

Prediction of lake ice in the Netherlands using FLake

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In SURFEX, used as surface scheme of HARMONIE, the Fresh water Lake (FLake) model has been implemented. FLake accounts for the thermodynamic interaction between fresh water lakes and the atmosphere. An off-line version has been installed and compared with the operational ice-grow model at KNMI. The off-line version of FLake has been driven with various input data like HARMONIE analyses and ensembles from the ECMWF model. The models are validated with indirect ice thickness measurements at Cabauw and with data from a voluntary observers network in the Netherlands. FLake has predictive power and is competitive with the operational ice-grow model.