Support to sustainable urban mobility
Belgrade, Serbia

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Starting point - Negative effects of traffic

• EU – over 75% of population in urban areas;
• Traffic as a source of Air Pollution – largest individual pollutant;
• Belgrade – More than 50% of air pollution comes from traffic + in average 1.7 million t CO2/year;
• Quarter of GHG emissions;
• Polluted urban air = 100,000 human casualties per year in Europe;
• Polluted air = increase in cardio-vascular and respiratory difficulties;
• Clean air = longer life expectancy up to 8 months;
• Yearly Report on Air Quality in Serbia – polluted air in particular in agglomerations (Belgrade, Bor, Pancevo, Kosijeric etc.)
Sustainable Urban Planning Concept

• Advantages of urban areas: socio economic needs – education, health protection, culture, labor markets...

• Coherency of Planning policies: socio-economic development + environmental protection = sustainable urban environment;
UNDP/GEF Project

“Support to sustainable urban transport in the city of Belgrade”
Background Information

• Implementation period: 2011 – 2014;
• Project Partners:
  – Ministry of Agriculture and Environmental Protection
  – City of Belgrade (Secretariat for Transport and Land Development Agency of Belgrade)
  – UNDP;
• Final beneficiaries: citizens of Belgrade and entire Country (1/3 of Serbia’s population lives in Belgrade – approx. 2 mil);
• GEF funding: 940.000 USD (Total budget: US$ 7,451,951);
• Pioneer attempt to deal with challenges of sustainable urban mobility;
• Main Outcome: sustainable urban planning in correlation with mitigations of GHG emissions from Transport Sector;
National Project Context:

Implementation of strategic goals:
- Strategy for Sustainable Development,
- Energy Development Strategy,
- National Environmental Protection Programme,
- Strategy of Economic Development by 2020,
- National Energy Efficiency Plan,
- National Communications to the UNFCCC

Benefits:
- Complying with the EU requirements
- Better implementation of the regulation in the field of spatial planning, air protection, climate change, transport, etc.
- Compliance with EU 2020 Framework
- Implementation of the Int. commitments (Amsterdam and Paris Declarations);
Component 1 – Sustainable Urban Transport Plan (SUTP)

- **Results achieved:**
  - Analysis of the Urban and Transport Policy,
  - Overview of the Legal and Strategic Framework,
  - Capacity Assessment and Financial Resources Plan,
  - Work Plan for the SUTP Process,
  - Communication Plan,
  - Baseline analysis, Business-as-usual scenario and scenario with additional interventions,
  - Cost-benefit analysis concluded on the business-as-usual scenario,
  - Final Report.

**Long term effects of the 1st Component:**

- Integration of economic, social and environmental dimensions into Urban Traffic Planning Context,
- Improving City Development Perspectives: regional competitiveness;
- Compliance with EU legislation in the field of air pollution, noise, harmful emissions (EU target: 68% less emissions from transport by 2050);
- Improving access to European Cohesion Funds for regional development;
Sustainable Urban Transport Plan by 2021

If advanced scenario is applied by 2021 (comparing to the “Smartplan”):

• 230,000 less trips per day by private car (approx 18% reduction of vehicle.km in private car);
• 6,000 trips more by public transport (0.4% more when comparing to Smartplan);
• Savings of 3400 driving hours in the morning peak hour;
• Annual time savings from congestion relief are estimated to 24 million euro;
• travel time savings for public transport users are estimated at total of 25,000 euro per year;
• Economic savings resulting from reduced mortality = 79 million euro (in additional walking and cycling);
• population exposed to noise between 55 and 60 dB(A) less for about 1%= saving 200,000 euro (assuming that 60% of emissions are traffic related) – reducing number of cars and km;
• Economic savings from emissions reduction - 3,5 million euro
• SUTP scenario by 2021, as compared with scenario without SUTP (Smartplan) generates a positive result of about 106 million euro;
Component 2 - Promotion of cycling as a transport mode:

- Measure of direct GHG emission reductions from transport sector;
- Cycling Awareness Raising Campaign (www.biciklirajbeogradom.com);
- A number of promotional bicycle rides;
- Celebrating European Mobility week since 2012;
- Study on the Safety of Cyclists in the Traffic;
- Marking cycling routes in Belgrade City;
- Parking infrastructure for bicycles;
- Two additional routes to recreational areas - 25 km towards Bojcinska forest and 13 km towards Mountain Avala;
Component 3 - Safe and sound to school program (improving the safety of children in traffic):

- Reducing traffic intensity near schools;
- Increasing the awareness among pupils and their parents on sustainable urban mobility;
- Public Information Campaign “Safe Roads to School”;
- Pilot project “Marking safe routes to the Primary School St. Sava”, downtown Belgrade;
- Promoting the concept of “Pedibuss” – guided walking tours for primary school pupils from their homes to schools;
- Project documentation prepared for marking safe routes to four additional primary schools in Belgrade;
Component 4 - Capacity building for professional drivers (train-the-trainers programme on eco-driving):

- Eco-driving training programme completed (25 instructors trained as well as 15 professional drivers);
- Examples from around the World and from Europe indicate possible savings of up to 1 million euro/year in fuel consumption from public transport vehicles;
- Public Transport Company of Belgrade will continue with training programme for eco-driving as part of their regular work;
- 2%, eq. 20.65 kt CO2 eq

-5% additional in activities of project partners

Buss drivers 8.28%
Truck drivers 6.92%
Car drivers 12.65%

30 83 500

30% more cyclists
20% more interested citizens
60% more into rent-a-bike

150,000 нових бициклиста
додатних 8 км стаза

13km of cycling routes to Mt. Avala
25km of cycling routes to Bojcsinska Forest

40 bicycles donated to the Government
Calculating GHG reductions - ongoing

- GHG gases considered: CO₂, CH₄ and N₂O.
- Emissions sources: all GHG emissions based on use of the fuel and energy supplied within the city of Belgrade boundary;
- Time span:
  - for GHG emissions data 2006 – 2012
  - For scenario modeling 2013 – 2020 (GHG emission reductions projections).
- Type, characteristics and age of vehicles taken into account;

**Methodology used:**

- Global Protocol for Community Scale GHG emissions (GCP) and COPERT IV model (for verification)- estimation of the GHG emissions in the time frame 2006 – 2012;
- Transport Emissions Evaluation Models for Projects (TEEMP) – GEF model for baseline scenario input and creation of the mitigation scenario;
Direct emission reductions:

• The project activities supposed to achieve approximately 160 kt or 160,000 t CO2-eq. cumulative reductions of GHG emissions till 2020.

• Eco-driving techniques in the public transport is first rated mitigation activity, followed by the cycling and safe roads to school component.

Indirect emissions reductions:

• Expansion of the project activates – eco efficient driving on the total number of commercial vehicles, including the heavy duty vehicles = annual reduction of approximately 6kt CO2-eq.

• Integrated city transport management and control system as part of the SUTP = annual reduction of approximately 20kt of CO2-eq per year.
Project visibility:

– [www.biciklirajbeogradom.com](http://www.biciklirajbeogradom.com)  
  [https://www.facebook.com/BiciklirajBeogradom](https://www.facebook.com/BiciklirajBeogradom)

– Results presented on several international events, including Rio + 20 Conference;

– GEF publication - „success story“;

– In mid-term evaluation valued as „highly satisfactory achievements“;

– Project Replication Guidelines under preparation;

– Project supported Belgrade City in celebrating EMW since 2012!
Project added values:

• Complementary with activities with other project partners;
• Safe and Sound to Schools component – example of synchronized actions by local government and international partners;
• Possible networking on:
  – Sustainable urban planning,
  – Alternative transportation modalities, cycling,
  – Sharing experiences with other European Cities with advanced urban planning systems
• Baseline for initiation of new project proposal on Sustainable Climate Resilient City – GEF6;
Bicycle route to Bojkinska Forest, recreational area near Belgrade
Cycling route to Avala Mt, vertical signalization
Improved public transport system in Belgrade
Cycling campaign

European Mobility Week
Campaign

“Safe roads to schools”
Map of Safe Road to School St. Sava, Belgrade
Awareness raising events and workshops...
Thank you for your attention!

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