
- **SEA** -issuing approval with regard to strategic evaluations of the impact of specific plans and programs on the environment
- **IPPS - integrated pollution prevention and control** - issuing approval and work permits for specific installations and activities
- issues integrated licenses for waste and hazardous chemicals management
- Waste and **chemical** management
- **The Secretariat also conducts other state administration responsibilities delegated to the City by the Republic**

CONTROL OF THE QUALITY OF ENVIRONMENT IN BELGRADE

The assignment has been realized through annual programs, with the exception of Ambient Air Quality Program, which is adopted for bi-annual period.

Air Quality Program

- The quality of ambient air originating from stationary sources (industrial facilities, heating stations, small trade facilities), at **27** measuring spots and originating from motor vehicles exhaust gasses in **18** most frequently used traffic arteries in Belgrade

The quality of river waters

- Sava, Danube, Kolubara, Galovica Canal and of **20** minor water streams; quality of other canals, retentions

Water of the Sava Lake, Lido bathing area and locations under the Mt.Avala (Pariguz, Bela Reka and Duboki Potok)

Water quality of springs, from **30** public fountains;

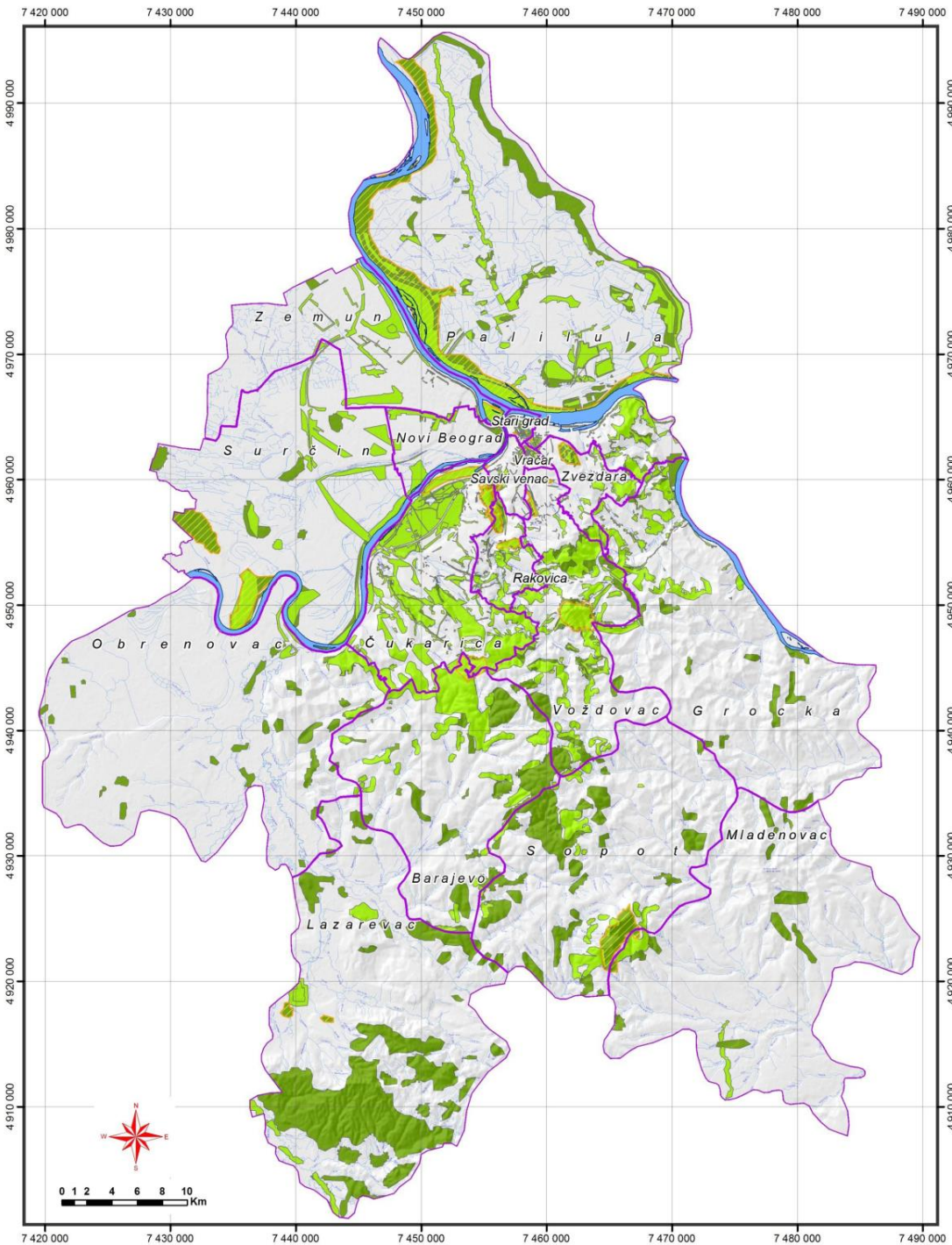
The quality of drinking water, produced in central and local waterworks;

The level of communal noise, during the day and night, at **35** measuring spots;

The degree of pollution of agricultural land in the zones of sources of drinking water and along the traffic arteries, at **40** spots

The level of radioactivity in the environment (air, water, rainfall, river water, drinking water, soil, foods, animal feed).

BELGRADE FOREST



-  Protected area
-  The planned new forests
-  Existing forests

Afforestation

“Afforestation strategy for Belgrade area” city Assembly adopted in June 2011.

- 1 st activity on Ada Ciganlija 17. October 2011.
- percentage of forest cover 11,2 %.
- forest cover 0,025 ha/ citizen ,
- forest cover 0,33 ha. / citizen - ensure preservation of the environment of a region
- **forested than 650 ha since 2011th**
- **and 1000 of trees planted.**
- We finance the development of Afforestation Plans for diferent municipality

FACTS ABOUT BELGRADE



There are a total of 44 protected areas in the territory of the City of Belgrade:

36 monuments of the nature - individual trees

3 areas of exceptional characteristics (“Veliko ratno ostrvo”, Kosmaj, and the mountain Avala)

5 monuments of the nature – geological location

2 sites as nature reserves

6 sites protected area of direct cultural property.

11 In procedure to become protected

Protected natural areas currently occupy **1.76%** of the total area of the city.

In the future it is planned that **2.34% of the total area is in formal conservation status**

ENVIRONMENTAL DEVELOPMENT PROGRAM OF CITY OF BELGRADE

Secretariat for Environmental Protection, have obligatory under the national Law on Environment („ Official Gazette PC”, бр. 135/04, 36/09, 72/09 и 43/11) to develop a program

- ▶ Is under preparation in co-operation with other city secretariats
- ▶ The programme consisting of various projects to be implemented from 2014 to 2024 on will also include a chapter on climate change
- ▶ The aim of the program is to define the priority directions of development policy and environmental management in Belgrade in the next ten years

The program includes the following core services:

- description and assessment of the environment;
- assessment of trends and key issues in the environment;
- basic objectives and criteria for the implementation of environmental protection as a whole , by sectors and geographical areas of priority measures;
- the most favorable conditions for the implementation of economic , technical, technological, economic and other measures for sustainable development and environmental management ;
- long-term and short-term measures for prevention, mitigation and control of pollution;
- holders, methods and timeframe ;
- resources for implementation .

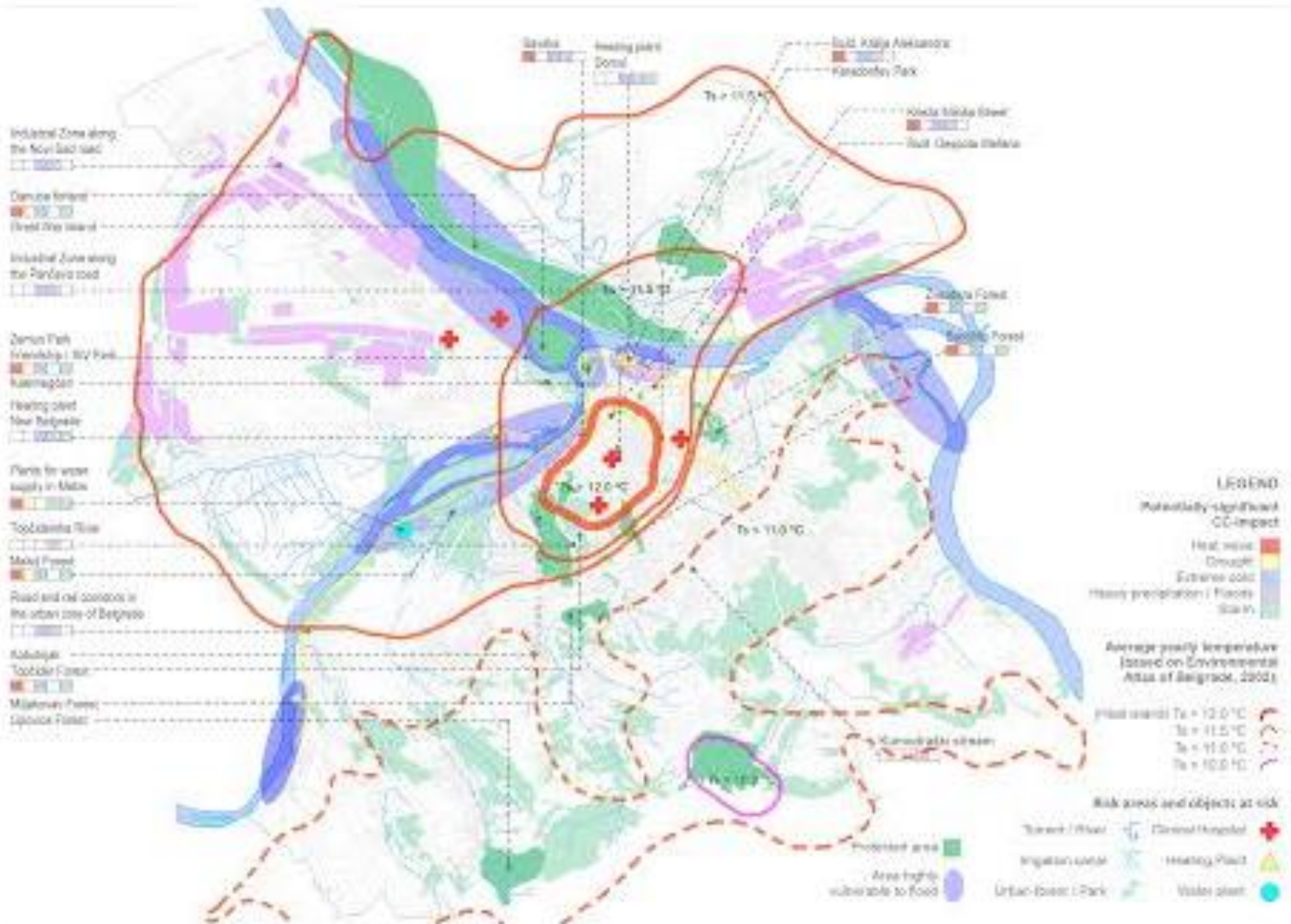
IDENTIFICATION OF PRIORITY ACTIVITIES AND PROJECTS

- Construction of the wastewater treatment plant;
- Create conditions for the primary waste selection;
- Increase the use of energy from renewable sources;
- Rationalize energy consumption in the public sector;
- Increasing areas under protection;
- Increase and better territorial spread green areas - "green infrastructure;
- Implement measures to reduce emissions of pollutants originating from traffic;
- Strengthen institutional capacity for environmental management and natural resources;
- Develop an information system in the field of environment

CLIMATE CHANGE ADAPTATION ACTION PLAN AND VULNERABILITY ASSESSMENT

- Participation of the City of Belgrade in the regional project "Adaptation to climate change in the Western Balkans" (Belgrade, Podgorica, Tirana) - implemented by GIZ
- In 2014, the City of Belgrade formed Steering and Working Group (WG) for the project.
- The Working Group was composed of representatives of the city administration, the city public enterprises, relevant institutions and experts.
- The document is the result of multisectoral WG.
- The Action Plan treats the whole administrative area of the City of Belgrade

MAPPING OF EXISTING VULNERABILITIES



THE ADAPTATION ACTION PLAN

The highest priority is given to:

- flood protection,
- green infrastructure

High priority is given to:

- establishment and improvement of the warning system; information and awareness, as well as other institutional and organizational measures;
- urban planning for flood protection;
- construction of retention ponds, drainage, saving and reuse of water;
- the establishment and rehabilitation of green spaces and streets.

RESEARCH STUDIES, PROGRAMS AND PROJECTS

- **“General regulation plan for Green Areas System of Belgrade”**
- **Project “Mapping and Validation of the Belgrade Biotopes” GIS**
- **Project: “Integrated Valorization of Forest Resources”**
- **Project: “Air Quality Plan in Belgrade”**
- **Procurement 2 measuring station for measuring point for the control and monitoring of air derived from stationary sources in Lazarevac - Vreoci**
- **Project: „ Local register of environmental pollution in Belgrade “**
- **The program of rehabilitation and revitalization of neglected green areas - the urban pockets”**
- **Project: “Research and Rehabilitation of the Area of Ada Huja in Belgrade”**

BUILDING PROJECTS "URBAN POCKETS"



BOILER ROOMS IN BELGRADE

- Large number of public buildings in Belgrade use environmentally unfavorable fuels (coal, oil fuel etc.)
- Old boilers in many buildings – low energy efficiency
- Exceeding allowable emissions of pollutants
- Vulnerable groups are threatened – (children – CO poisoning)
- Secretariat for Environmental Protection has developed the solution:
- On the basis of current technical possibilities for connecting to district heating system (DHS) and
- If the Environmental inspection prohibited work of boiler rooms due to exceeding allowable emissions of pollutants.
- Choice of boiler rooms which will be shut down based on these data
- This program has enabled connection of **13 public buildings to DHS** since 2012
- This successful program continues...

UNEP - BELGRADE PROJECTS:

- DISTRICT ENERGY IN CITIES – “CHAMPION CITY” – 3 YEARS
- BUILDING EFFICIENCY ACCELERATOR – “DEEP DIVE” – 1 YEAR

The City of Belgrade joined both projects – the only one in the World

District Energy in Cities includes following topics:

- Ownership structure of DH Company (JKP “Beogradske elektrane”)
- Reduction of influence of DHS on the environment
- Billing based on consumption
- Rehabilitation of the production and distribution capacities in DHS
- Application of new technologies – RES
- First steps in 2016 – Workshop on October, 31 and Rapid Assessment
- Main goals: Creating DH plan for the whole City, replication possibilities and creating the environment that stimulate investments of top companies in DH

Building Efficiency Accelerator:

- The City of Belgrade has 600 flats and 1/3 residential buildings don't even have insulation; huge number of public buildings too.
- This project has the aim to develop investments in the field of energy efficiency
- Technical consultant will be working with City for a year + demonstration project

ECONOMIC INSTRUMENTS AND FINANCING

The funds that come to the Budget Fund for Environmental Protection of the city of Belgrade are determined pursuant to Articles 85 and 87 of the Law on Environmental Protection and include:

- compensation for environmental pollution,
- compensation for substances which deplete ozone layer,
- compensation for emissions of SO₂ and NO₂, powder substances, and produced or disposed waste,
- compensation for the protection and improvement of the environment.

Also, the funds entering the Budget Fund for Environmental Protection of the city of Belgrade are determined on the basis of Article 82, paragraph 3 of the Law on Forests and include compensation for the use of forests.

WASTE MANAGEMENT

- The City Assembly adopted **the Local Plan for Waste Management** in the City of Belgrade for the period 2011-2020, of which implementation is expected to cost EUR 228 million.
- The Plan covers 10 central city boroughs, as well as the boroughs of Grocka, Mladenovac, Surcin and Sopot.
- The Plan primarily implies that all citizens of the capital city should be covered by the waste collecting service, which is why new underground containers will be installed in central city boroughs, while the network of regular containers and trash cans will be expanded in the suburbs.
- Each borough will get a green yard where the citizens will be able to dispose of their waste and bulk trash for free. The waste from such yard will be transported to a recycling plant, and the plan is to build two transfer stations, one in New Belgrade and the other in Rakovica, where waste will be treated for the needs of transport to the Waste Management Center in Vinca .
- What is also in the pipeline is the rehabilitation of the existing landfill in Vinca and construction of a new one, which will be in accordance with international standards. The plan also includes the use of landfill gas in electricity generation.
- According to the plan, the funds for all aforementioned projects will be provided from the city budget, environment protection funds, and loans.

WASTE MANAGEMENT

Waste management system

- ✓ **Developing PPP project for treatment and disposal of waste**
- ✓ **Introducing separate collection system**
- ✓ **Costrucion of minimum 14 recycling centers**
- ✓ **Costrucion of 3 transfer stations**
- ✓ **Closure and remediation of all unsanitary landfills in Belgrade**
- ✓ **Costrucion of fascility for composting of green waste**
- ✓ **Costrucion of fascility for recycling of CDW**

COLLECTION



Mixed recycable waste



Separate recycable waste



Recycling islands



Bins for individual households



City bins

RECYCLING CENTERS

All municipalities will have at least one recycling center for collection of hazardous and recyclable waste from households



Your Civic Amenity Waste & Recycling Sites in Rutland

THE PERMIT SYSTEM FULLY EXPLAINED

cartons		furniture		plastic bottles	
brown glass		food & drink cans		scrap metal	
building materials		green glass		shoes	
car batteries		hardcore & rubble		soil	
cardboard		household waste		fridges & freezers	
fluorescent tubes		garden waste		steel cans	
clear glass		wood & timber		paper	
clothes		mixed paper & card		textiles	

www.rutland.gov.uk

VINČA LANDFILL

- Existing landfill will be closed and remediated
- Landfill gas of nearly, 4 MW will be utilised.
- All other landfills in all municipalities will be closed and remediated



PROJECT PUBLIC PRIVATE PARTNERSHIPS FOR TREATMENT AND WASTE DISPOSAL

- ✓ Remediation of existing landfill
- ✓ Construction of new landfill cells in accordance with EU standards
- ✓ Construction of EfW facility
- ✓ Construction of CDW recycling facility
- ✓ Construction of facility for landfill gas utilisation

- ✓ 0% BMW landfilled

THANKS FOR YOUR ATTENTION!

www.beograd.rs

www.klimatskepromenebeograd.rs

natasa.djokic@beograd.gov.rs

filip.abramovic@beograd.gov.rs