



PROGRAMUL DE COOPERARE ELVEȚIANO-ROMÂN
SWISS-ROMANIAN COOPERATION PROGRAMME

Urban Climate Study of Bucharest, Romania

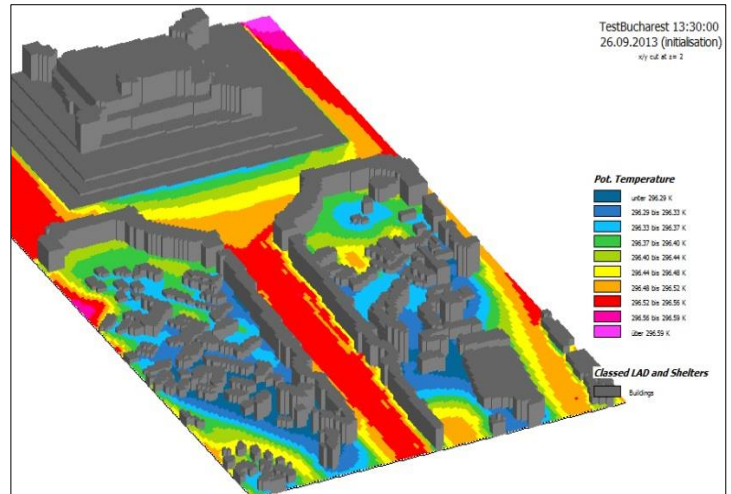
Starting Date 01.05.2013

Duration 36 Months

Discipline Climatology, Civil Engineering

Main Goals

- To study the on-going meteorological processes by direct measurements of radiation and heat fluxes at 3 – 4 micrometeorological flux towers within the city area covering different types of land cover.
- A method widely used in many western countries or in East Asia how to convert the results of complex meteorological measurements and data into information required and used by local and regional planning authorities. This has never been carried out in Romania and the technique will be implemented at the Technical University of Civil Engineering Bucharest.



Activities

- Micrometeorological measurements, including procurement and installation of instruments
- Analysis of meteorological data
- Analysis of turbulent fluxes
- Analysis of CO₂ data and PM10 data
- Processing of remote sensing satellite data
- Analysis of Bucharest urban sprawl process
- Using numerical urban climate models like ENVI-met potential urban planning scenarios will be simulated to improve urban climate, human comfort, air pollution and health.

Expected results

- Energy balance study based on the measurements of radiation and turbulent heat fluxes
- Air pollution study especially focusing on concentrations and fluxes of CO₂ and particulate matter (PM10).
- Land-use change study for Bucharest
- Urban planning recommendations for public administration

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