

New MDSS in Slovenia

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Slovenia is located in a meteorologically diverse territory between the western Alps, northern Adriatic and Pannonian Plain. Weather information on the roads is therefore valuable. There are 69 RWSs installed on motorways (Vaisala, Lufft, Boschung, Davis) which are integrated into a comprehensive RWIS.

Beside the RWSs data, short-term weather forecasts of high temporal and spatial resolution from INCA/ALADIN meteorological systems of National weather service ARSO are used. A widely used physical model for forecasting the RST and road condition METRo was incorporated into RWIS. Physical model was improved with further parameterisations of the relevant physical phenomena and combined with statistical techniques to improve the quality of input or output variables.

In winter 2015/2016 the DARS RWIS was upgraded with additional functionalities and became a Maintenance Decision Support System (MDSS) which supports managers in making appropriate decisions. MDSS is able to calculate METRo forecasts on the whole Slovenian motorways with 30 m spatial resolution and 1 hour time resolution (up to 24 hours in advance). Such road forecasts can support winter maintenance decision with automatically treatments selection (MDSS provides time, type, amount and place of each treatment).

Furthermore, thermal mapping on the all Slovenian motorways were performed in 2016. Results were used to provide better route-based forecasts.

