

Summary of ALADIN activities

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Modelling activities

- Development of a new version of SURFEX :
 - Improvements to the snow scheme (multi-layer + snow metamorphisms)
 - Introduction of gardens (ISBA) in the town model TEB
 - Carbon version of ISBA-Ags
 - « Double source » surface energy balance
 - Evaluation of Flake within AROME
 - *Plans for inclusion of a sea ice model in SURFEX*
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Activities on databases

- Availability of a new soil texture database at 1km (HWSD) within SURFEX
 - Improved global lake database (location, depth) within ECOCLIMAP
 - Global lake surface temperature climatology
 - New methodology for land cover classification (applied to the African continent)
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Activities on data assimilation

- Soil analysis with the convective scale model AROME
 - Assimilation of ASCAT soil wetness within ALADIN using a SEKF (Météo-France, ZAMG)
 - Surface albedo analysis using LandSAF products (Kalman filter)
 - Snow analysis based on SYNOP and satellite imagery (Optimum interpolation scheme - CANARI)
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Other activities

- Optimisation and parallelization of SURFEX
- Coupling of the surface EKF with the atmospheric 3D-Var assimilation system

