

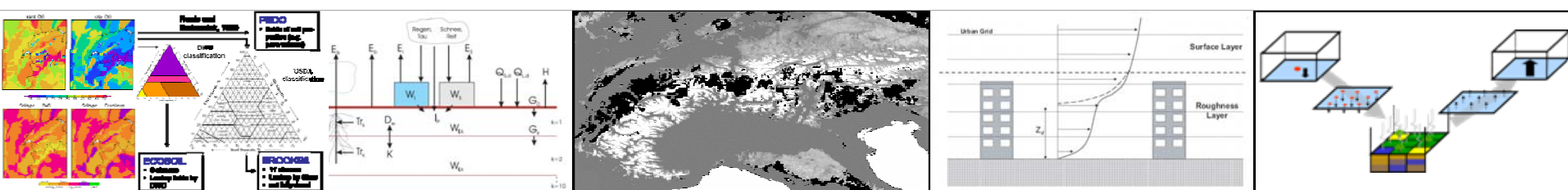
Is there a life after COLOBOC?

Jean-Marie Bettems
MeteoSwiss

COLOBOC/SOILVEG Workshop
01 March 2010, Langen

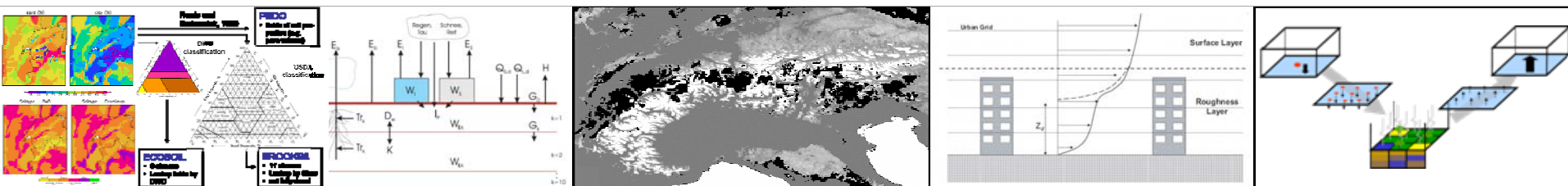


- The COLOBOC project ends at the next COSMO GM (09.2010 in Moscow).
- Work on the lower boundary condition will continue, but possibly with less resources and lower priority.



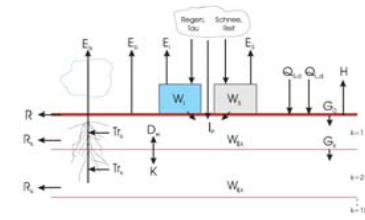


- How **critical** is the further improvement of the lower boundary condition (in particular when compared with other system components, e.g. numeric, turbulence) ...
 - ... for **climate applications**
 - ... for **short range forecasts** (2h – 2d)
 - ... for **very high resolution** ($\leq 1\text{km}$) applications **in complex terrain**
- Which **aspects** of the lower boundary condition should be improved in priority (e.g. soil depth, real time phenology, agriculture, leaf temperature instead of T2m, soil moisture analysis)

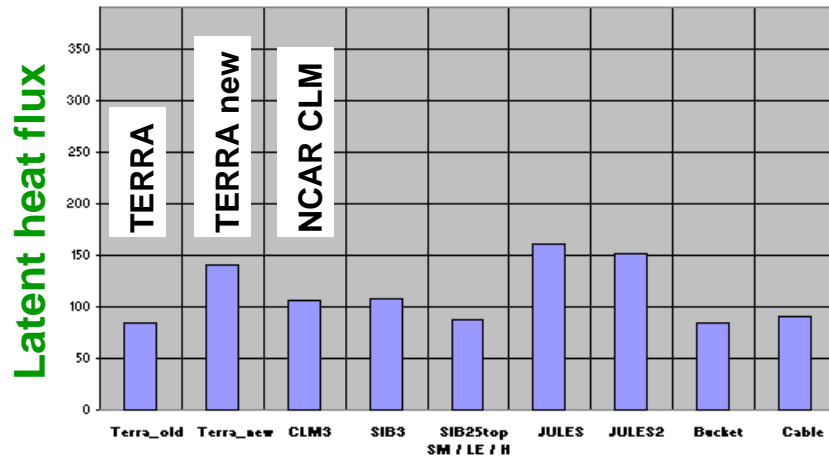




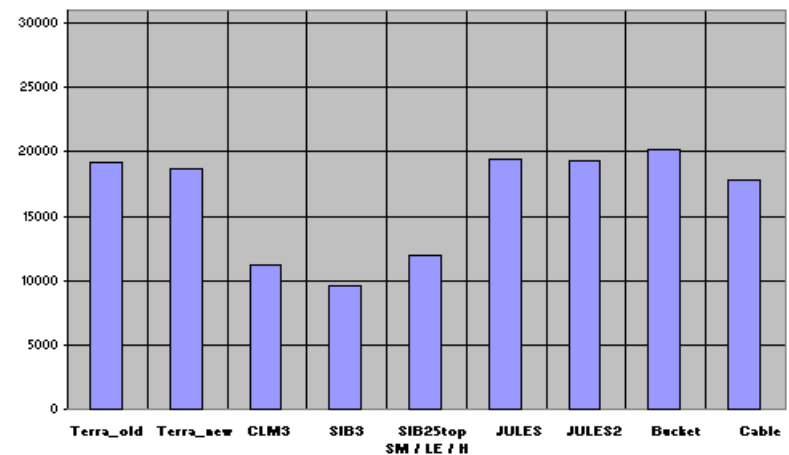
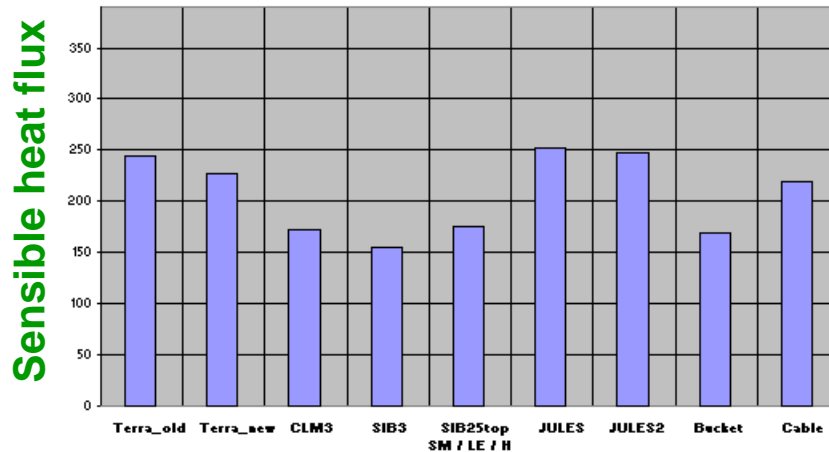
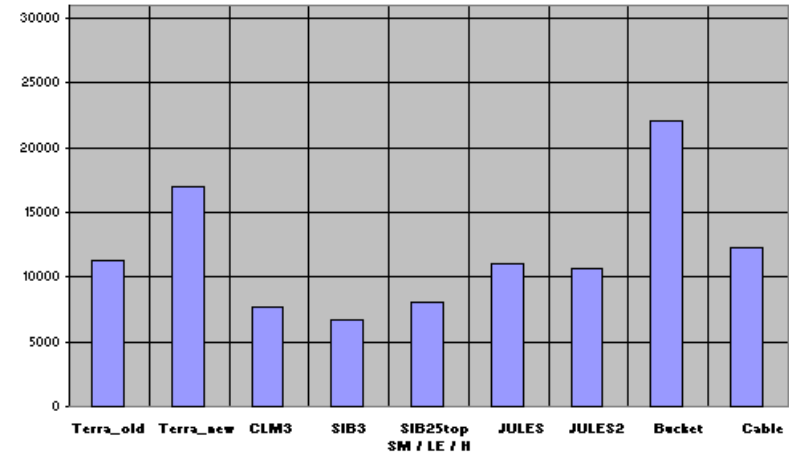
Soil model intercomparison (R.Orth)



Mean error



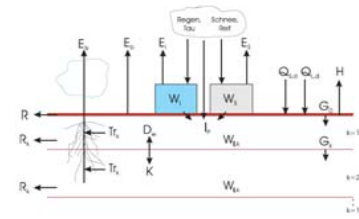
Standard deviation



Observation driven SVATs / Verification with measured fluxes / 9 sites / 5-9 years time series



Soil model – TERRA or ...



- Different studies (G. Vogel, F. Di Giuseppe) have shown some significant limitations of our latest soil model revision
 - > missing grass layer,
 - > temporal evolution of vegetation,
 - > vertical soil structure, in particular lower bc (e.g. depth of water reservoir).
- A multi-years inter-model comparison at 9 sites (R.Orth) has shown (no specific tuning / looking at surface fluxes and soil humidity):
 - > TERRA provides lower quality fluxes than NCAR CLM,
 - > latest developments do not fill the quality gap.
- The group of Prof. Seneviratne has found some significant deficiencies of TERRA, all corrected by using NCAR CLM.
- **Shall one continue to invest in TERRA?**
Or use NCAR CLM as alternative?
Or support both?
Or ... ?



Sharing observations

A service of COSMO to the SRNWP community



- **Do you manage a high quality operational observation site?**
 - Italian NWS → Ask M. Ferri
 - Other Italian ARPAs ?
 - Greece ?
 - Romania ?
 - Poland → No existing site
 - Russia → Will evaluate access to Valdaï (?)
- **Would you also agree to contribute to this SRNWP action?**

Exchange of observational data for the validation of land-surface schemes. Data provided **only** for the C-SRNWP members with a **significant time-lag** after the observational time and for **research purposes** only. The access for the data is granted by the C-SRNWP Programme Manager and will be accessible at a password-protected webpage.