

ICCARUS 2021, TERRA standalone session, summary of discussion

StandAlone tools for land surface modelling (LSM) are quite necessary whether for weather or climate applications. They are also a perfect test-bed for new approaches and algorithms. Thus, resources should be made available to develop and maintain a StandAlone version for LSM.

For TERRA StandAlone in particular, investments in improvements should only be made for short-term purposes (~1-2 years maximum). Possible aspects to consider are the addition of the ICON tiles framework, the ICON specific treatment of the external parameters, and the addition of other surface modules (urban, lake, sea ice). Most of these tasks can be quickly done (a couple of days).

For medium to long term perspective, successors to TERRA as an LSM (e.g. JSBACH), when in the COSMO or ICON framework should be brought into the StandAlone framework.

In conclusion, and particularly within the PT-SAINT framework, new additions to physics will happen in TERRA StandAlone, while insuring that the developments are modular and can be easily adopted into any new emerging standalone tool.