Cacica salt-mines, Suceava county: meteorological factors and balneary-climatic potential studies

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In order to make a complete characterization of a special region of medical treatment, the complex analysis of physical, chemical, geological and meteorological factors is described in this paper. The Cacica saline area is well-known as a balneary-climatic region but it is not yet complete analyzed. The Cacica treatment area is located between coordinates: 47°34' – 47o41' north latitude and 25°47' – 25°56' east longitude, respectively. The hilly topography of the Cacica area is guarded to the north-west by the height of 973 m- the peack of Custura and to the south-east by the Ciungi massive- height of 629 m.

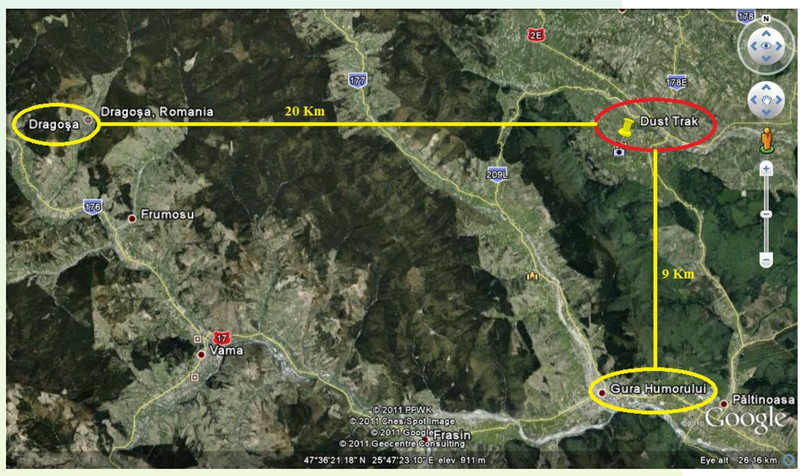
METHODOLOGY

The investigated area – region Cacica, Suceava County

In this study, we focused mainly on the geological and stratigraphical research on Cacica habitat region, characterized both in terms of local climatology and population, respectively.

The geological map of the area at a scale of 1:200000 and meteorological data, especially those related to the wind have been used. The Cacica region presents an ideal area for medical treatment due to air quality, water and soil salty.

The area where monitoring took place, has a mild form of trough, bordered by a "horseshoe" of hills, which leaves uncovered the east and southeast to the infiltration of pollutants and sewerage wind.



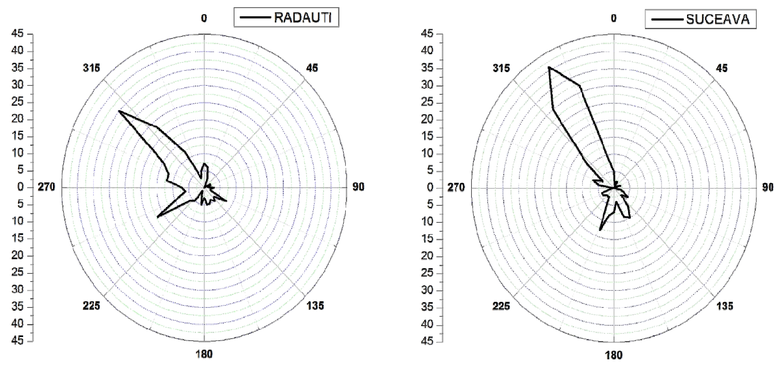
Hydrometric stations to monitor rainfall Gura Humorului and Dragoşa, respectively

Meteorological station: region Cacica, Suceava County

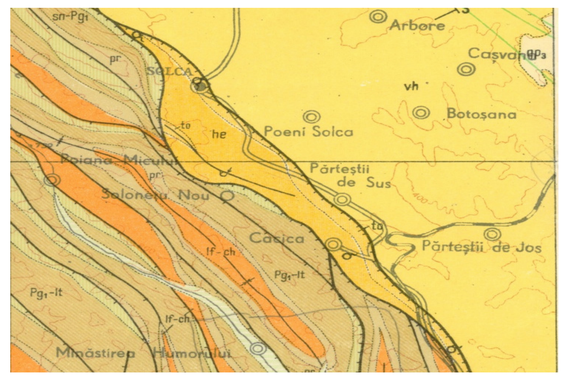
Experimental device:

DustTrak Aerosol Monitor – model 8520

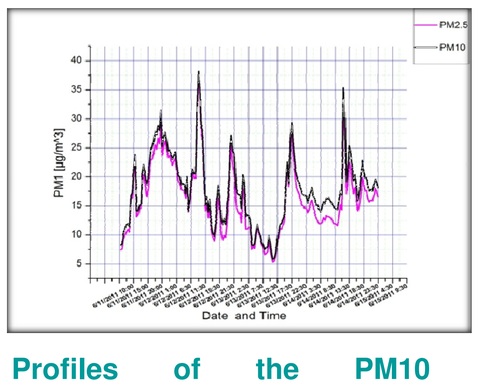
RESULTS AND DISCUSSIONS



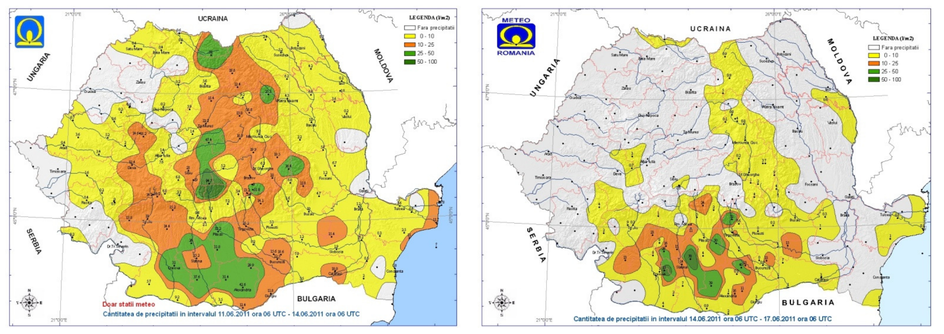
Compass Rose from the Meteorological Radauti and Suceava Station11-19.06.2011



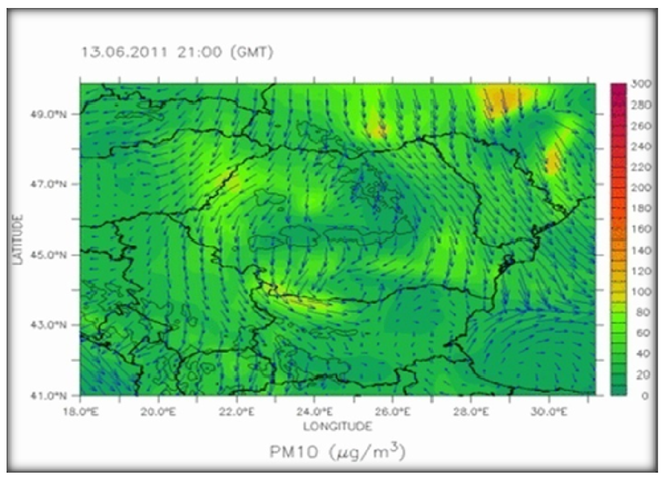
Geological map of Solca AREA - Cacica, 1:200000

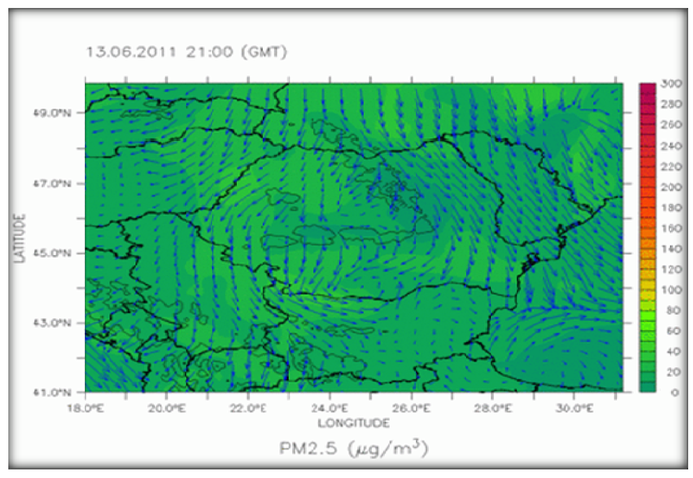


Profiles of the PM10 (black) and PM2.5 (magenta) concentrations, experimentall y measured by DUST TRAK



The amount of precipitation (l/m) in the interval 11.06.2011 h06-14.06.2011 h06 (left). The amount of precipitation (l/m) in the interval 14.06.2011 h06-17.06.2011 h06 (right)





MAP 3D, an useful tool to predict the high concentrations of particles matters

By correlating the relative humidity and rainfall in the period of 13 - 17/06/2011, we can see a slight increase in values recorded in 13.06.2011 compared with 17.06.2011, because for the end of week, the showers were not present and thus a slightly increase is normal. The data measured during this period, for example, values for PM10 reveal an average of 25.85 µg/m^3. Indicators PM10 daily limit value for human health protection has not been exceeded (according to the Order 592/2002, 50 µg/m^3

Getting to Know
Cacica surroundings!

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