Environmental Atlas Berlin

Near ground Air Field and Air Mass Flow

Entire Area 06:00 p.m.

Wind Field in Direction and Velocity (m/s)

- > 0.1 - < 0.5
- 0.5 - < 1.0
- 1.0 - < 1.5
- 1.5 - < 2.5

Air Mass Flow in 1000 m³/s

- 0.1 - < 1.0
- 1.0 - < 2.5
- 2.5 - < 5.0
- 5.0 - < 7.5
- 7.5 - < 10.0
- 10.0 - < 12.5

1. The represented results to chapter 04.10 Climate model Berlin were calculated under application the regional climate model FITNAH, Flow Over Irregular Terrain With Natural And Anthropogenic Heat Sources. The essential goal of the examinations was to predict the changes of the climatic circumstances of Berlin's urban structures.
The maps of chapter 04.10 supplement those environmental-maps 04.02, 04.03 – 04.05 as well as 04.07, which were based upon measurements at 41 monitoring stations and on about 3000 monitoring points all over the city and its surroundings in the years until 1999. The results of these maps were consulted for plausibility examinations here.

2. The model FITNAH calculates meteorological parameters on a three-dimensional grid. For the present calculations, a screen dissolution of 200 m x 200 m was selected in the entire area, additional 50 m x 50 m in a detailed analysis area.

3. The model calculations were started in each case at the time of the sunset in the evening and executed until sunrise of the subsequent day. In form of maps for the individual climate parameters the points in time 22.00 o'clock and 06.00 o'clock were presented. The date 22.00 clock represents the reversal of the insolation to the radiation situation shortly after sunset and shows the beginning of a phase of big cooling dynamics. The 06.00 o'clock date stands for the maximum cooling within the city (with different characteristics according to surface structure).

4. In the maps of chapter 04.10 the climate conditions of the near ground atmosphere were shown as grid means of the separate parameters over terrain height in 2 m. If several land-uses exist within a screen with different percentages, so the shown value calculates from the averaged weighting. In this respect, the simulated statements are comparable only for bigger areas of uniform as well as corresponding land-use with near ground measurements.

Scale: 1 : 50 000

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 km

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