



SOILVEG Working Group

Introduction and updates

SOILVEG WG of the CLM-Community

- 38 members currently
- Aims at coordinating CLM-Community activities related to land surface modelling
- “Coordination of the model development activities related to the WG/ PG description” (Rules of internal procedure)

Common WG3b/SOILVEG tool for documenting model developments:

- <http://www.cosmo-model.org/content/model/releases/developments.htm>

WG3b					
2013-02-01	idea	2013-03-31	Scale separation for Z0 and SSO (subgrid scale topography)	JM. Bettems (MCH)	N/A
			description	status	technical
			testing	documentation	
2013-01-01	work	N/A	Carbon cycle	[CLM] B. Ahrens (Uni Frankfurt	N/A
			description	status	technical
			testing	documentation	
2013-01-01	work	2013-03-31	Parameters for orographic radiation correction	JM. Bettems (MCH)	N/A
			description	status	technical
			testing	documentation	
2013-01-01	work	2013-12-31	Revision of transpiration and root parameterization	G.Vogel (DWD)	N/A
			description	status	technical
			testing	documentation	

Responsabilities

- E. Davin: WG coordinator
- M. Demuzere: deputy coordinator
- A. Hermans: SOILVEG webpage management
- S. Kothe: TERRA developments → presentation
- E. Davin: Community Land Model developments → presentation
- H. Wouters: Urban MIP project → presentation



TERRA

Person/institution in charge	Description of development	Version	Status
B. Ahrens (Uni Frankfurt)	New numerics for the Richards equation (necessary for multiple soil horizons and moving water tables)	Already implemented in TERRA stand-alone; will be tested in COSMO-CLM	Implementation in TERRA stand-alone in its final testing phase; implementation in COSMO-CLM in 2012
B. Ahrens (Uni Frankfurt)	Carbon cycle	Will be implemented first in TERRA stand-alone	to be finished June 2013 (stand-alone version)
B. Ahrens (Uni Frankfurt)	Dynamic vegetation	Will be implemented first in TERRA stand-alone	To be started in 2012
S. Schubert (PIK)	Urban scheme BEP (Martilli et al. 2002)/ DCEP (Schubert et al. 2012)	COSMO4.8-CLM11	Complete, evaluated for Berlin and Basel
K. Trusilova (DWD)	Urban scheme TEB (Masson 2001)	?	End 2012
H. Wouters (KU Leuven)	urban parameterization into TERRA_ML (this includes thermal roughness lengths parametrization with the help of new stability functions momentum and heat. Albedo, emissivity and momentum roughness length will be derived from satellite data to represent urban surfaces)	TERRA stand-alone 4.11	Early 2013
J. Volkholz (PIK)	River routing model	COSMO4.8-CLM11	Finished, evaluated for Elbe catchment
J. Volkholz (PIK)	Wetlands	COSMO4.8-CLM11	Implemented, under testing

Community Land Model

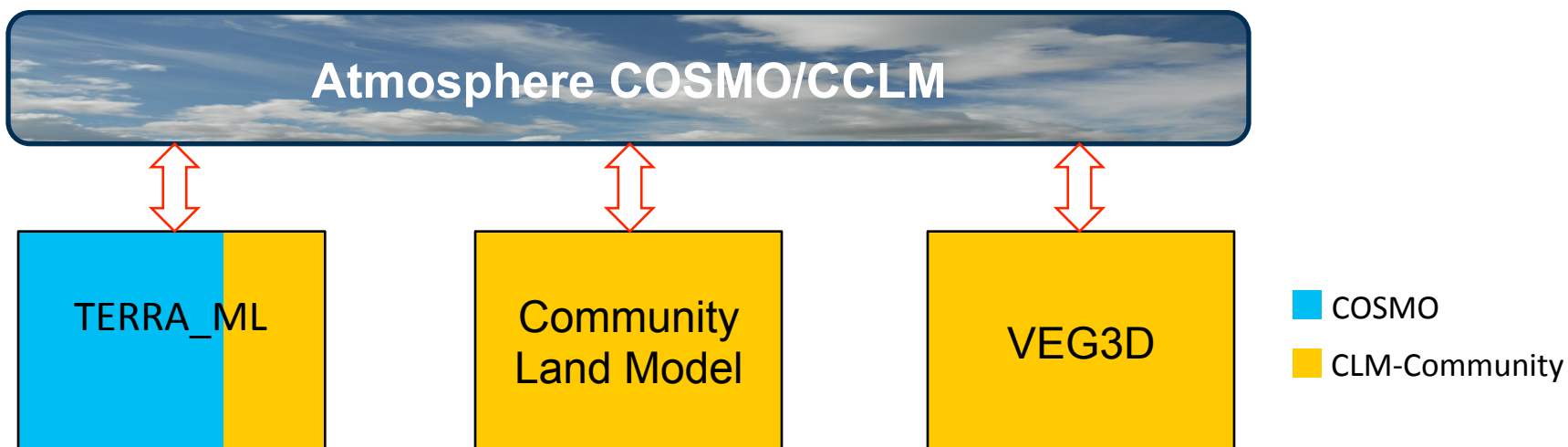
Person/institution in charge	Description of development	Version	Status
E. Davin (ETHZ)	Community Land Model coupled to COSMO-CLM as subroutine	COSMO4.8-CLM11 CLM3.5	Implemented and evaluated
E. Davin (ETHZ)	Community Land Model coupled to COSMO-CLM using OASIS3 coupler	COSMO4.8-CLM19 CLM3.5/CLM4	Implemented and in testing phase, evaluated version end 2012
S. Vanden Broucke (KUL)/ N. Van Lipzig (KUL)	Implementation of forest management parameterization in CLM (e.g. distinction between short rotation management, even-aged, multi-functional forest, close to nature, nature reserve)	COSMO4.8-CLM11 CLM3.5	Planned, to be finished by the end of 2013
M. Demuzere (KUL)	Implementation of urban irrigation and water sensitive strategies	COSMO4.8-CLM19 CLM4	To be finished end of 2013

- Use of redmine for source code management: <http://code.hzg.de>

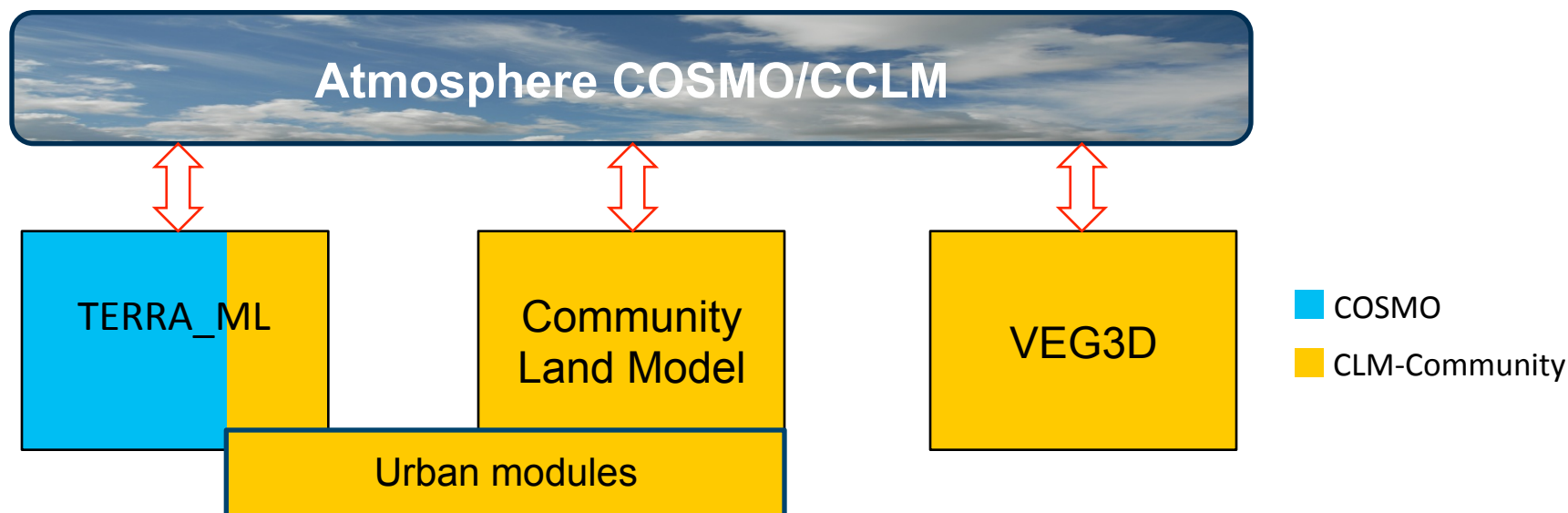
VEG3D

Person/institution in charge	Description of development	Version	Status
G. Schaedler (KIT)	VEG3D coupled to COSMO-CLM as subroutine	COSMO4.8-CLM7	Implemented and under testing
G. Schaedler (KIT)	VEG3D coupled to COSMO-CLM with OASIS coupler	COSMO4.8-CLM17	Under way

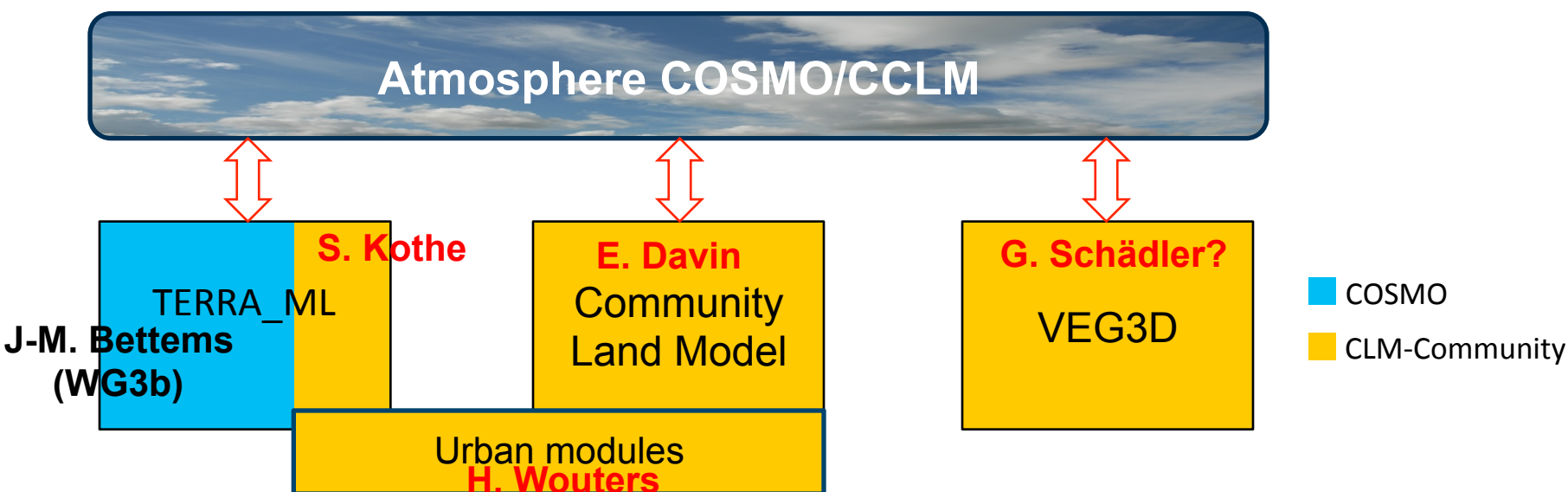
Overview of developments



Overview of developments



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Organisation of WG and responsibilities

- WG coordinator: E. Davin ; Deputy coordinator: M. Demuzere
- Coordination TERRA: S. Kothe
- Coordination Community Land Model: E. Davin
- Coordination VEG3D: G. Schädler?
- Coordination Urban modelling: H. Wouters
- Webpage management: A. Hermans
- Next SOILVEG meeting during COSMO/CLM seminar, jointly with COSMO WG3b

Intercomparison TERRA_ML / CLM3.5

- Comparison TERRA_ML / CLM3.5 for Europe (*Davin et al., Clim. Dyn., 2011; Davin and Seneviratne, Biogeosciences, 2012; Lorenz et al., JGR, 2012*)
- Simulations now exist also for Europe, Africa, South America, Australasia...

Urban sub-group (coordination H. Wouters)

- Urban Model intercomparison for Berlin
- Models involved: BEP / TEB / TERRA_MLU
- Implemented in COSMO4.8-CLM11
- Workshop will be organized at DWD by end of this year
- 1st results expected for the next CLM-Community Assembly