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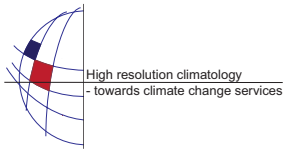

The Budget of the Atmosphere-Soil Exchange: A Long-term Fluxes Analysis (BASE:ALFA) project.

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A long term measurements of parameters characterizing the energy and water cycle in the Po Valley (Italy) has been carried out between summers 2009 and 2010 to create a data pool of micro-meteorological/soil data to test and validate Surface Vegetation Atmosphere Transfer Scheme (SVATS) and Regional Numerical weather prediction R-NWP with respect to the representation of near-surface processes. The BASE:ALFA project organized in the middle of the Po valley was thought as a prototype experience which tried to fulfill the need highlighted in recent SRNWP program for a network of surface stations which should soon appear in Europe as a spontaneous cooperation of national weather services.

We report on our experimental campaigns and on some modeling outcomes. In particular, we will present one targeted application of the collected dataset, which we found of special interest for the area. That is how the wrong PBL mixing height modeling can impact air quality assessment. Most air quality models for pollutant concentrations estimations, in fact, uses R-NWP predicted and or analyzed PBL mixing height to estimate air quality indices, as for example PM10 concentrations.