Steering Committee (STC) Report

Lt Col Lucio Torrisi

ITAF - Operational Center for Meteorology (COMET), Pratica di Mare (Rome)

44th COSMO-STC meeting – 9-10 September 2019

Participants:

- L. Torrisi (Italy, chair)
- D. Majewski (Germany)
- P. Steiner (Switzerland)
- P. Skrimizeas (Greece)
- A. Wyszogrodzki (Poland)
- G. Stancalie (Romania)
- D. Kiktev (Russia)
- Y. Levi (Israel)
- D. Mironov (SPM)

Guest speaker:

G. Zängl

STC representatives

Country	Member	Deputy
Germany	D. Majewski	G. Zängl
Switzerland	P. Steiner	M. Arpagaus
Italy	L. Torrisi	F. Marcucci
Greece	P. Skrimizeas	F. Gofa
Poland	A. Wyszogrodzki	A. Mazur
Romania	E. Mateescu	R. Dumitrace
Russia	G. Rivin	M.Tsyrulnikov
Israel	Y. Levi	P. Khain

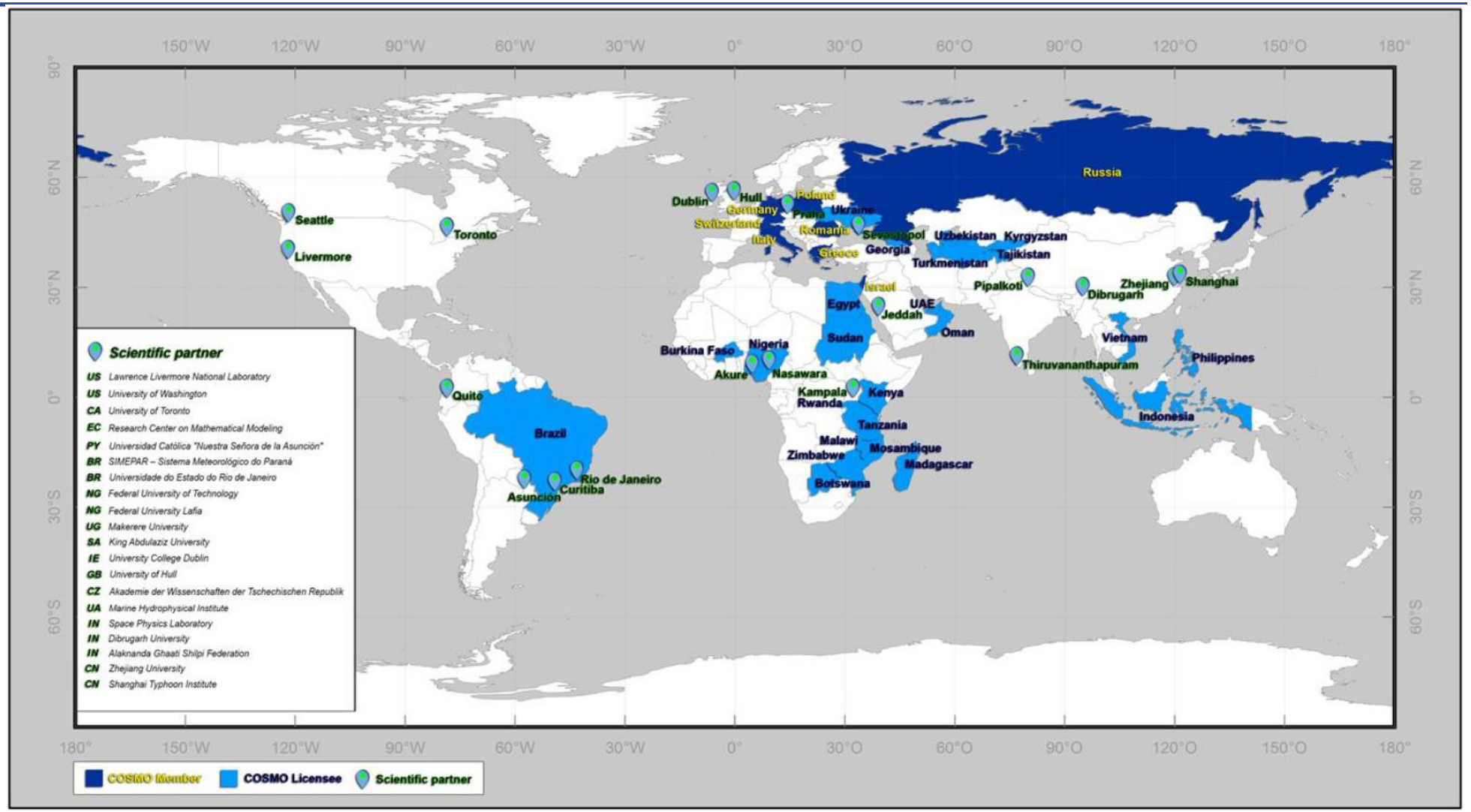
Operational regional NWP Applications at COSMO Members

Country	Deterministic System Grid spacing (km)	Ensemble DA System Grid spacing (km) / number of members	Ensemble Pred. System Grid spacing (km) / number of members
Germany	2.2	2.2 / M40	2.2 / M20
Switzerland	6.6 and 1.1	2.2 / M40	2.2 / M21
Italy	5.0 and 2.2	7.0 / M40 2.2 / M40	7.0 / M40 2.2 / M20 (pre-operational)
Greece	4.0 and 1.0	-	-
Poland	7.0 and 2.8	-	2.8 / M20
Romania	7.0 and 2.8	-	-
Russia	13.2, 7.0, 2.2 and 1.1	-	-
Israel	2.8	-	-

COSMO-Model Worldwide distribution

6 licensees in 2019.

Botswana
Brazil-INMET
Brazil-DHN
Oman
Turkmenistan
United Arab Emirates



Free usage of COSMO model in developing countries and at universities.

COSMO license income and activity proposals

6 COSMO Licensees in 2019

Total license fee income in 2019: 120.000 € (NO taxes on the license fee income have to be paid by DWD!)

But most of the expenses will be taxed by VAT (19%); thus we pay 19% taxes on most of the accepted Activity Proposals.

Accepted until August 2019: ~ 90.000 €!

We can still spend about 15.000 - 20.000 € for COSMO Workshops / Meetings / Visitors.

Please send COSMO Activity Proposal as soon as possible!

Dead line for re-imbursement by DWD administration: November 2019!

Please send a report from the event funded by COSMO proposals.

COSMO license income and activity proposals

Extremely important to follow DWD travel regulations (limits for diem, hotel, transportation, etc) Please use the new form. After the activity is carried out, please send all documents asap to Daniel Egerer!

CONSORTIUM FOR SMALL SCALE MODELING

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COSMO activity proposals

The Activity Proposal Form

For the purpose of submitting an activity proposal, download first the Proposal Form (ver 2019), read its instructions and ma
The per-diem and hotel table is here (the names of the countries are in German). For Germany, please look at the table belo

Table for Germany. For other cities please contact Mr. Daniel Egerer.

City	Per Diem	Maximum hotel rate per night with receipt
Hamburg	24 €	81 €
Berlin		90 €
Frankfurt		84 €
Offenbach		79 €
Langen		75 €
Darmstadt		81 €
Karlsruhe		81 €
Munich		86 €

How to get reimbursed for a trip covered by an Activity Proposal

1. If you have paid for the trip on your own

- Save all your bills / receipts (plane or train ticket, hotel, public transportation, etc)

2. If your employer has paid for your trip

- Save your bills / receipts (plane or train ticket, hotel, public transportation, etc.)

Place (in German)	Per diem	Maximum hotel rate per night with receipt*
	in Euro	
1	2	3
Afghanistan	25	95
Aegypten	34	125
Aethiopien	22	86
Aequatorialguinea	30	166
Albanien	24	113
Algerien	42	173
Andorra	28	45
Angola	64	265
Argentinien	28	144
Armenien	19	63
Aserbaidschan	25	72
Australien		
Canberra	42	158
Sydney	56	184
other	42	158
Bahrain	37	180
Bangladesch	25	111
Barbados	43	165
Belgien	35	135
Benin	33	101
Bolivien	25	93
Bosnien und Herzegowina	15	73
Botsuana	33	102
Brasilien		
Brasilia	47	127
Rio de Janeiro	47	145
Sao Paulo	44	132
other	42	84
Brunei	40	106
Bulgarien	18	90
Burkina Faso	36	84
Burundi	39	98

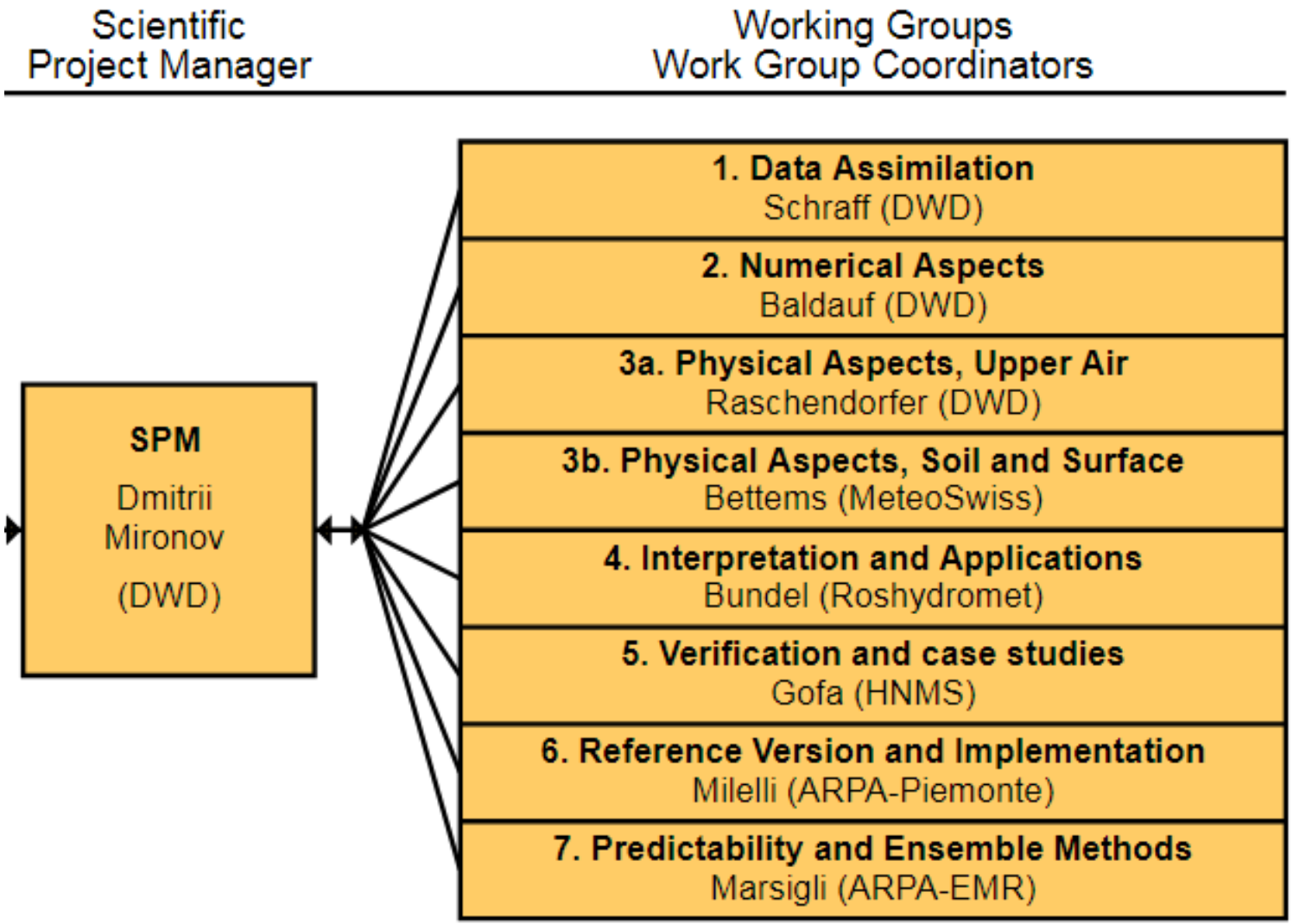
COSMO Priority Projects and Priority Tasks

WG1	PP KENDA-O Christoph Schraff 09/2015-08/2020	Km-scale ENsemble-based Data Assimilation for high-resolution Observations	ONGOING
WG2	PP EX-CELO Zbigniew Piotrowski 09/2017-08/2019	Extension of COSMO-EULAG operationalization	EXTENDED TO 03/2020
	PT CCE Damian Wójcik 09/2018-08/2019	Consolidation and testing of the COSMO-EULAG	
WG3a	PP T2(RC)2 Harel Muskatel 09/2015-03/2020	Testing and Tuning of Revised Cloud Radiation Coupling	ONGOING
WG3b	PP CALMO-MAX Antigoni Voudouri 06/2017-08/2020	CALibration of COSMO Model (CALMO) Methodology Applied on eXtremes (MAX)	ONGOING
	PT SAINT Sascha Bellaire 09/2017-06/2020	Snow cover Atmosphere INTeractions; multi-layer snow model	ONGOING
	PT ÆVUS2 Paola Mercogliano 09/2019 - 08/2020	Analysis and Evaluation of TERRA_URB Scheme	NEW PT: APPROVED

COSMO Priority Projects and Priority Tasks

WG4/5	PP AWARE Flora Gofa & A. Bundel 09/2019-08/2021	Appraisal of "Challenging WeAther" FoREcasts	NEW PP: APPROVED
WG5	PP CARMA Amalia Iriza-Burca 04/2018-03/2020	Common Area with Rfdbk/Mec Application	ONGOING
WG6	PP C2I Daniel Rieger 04/2018-03/2022	COSMO transition to ICON-LAM	ONGOING
	PP CEL-ACCEL Z. Piotrowski 09/2017-08/2019	COSMO-EULAG on accelerators	EXTENDED TO 03/2020
	PP IMPACT Carlos Osuna 08/2018-09/2022	Icon on Massively Parallel ArchiteCTures	ONGOING
	PP WG6-SPRT Massimo Milelli … permanent	Support (on-going WG6 tasks)	ONGOING
WG7	PP APSU Chiara Marsigli 03/2018-08/2020	Ameliorating Perturbation Strategy and Usage of ensemble systems	ONGOING

COSMO Working Groups



Thanks to the SPM, WG-PP/PT Leaders and the scientists involved for all the work, ideas, enthusiasm, ….

PP COSMO transition to ICON (C2I) – Status 09/2019

Phase 1	Phase 2	Phase 3
- ICON Training 2018 - Installation - Setup - First experiments	- Daily forecasts - Verification	- Daily forecasts - Verification - Data assimilation - Forecasters' feedback
Q2 2018 – Q4 2018	Q1 2019 – Q2 2020	Q3 2020 – Q1 2022

	NMA	IMGW	COMET	IMS	HNMS	RHM	ARPAE	ARPAP	CIRA	INMET	CLM
Installation	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Experiments running	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴	🟢	🟢	🟢
Daily Forecasts	🟢	🟡	🔴	🟢	🟢	🟢	🔴	🔴	⚪	🟢	⚪
Verification started	🟢	🟢	🔴	🟢	🟢	🟢	🔴	🔴	🟢	🟢	🟢

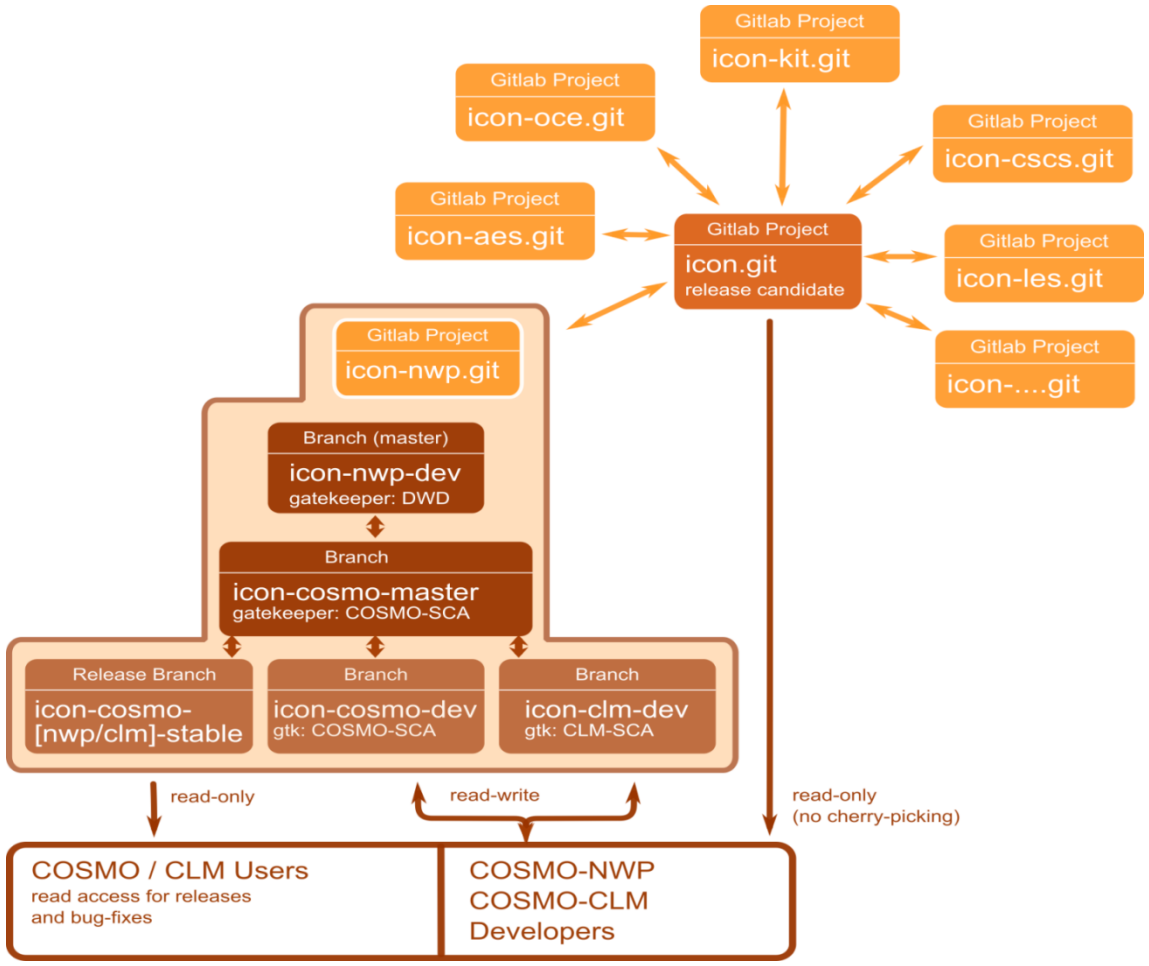
🟢 Done/Ongoing 🔴 Not yet done

🟡 Issues left ⚪ Does not apply

COSMO workflow for ICON-NWP developments

- COSMO/CLM community will no longer have full control over the source code of their model and can only control their own contributions to ICON
- SMC is preparing a document on the possible workflow:
  - ➔ The contributions will be managed in a similar way as for COSMO model (SMC->propose work, STC->approve it), but according to similar standards (harmonized with ICON) and extra criteria of acceptance (changes not impact on ICON properties) and an agreed workflow
- Also the legal and organizational aspects of the interaction between the ICON Partners and COSMO need to be formalized (next slides)

Coordination of efforts between COSMO and ICON communities is crucial!



Approval of changes related to ICON-NWP

COSMO Consortium has been named as a **key development partner of DWD for operational NWP and data assimilation** (in appendix I of DWD/MPI-M agreement). DWD has the responsibility to ensure that this partnership complies with the DWD/ MPI-M cooperation agreement.

➔ **Annex F - Relation to ICON Developers at DWD and MPI-M, part I (signed by DWD and MPI-M)**

DWD and MPI-M grant the *COSMO NMS and the major members* the **right**, which is **non-exclusive, free of charge and unlimited in time, to use of the ICON** Modelling Framework for Research and Development and their Official Duty purposes.

-"§4 – Development partnerships" of DWD/MPI-M agreement and some paragraphs of "institutional non-commercial research license of ICON Modelling Framework" are cited in this annex (license downloadable from https://code.mpimet.mpg.de/attachments/download/19579/ICON_Non-Commercial_Research_Licence.pdf)

-It was signed by DWD and MPI-M. It will be signed by COSMO (Chairman of STC)

➔ **Annex A -** List of the COSMO-Software

The ICON-LAM section was removed and substituted with a link to information in Annex F part I

"The rights of use of the Partners for ICON Modelling Framework are specified in the Annex F, part I."

Approval of changes related to ICON-NWP

➔ **Annex F, part II**

It specifies the DWD-COSMO development partnership for ICON with respect to operational NWP including data assimilation. This part emphasise the role of COSMO Consortium as the **key development partner of DWD**, define modalities to ensure that development work can be incorporated into ICON Modelling Framework, taking into account DWD responsibilities with respect to the ICON Cooperation agreement.

- This allows COSMO to actively contribute to the further development of ICON-NWP.
- It will be signed by DWD and COSMO (Chairman of STC)
- Final version is expected a few months

Other …….

- Short guidance on possible next future developments by SMC
- C. Osuna will substitute O. Fuhrer in ECMWF scalability board
- Possible new COSMO version with only technical changes by end of year
- Deterministic data assimilation scheme (3DVar with climatological background covariance, …)
- Real time COSMO-LEPS data for HH2020 LANDSUPPORT research project
- ……

Location: building Uni-Mail Geneva (Switzerland)

Planned excursion

12:45-14:00 Lunch at the university

14:00-15:15 Guided walk from the university through the old town of Geneva to the lake of Geneva

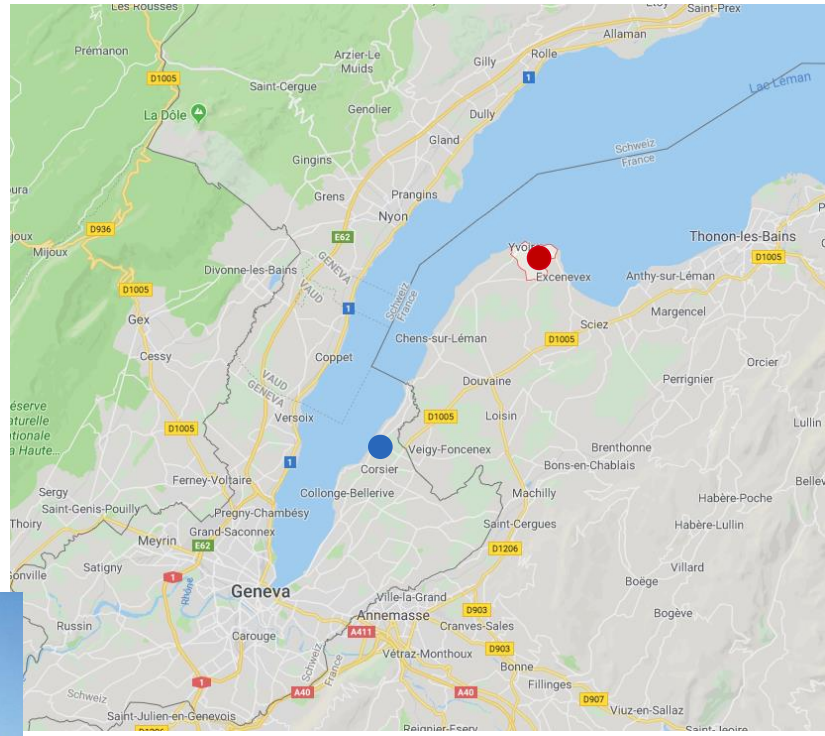
15:30-17:00 Boat-trip on the lake towards Yvoire (France)

17:00-18:00 free visit of Yvoire

18:00-19:00 Boat-trip with aperitif towards Corsier (Switzerland)

19:15-tbd Dinner in Corsier

tbd Return by bus to Geneva



COSMO-GM 2021

- Location: Bucarest (Romania)
- Period: 13 – 17 September

METEO ROMANIA

Thanks for your attention!

Thanks for coming to Rome!