



WARSAW – SUSTAINABLE AND CLIMATE-FRIENDLY DEVELOPMENT



Leszek Drogosz
Director of Infrastructure Department,
Warsaw City Hall



City of Warsaw

✓ Main features:

- area: 517 km²
- inhabitants within administrative borders: 1.7 million
- inhabitants within agglomeration: 2.5 million
- density of population: 3300 per km²
- registered enterprises: 300 000
- budget for 2010: 3.1 billion euro
- unemployment: 3.4%





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- ✓ **Getting ready for implementation of our Sustainable Energy Action Plan**
- ✓ **Goals of Warsaw's Energy Action Plan:**
 - **Modernization of energy production and distribution,**
 - **Implementation of renewable energy sources,**
 - **Optimization of energy consumption and resource management,**
 - **Making buildings more energy-efficient,**
 - **Introducing new solutions in transport,**
 - **Changing energy consumers behaviour.**
- ✓ **Promotion of Covenant of Mayors ideas among Polish self-governments**



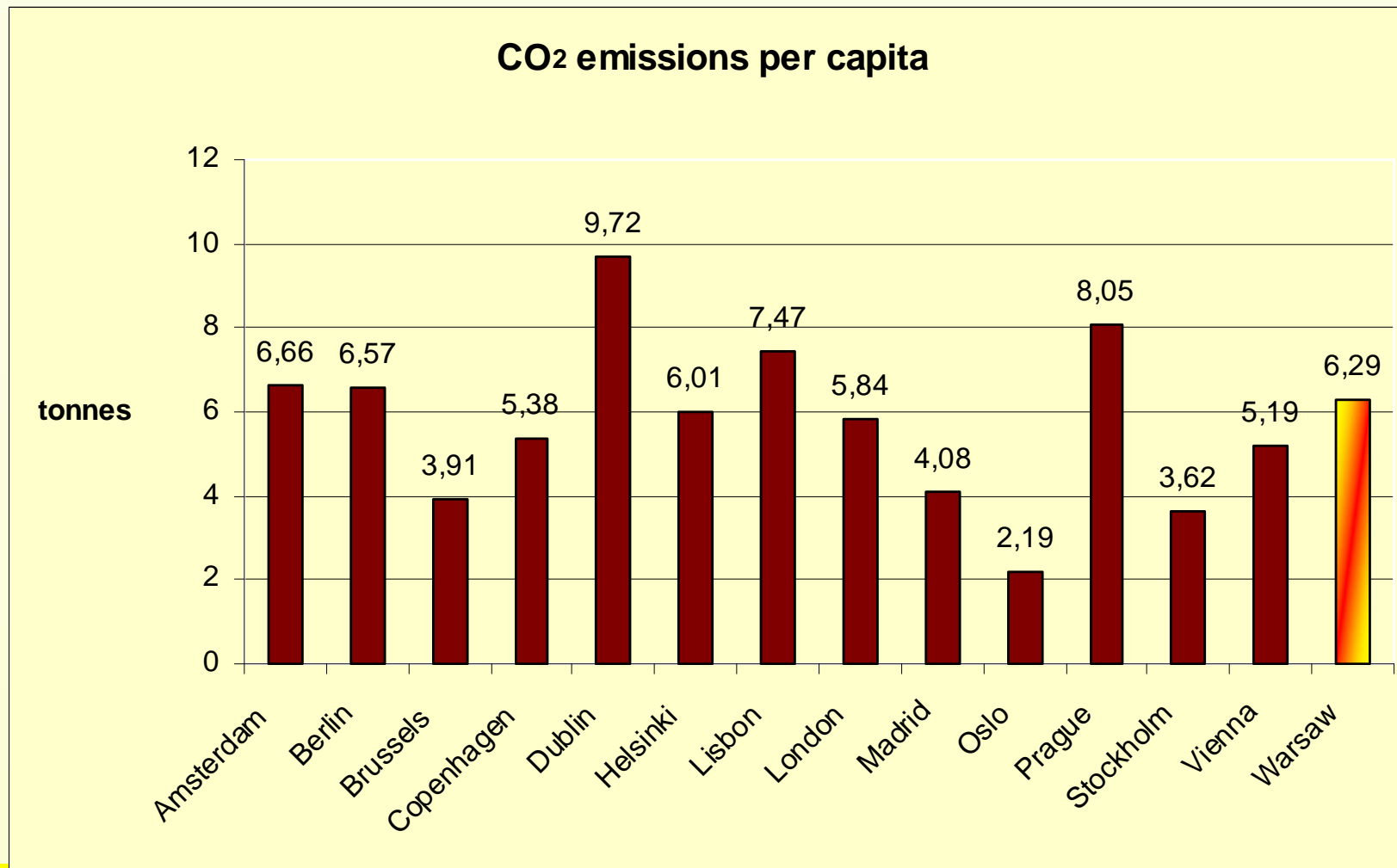
Climate protection team – responsible for SEAP





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Warsaw among other European cities

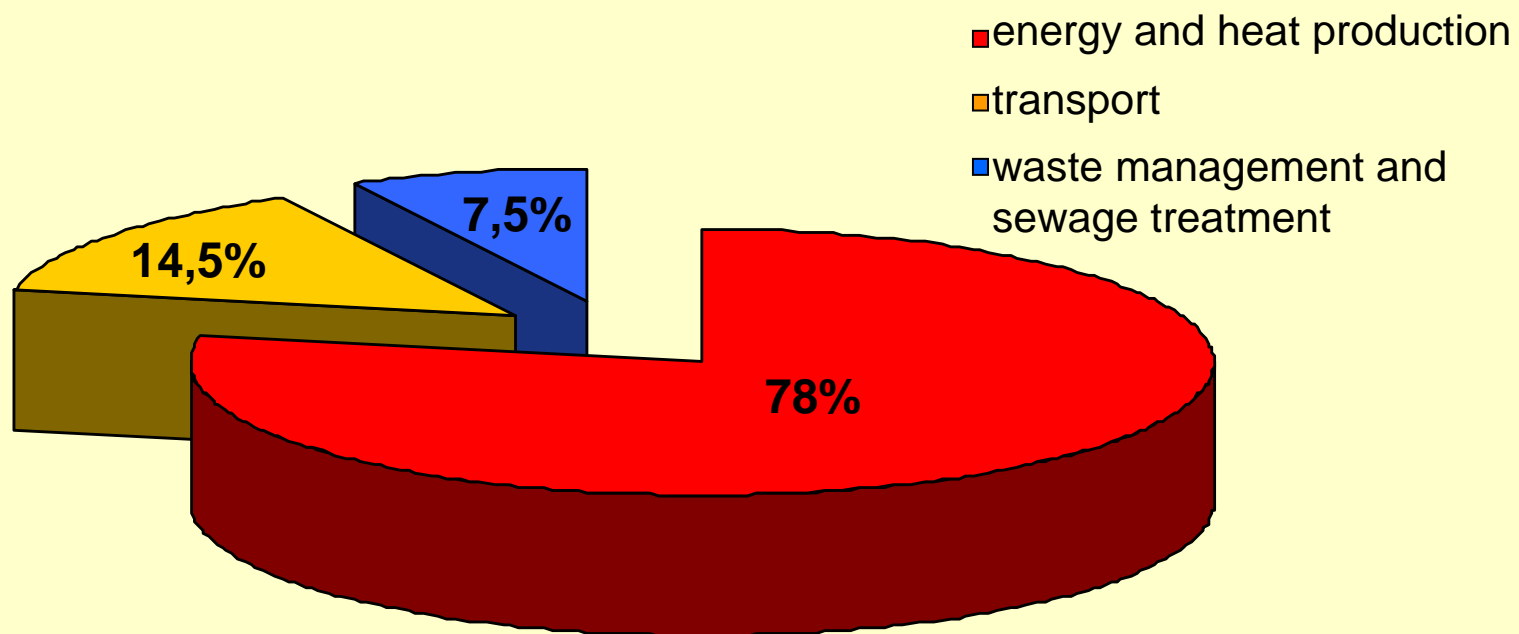




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Total emissions in Warsaw in 2007

[thousand tonnes CO₂eq/a]





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Sustainable Energy Action Plan – main activities on reduction of energy consumption

Lp.	Tasks	Planned energy savings in 2020	Reduction of CO ₂	Costs
		[MWh/a]	[t/a]	[million €]
1	Complex buildings retrofit in housing sector	1 399 200	415 562	1020
2	Complex buildings retrofit in service sector	1 150 783	341 782	612
3	Complex buildings retrofit in public sector	359 718	106 836	191
4	Modernization of heating system (e.g. replacement of local heat sources with more efficient heat sources)	105 000	31 185	87
5	Retrofit of industrial buildings	185 820	55 189	49
6	Modernization of indoor lighting	85 228	83 693	9
7	Modernization of street and outdoor lighting	55 000	54 010	25
8	Replacement of old home electronics	16 667	16 367	57
9	Replacement of old IT equipment	22 727	22 318	38



Present activities

- ✓ **Street lighting modernization – plans for 2008-2012**
 - Energy consumption reduction by **22.2 GWh** annually (currently 95.1 GWh)
 - Electric energy cost reduction by **€ 2 million** annually (currently € 8.75 million)
 - CO₂ emissions reduction by **20.5 thousand tonnes** annually
- ✓ **Transport**
 - Expansion of existing public transport network
 - Purchase of **186 trams (375 million €)** and **35 units for metro (250 million €)**
 - Construction of the second metro line up to 2014 (**1 billion €**)
- ✓ **Energy production in cogeneration**
 - coal consumption reduction by about **30%**
 - cogeneration produces from the same amount of fuels additional **3.4 TWh** of energy for Warsaw
 - CO₂ production reduced by **2 million tonnes** annually
- ✓ **Biomass combustion in power plants in Warsaw**
- ✓ **Waste-to-energy**





Thank you for your attention



e-mail: ldrogosz@um.warszawa.pl