Meeting 20.09.2023: Agenda

1. Status of the test and stage-0 FPS-URBAN-RCC simulations
2. New geo_em files based on LANDAMATE_PFT
3. Update on the vertical levels in the stage-0 runs
4. Urban parameters for Paris shared by Aude: next steps?
5. Urban variables problem
6. FPS-URBAN-RCC meeting at the ICRC-CORDEX 2023 conference
7. ….

1. Status of the test and stage-0 FPS-URBAN-RCC simulations

According to the google spreadsheet table:

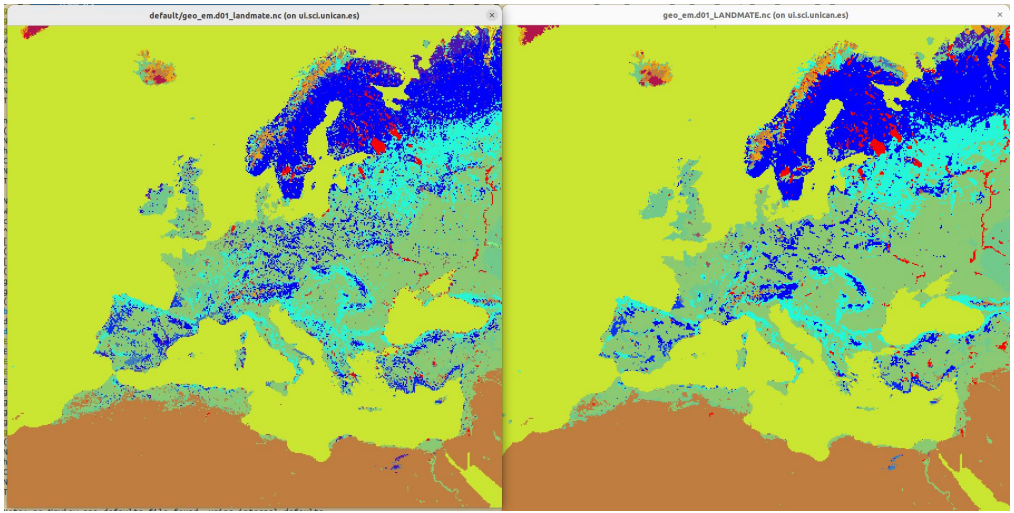
Institute:	CIMA	IEDE	AUTH	IPSL	UMU	CYI	IDL	Fudan	UCAN	CUNI
test run	failed			success		success			success	success
stage-0									success	

Stage 0 simuatations:

Institution	**Experiment name**	**Nprocs (np,ppn; nprocs)**	**d01, d02 <time-step>***	**walltime (5months)**	**Changes respect to the test run**	**Problems**	**Others**	**Error messge**
UCAN	stage-0	6x52=312	1.846, 0.231	5days 17hours	dzbot=10	no problem	NA	SUCCESS!!!
UCAN	stage-0	7x52=364	1.708, 0.209	5days 6hours	dzbot=10, Madrid params	no problem	NA	SUCCESS!!!

2. New geo_em files based on LANDAMATE_PFT

- New files are created with LANDMATE_PFT land cover data
- Water surfaces updated with higher resolution data to avoid the problem with lake pixels along the coast, and the conservative interpolation of land cover fraction was used to get more realist values and less noisy map (EUR-CORDEX runs reported some crashes probably related to this issue)



- Download link to be included in our github repository

3. Update on the vertical levels in the stage-0 runs

- Alberto suggested to have dzbot=10 at least, to put some levels inside the urban canopy.
- Sophie and Josipa performed test runs with the selected height, and the run went smoothly
- UCAN completed stage-0 runs with dzbot=10, and 60 vertical levels (it is necessary to increase the number of levels in order to reach the 20 hPa top)
- Updates on the namelist:

test run		stage-0 run	
&domains		&domains	
.		.	
e_vert	**= 54, 54,**	**e_vert**	**= 60, 60,**
p_top_requested	= 2000.,	p_top_requested	= 2000.,
auto_levels_opt	= 2,	auto_levels_opt	= 2,
dzstretch_s	= 1.20,	dzstretch_s	= 1.20,
dzstretch_u	= 1.04,	dzstretch_u	= 1.04,
max_dz	= 1000,	max_dz	= 1000,
dzbot	**= 35,**	**dzbot**	**= 10,**
….		….	

4. Urban parameters for Paris shared by Aude: next steps?

Jesus got the data shared by Aude from Tomas, and opened a discussion on the implementation of the parameters into WRF with Alberto, Lluis, Sophie and Josipa:

- The data are complete and can be implemented in WRF
- Procedure is no as straightforward, Alberto shared the instructions “how to” with us
- Lluis created a new working google document with the instructions included
- **Will this be ready for the FPS-URBAN-RCC run? What are possible alternatives?**

5. Urban variables problem

- The URBAN variables from BEP+BEM are huge, and not possible to get in the output:
  - To obtain Near-surface temperature pavements, Near-surface temperature roof, Near-surface temperature green spaces, Near-surface temperature blue spaces, Anthropogenic heat flux, Skin temperature, Surface temperature pavements, Surface temperature roof, Surface temperature green spaces, Surface temperature blue spaces in output from BEP+BEM is impossible at this stage, since these variables (i.e. TRB_URB4D, TGR_URB4D, TB_URB4D, TG_URB4D..) **are 3D, with 3rd dimension containing cca 300 and more levels.**
  - Because the variables are huge, and the model will crashed with segmentation fault or hang. It is necessary to do extra work to extract these variables in a 2D form.
  - Lluis suggested the ways to calculate these diagnostics (based on MOST), and to include them in the WRF module for CORDEX.
  - Lluis included all the info and steps in the google working document, where you can comment and suggest

6. FPS-URBAN-RCC meeting at ICRC-CORDEX 2023

- Suggestions and questions to be discussed on the meeting …