

COSMO User Support For 2015

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COSMO Licenses Policy

- Scientific usage: Freely available to universities, research institutes and national weather services; ICON data are transferred in delayed (24 hrs old) mode.
- Operational numerical weather prediction for non-COSMO members:

Free for weather services in *developing countries* (see *World Bank country classification*!)

Otherwise: Annual fee of 20.000 €;

The screenshot shows the COSMO website's 'COSMO Model Licence' page. The page header includes the COSMO logo and navigation links: Members, Committee, Display, Home, Updates, Obs. Exchange, GM 2015. The main content area is titled 'COSMO Model Licence' and includes a 'Last updated: March 2013' timestamp. The page is divided into sections: 'Free licences' and 'Licences with an annual fee'. The 'Free licences' section states that the COSMO model is completely free of charge for all research applications, with an additional free licence available for operational use in developing countries (World Bank list) for lateral boundary data. The 'Licences with an annual fee' section states that national (hydro-)meteorological services in developed countries must pay an annual licence fee of 20,000 € for operational use. Contact information for more information is provided at the bottom: cosmo-licence@cosmo-model.org.

COSMO website page information



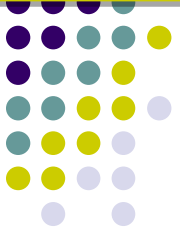
WG6 Priority Task – “Support of COSMO licenses”

- ❖ Starting from September 2011, NMA Romania has been involved in the COSMO User Support Activities priority task:
 - ✓ supporting new COSMO users during the implementation phase through e-mail assistance and by remote access to their computer system;
 - ✓ helping the COSMO users to set up their operational COSMO applications;
 - ✓ running the COSMO - Model and the INT2LM software.

- ❖ As part of these activities, Romania offered support for sequential / parallel compiling without data assimilation of the model

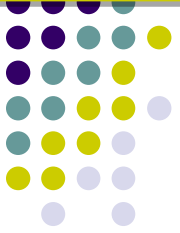
- ❖ Basic requirements:
 - *Fortran compiler*: gfortran (vs. > 4.5); *C compiler*: gcc
 - Libraries: DWD, GRIB_API
 - int2lm & cosmo sources

Support Activity = email assistance + remote access + trainings



COSMO Help & usage

- COSMO contract for scientific evaluation; e-mail to detlev.majewski@dwd.de
- Support during installation of the COSMO-model: e-mail to cosmo-licence@cosmo-model.org.
- Topographical data for your COSMO-model domain, e.g. at a grid spacing of 0.0625 (~ 7 km); e-mail to detlev.majewski@dwd.de.
- ICON data corresponding to your COSMO-model domain e-mail to norbert.liesering@dwd.de.
- Create COSMO-model products (e.g. via GrADS); if you need help, e-mail to helmut.frank@dwd.de.
- Implement the operational scheduler of M. Gertz; e-mail to michael.gertz@dwd.de.



Email assistance + remote access

- In January 2015 (according to the plan) DWD stopped the distribution of GME data and sent ICON data instead.

2015 The migration from GME to ICON data

Romanian + DWD Team offered support (by e-mail, remote connection) to all interested parties especially for problems regarding the migration to ICON data:

- Nigeria – Eniola Olaniyan
- Tanzania – Peter Tuju
- Vietnam – Monh Linh Nguyen
- Ecuador – Venesa Iza Marcia , Lopez Sofia Alejandra
- Ucraina – Vitali Shpyg
- Rwanda – Prosper Ayabagabo
- Armenia – Zara Petroysan , Rita Abrahamyan
- Oman – Issa Alamri
- Malawi – Charles Vanya , Amos Mtonya
- many others



The official email announcement for all the COSMO users

Fwd: GME to ICON Migration: Information for Changes how to run INT2LM

File Edit View Message

Reply Group Reply Forward

Dear Colleagues,

the 20th of January is getting closer and we want to give you some more instructions on how to migrate to the data of our new global model ICON. Some of you already got some test data, but not everybody made use of this offer. Therefore we now prepared a test data set for all of our partners and for every domain. You can take a look to the attached documentation file "GME_2_ICON.pdf" to read about the necessary steps to prepare your INT2LM for the ICON to COSMO interpolation. Please take also a look to the other available documentation (INT2LM User Guide). But you should in any case read the following!

Everybody should download this data set, also the ones who already have a test data set, **because there are some changes compared to the data set you got earlier.**

Changes to data sets distributed earlier:

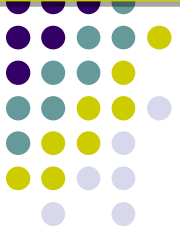
1. There are 3 constant files necessary now for running the interpolation ICON-2-COSMO with INT2LM:
 - o `icon_extpar_<your-domain-name>_R03B07_20141202.nc`: external ICON parameters based on the used ICON grid (from 02nd December 2014) and your domain (NetCDF file). Note that these parameters have been updated and are really different to the ones you got before!
 - o `icon_grid_<your-domain-name>_R03B07.nc`: external grid file to specify the ICON grid points covering your domain (NetCDF file)
 - o `icon_hhL_<your-domain-name>_R03B07.g2`: external file to specify the heights of the half levels (hhL) for the ICON grid points covering your domain (GRIB2 file)

Note, that we are NOT distributing these 3 files daily, so you have to take them from the test data set and store them for your operational runs (best in the CONST-directory for the input model)
2. We are NOT distributing the full 90 ICON levels, but only the lower levels, which are necessary to run the COSMO-Model, which is not going as high in the atmosphere, as ICON. For that we introduced a Namelist variable in INT2LM: `nlevskip`. For your applications you have to set `nlevskip=20` (in group /GRID_IN/).
3. At the moment we cannot write proper UUIDs (unique universal identifiers) for the ICON data, therefore the namelist variable `lcheck_uuidOfHGrid` has to be set to `FALSE`. (in group /CONTRL/). Later, these UUIDs will be used to check that the ICON forecast data corresponds properly to the 3 ICON constant data sets.

New test data set with constant files for ICON:

All test data sets are available from special ftp-servers. All data are packed in one tar-file, named `test_ICON_<your-domain-name>.tar.bz2` where you should recognize `<your-domain-name>`.

Because of the amount of data, there are 2 ftp-accounts. The address for both accounts is: <ftp-anon.dwd.de>



Email assistance + remote access

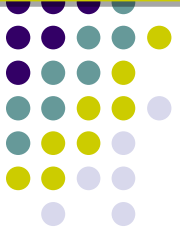
Smoothly migration - previous steps to be accomplished:

- DWD started to distribute ICON test data to all COSMO-Model users worldwide
- The users has been previously supported on implementation and testing the COSMO interpolation version (2.01) released on November 2014

Expectation – improvement of COSMO model forecast. ICON is a non-hydrostatic global model with grid spacing of 13 km (globally), 90 layers up to 75 km and with upgraded physics packages.

Additional requirement

In order to use ICON data, the users has been supported on NetCDF library implementation int2lm_141125_2.01



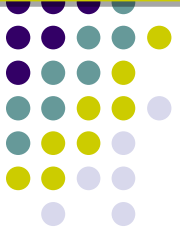
COSMO trainings

COSMO training *hold in NMA, Romania* ***20 to 31 October 2014***

The Romanian support team organize this course for 2 researchers from National Meteorological Service of Malawi: Charles Vanya and Amos Mtonya

Short summary of the course:

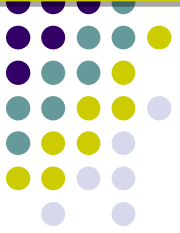
- Compilation of the COSMO model on the IBM cluster (NMA Cluster)
- Running the model for the Romanian domain (COSMO 7 km and COSMO 2.8 km)
- Grads and shell scripts
- Running the model (COSMO 7 km) for Malawi domain
- Automatization of operational procedure for running the COSMO model
- Compilation and running the COSMO model on the trainee laptops



COSMO trainings

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20 to 31 October 2014





COSMO trainings

COSMO / CLM / ART Training Course 2015. Theory and Applications, DWD, BTZ Langen 23 to 27 March 2015.

(regular training)

- this training course is very important for other national meteorological services which plan to use the COSMO model for operational NWP
- *Romanian team (Cosmin BARBU, Bogdan MACO, Amalia IRIZA) attended this course as trainers, for performing the practical exercises.*
- *Assisting the participants in implementing the COSMO model on their personal computers and running test cases for domains which covered their areas of interest*

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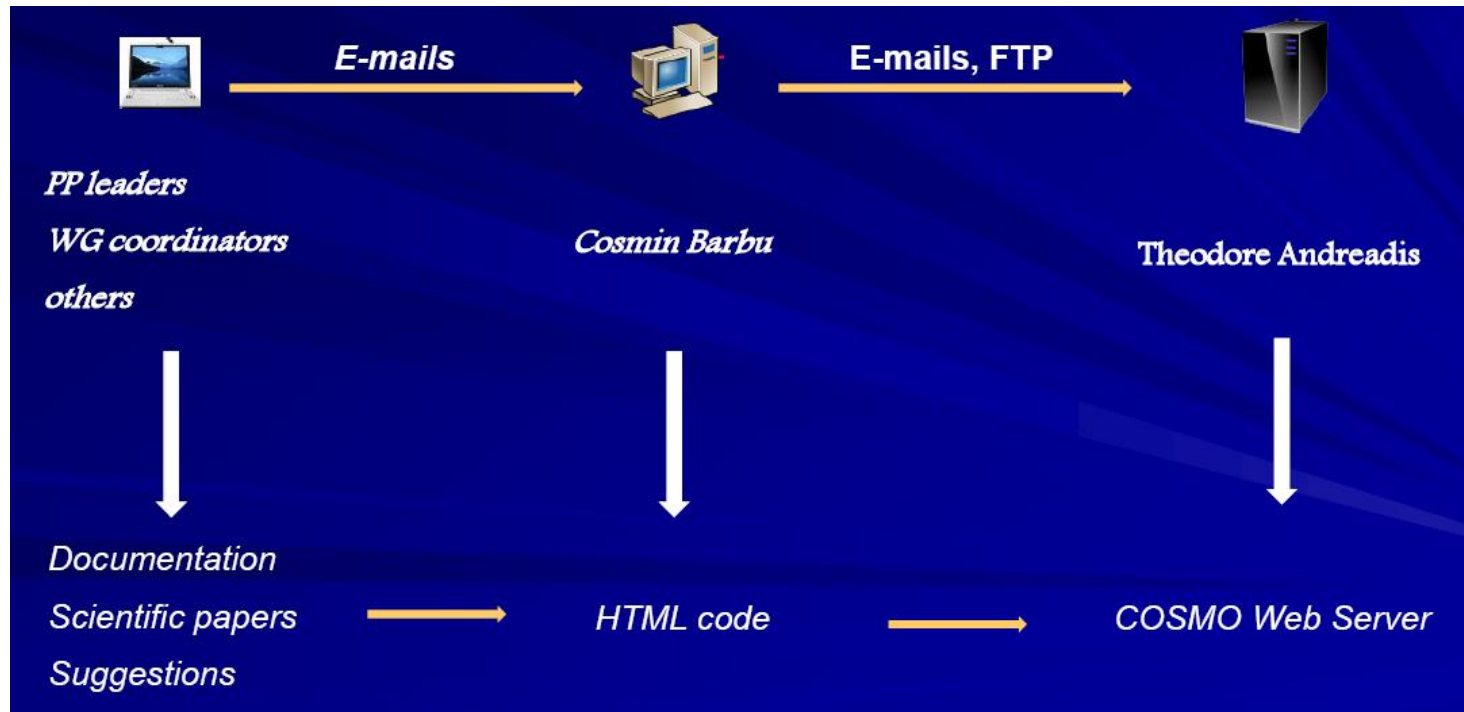


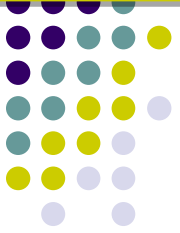


COSMO website activity

COSMO web team & work activity

- Massimo Milelli (ARPA Piemonte) – WG6 coordinator
- Theodore Andreadis (HNMS)
- Cosmin Barbu, Bogdan Maco (NMA)
- others: PP leaders, WG coordinators, COSMO scientists





COSMO website activity

Work done 2014 – 2015

(regular / on-going activity)

Pages which have been / have to be updated:

- PP & WG pages (task details, working plans, meetings, news)
 - could be edited by each PP & WG leader
- The minutes of STC & SMC meetings
- The minutes and presentations of the workshops, tutorials
- New version of COSMO model documentation: “Dynamics and Numerics” – part 1, “Idealized Simulations”
- Fieldextra 12.0 version – see Cosmo utilities software section
- The operational pages for some COSMO members: NMA, HNMS, RosHydromet
- COSMO verification & technical reports
- Newsletter no. 15
- COSMO Science plan for 2015 – 2010
- Bugzilla User Guide tutorial (to be published)

COSMO website activity

Work done 2014 – 2015

(regular activity)

The 15th COSMO newsletter:

WG3a – 2 contributions

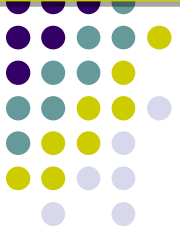
WG3b – 2 contributions

WG5 – 2 contributions

WG7 – 4 contribution

Editing done by Mihaela Bogdan (NMA)





COSMO website activity

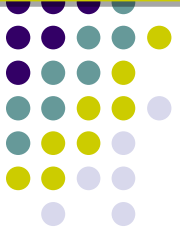
Work done 2014 – 2015

COSMO Bugzilla - brief tutorial:

INDEX

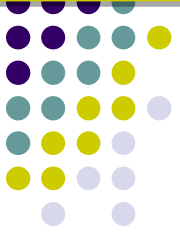
- What is bugzilla?
- How do I gain access?
- How do I change my account settings?
- How are bugs organized?
- How do I search for a bug?
- What is the life-cycle of a bug?
- How do I submit a bug? (example)





Conclusions:

- COSMO model run successfully with ICON input data in most countries which has migrated to GME to ICON;
- The training activities help potential users to get better acquainted with the COSMO model;
- All these activities can improve the communication between the COSMO consortium and the users of the model;
- Romania is able to go on providing support in implementing the COSMO model to new users in 2015 – 2016 and participate with permanent activity in the “*SuPpoRT Activities*” task.



Thanks for your attention!

QUESTIONS?!