

# SOILVEG overview

Demuzere, Matthias & Davin, Edouard

COSMO User Seminar  
Offenbach, 10<sup>th</sup> of March 2016

# Organisation & responsibilities

WG coordinator: E. Davin

Deputy coordinator: M. Demuzere

Website Management: M. Demuzere

Source code management:

- TERRA: Jan-Peter Schulz
- TERRA-URB: H. Wouters
- Community land model: E. Davin
- Veg3D: M. Breil

Urban Model Intercomparison project: H. Wouters

# Activities / Science Plan

Intercomparison TERRA/Community Land Model/Veg3D over different regions:

1. Coupled mode: based on existing CORDEX runs
2. Global off-line mode: participation in GSWP3

# Activities / Science Plan

## 1. Coupled mode

→ Questionnaire was sent:

1. Which model versions did you use for COSMO-CLM, TERRA-ML and Community Land Model
2. What coupling strategy did you use for COSMO-CLM and Community Land Model?
3. What is your simulation area and final resolution?
4. What is your spin-up and simulation period?
5. Which initial and boundary data did you use?
6. In case we manage to start this project, are you interested to:
  - a. share the data
  - b. actively contribute to this effort (analysis, writing, ...)

# Activities / Science Plan

## 1. Coupled mode

→ Answers received: key word = “Variety”.




- **4 groups:** Wim Thiery, Stephan Hanne, Marcus Breil, Burckhardt Rockel
- Various model combinations (TERRA vs CLM, TERRA vs VEG3D, ...)
- Various regions: African Great Lakes, Larger Alpine Domain, CORDEX DE/EU/Africa, CORDEX Australasia
- Various simulation periods
- Various forcing for future climate
- Various model version and coupling frameworks

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- Various forcing for future climate
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-  Sharing data
-  New simulations
-  Active contribution (analysis, writing, ...)

# Activities / Science Plan

## 2. Global off-line mode

Idea: Join the Global Soil Wetness Project Phase 3 (GSWP3) with TERRA.

→ Thus far only an “internal discussion”

### Potential way forward:

- Identify someone interested to contribute and to actually perform the TERRA runs
- This contact person can discuss details/time lines with GSWP3 coordinator
- Choice of model? TSA-4.13, TSA-5.01, TSA-GUF, ...

# Highlights

- Trusilova, K., Schubert, S., Wouters, H., Fruh, B., Grossmann-Clarke, S., Demuzere, M., Becker, P., 2015, The urban land use in the COSMO-CLM model: a comparison of three parameterizations for Berlin. Meteorologische Zeitschrift.
- Wouters, H., Demuzere, M., Blahak, U., van Lipzig, N., De Ridder, K., Maiheu, B. , Camps, J., Thielemans, D., 2016, Urban land-surface parametrization for micro-scale climate modelling and numerical weather prediction with TERRA URB2.0 coupled to COSMO(-CLM): formulation, evaluation and parameter sensitivity for Belgium during summer 2012. Submitted to Theoretical and Applied Climatology.
- ...