Mesoscale numerical weather prediction in Basque Country Area: present and future

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The objective of this work is to present the actual state of mesoscale numerical prediction system implemented for its operative use in Basque Country area and to present the future evolution of this system. We also present some operative aplications based on numerical results, and some validation strategies adopted for performance evaluation in actual implementation.

A limited area mesoscale numerical model, have been implemented some years ago, for Basque Country area operational forecast purposes in Basque Meteorology Agency (EUSKALMET). We present topics related with the development, implementation, validation and operational products generation sub-systems. In order to evaluate the performance of the NWP operative model in the Basque Country area at present we use a daily basis verification for some forecast variables. Several indexes and strategies are used to make a quantitative validation based on AWS network data. Skill of model results depending on the forecast horizon D to D+5 are also considered.

Actual state of operational numerical weather forecast in Basque Country area are analyzed and some considerations for its future improvement are made. We present a preliminary scheme and some considerations related with the future implementation of a probabilistic mesoscale simulation system for Basque Country Area in EUSKALMET.