

The transition from the limited-area model COSMO to the limited area mode of the ICON modelling framework (ICON-LAM) within the Consortium for Small-Scale modelling has made considerable progress during the recent years. All COSMO member states are now prepared and able to run a deterministic forecast with ICON-LAM on a regular basis. The considerable achievements by the COSMO priority project C2I were essential to reach this milestone. The consortium is deeply grateful to all contributors to the PP C2I and the project leader Daniel Rieger (DWD) for their effort and support. With PP C2I coming to its end in spring 2022, the consortium is now in a good position to pursue further steps of the transition in terms of implementation to operations and scientific development within its Working Groups and dedicated priority projects and tasks. In fact, this work has already started in Priority Projects like CITTA ("City Induced Temperature change Through Advanced modelling", started in 07/21) aiming at the transition of the achievements of PT AEVUS & AEVUS2 to ICON. Moreover, the Priority Project CAIR ("Clouds and Aerosols Improvements in ICON Radiation Scheme") continues with relevant improvements in ICON in its second phase PP CAIR-2 (started in 03/22). Another example is the sensitivity study on ICON model parameters presented at ICCARUS 2022 by E. Avgoustoglou and colleagues from four COSMO partners. However, there are further steps to go towards the transition to ICON, which will require some efforts and will pose challenges as well. The COSMO and ICON communities will have to liaise closer in future, concerning scientific and technical aspects as well as organizational structures and administrative procedures. The process of defining suitable agreements and pathways for an effective and beneficial cooperation and the indispensable exchange of information is ongoing on various levels. One of the next steps in this direction will be the joint session of the Scientific Management Committee and members of the ICON community during the ICON All Staff Meeting in June 2022.

The transition to ICON has consequences for generating revenue in COSMO from license fees, which in turn are used to fund COSMO activity proposals. While COSMO license fees are currently paid for the operational use of the COSMO model, this is not analogously applicable to the operational use of ICON. However, the consortium strives towards providing support for ICON users under a license with annual fees. This support has to be established within COSMO and a first preparatory step is the new PP ICON-COMFORT ("ICON-competence in forecasting", started in 03/22).

When new prospects emerge, some familiar and well-established basics start to stand back. On 14th December 2021, COSMO 6.0 has been released as the final official version of the COSMO model. This model has been the scientific core of the consortium for many years providing a sense of common identity for the COSMO partners. A dedicated contribution of the SCA Uli Schättler (DWD) about COSMO 6.0 in this COSMO newsletter emphasizes the importance of the COSMO model for our community.

Since the release of COSMO Newsletter No. 20, further priority projects and tasks were completed with success: PT SAINT ("Snow cover Atmosphere Interactions"), PP AWARE ("Appraisal of 'Challenging Weather' forecasts"), and PP CARMA ("Common Area with Rfdbk/Mec Application"). PP CARMA resulted in a restructured procedure for common plot activities and has been the basis for the implementation of a very useful shiny application for the interactive generation of verification plots (see <https://www.cosmo-model.org/content/tasks/verification.priv/default.htm>). There is a contribution about PP CARMA in this issue of the COSMO Newsletter by the project leader Amalia Iriza-Burca (NMA) and the PP CARMA team.

The COVID-19 pandemic prevented us from having in-person meetings in 2021. Not only smaller meetings of STC, SMC or working groups were held online, but also the COSMO General Meeting 2021 as well as ICCARUS 2022 had to be restricted to an online event once again. Even though we can be glad to benefit from good technical infrastructure and excellent support by the staff organizing

the online meetings and even though we adopt to these circumstances more and more, there is an increasing need and desire to meet in person again after more than two years. Looking at the currently lowering numbers of COVID infections, let us keep fingers crossed that the "COSMO family" will be able to meet in Athens in September 2022, though a decision is still due.

Last, but not least, we welcome the CIMA foundation (<https://www.cimafoundation.org/>), Italy, as new participating member to COSMO.

I would like to thank all contributors to the COSMO Newsletter No. 21 and the editorial team, in particular Mihaela Bogdan and Massimo Milelli, for the effort put into setting up this issue of the Newsletter.

Looking forward to more in-person meetings,

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