



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Home Affairs FDHA
Federal Office of Meteorology and Climatology MeteoSwiss



STC Report

Eretria, 11th of September 2014

Philippe Steiner



34th STC meeting on 8th/9th Sept.

Participants:

- D. Majewski (Germany),
- P. Steiner (Switzerland, chair)
- L. Torrisi (Italy)
- T. Tzeferi (Greece)
- A. Wyszogrodski (Poland)
- R. Dumitrace (Romania)
- D. Kiktev (Russia)
- M. Ziemianski (SPM)

Excused:

- G. Stancalie (Romania)



New COSMO Agreement

- New COSMO Agreement, signed 19.6 / 21.7 / 6.8, **in force**
- Annexes ruling the collaboration with CLM & ART signed
- Annex for the collaboration with ICON still pending





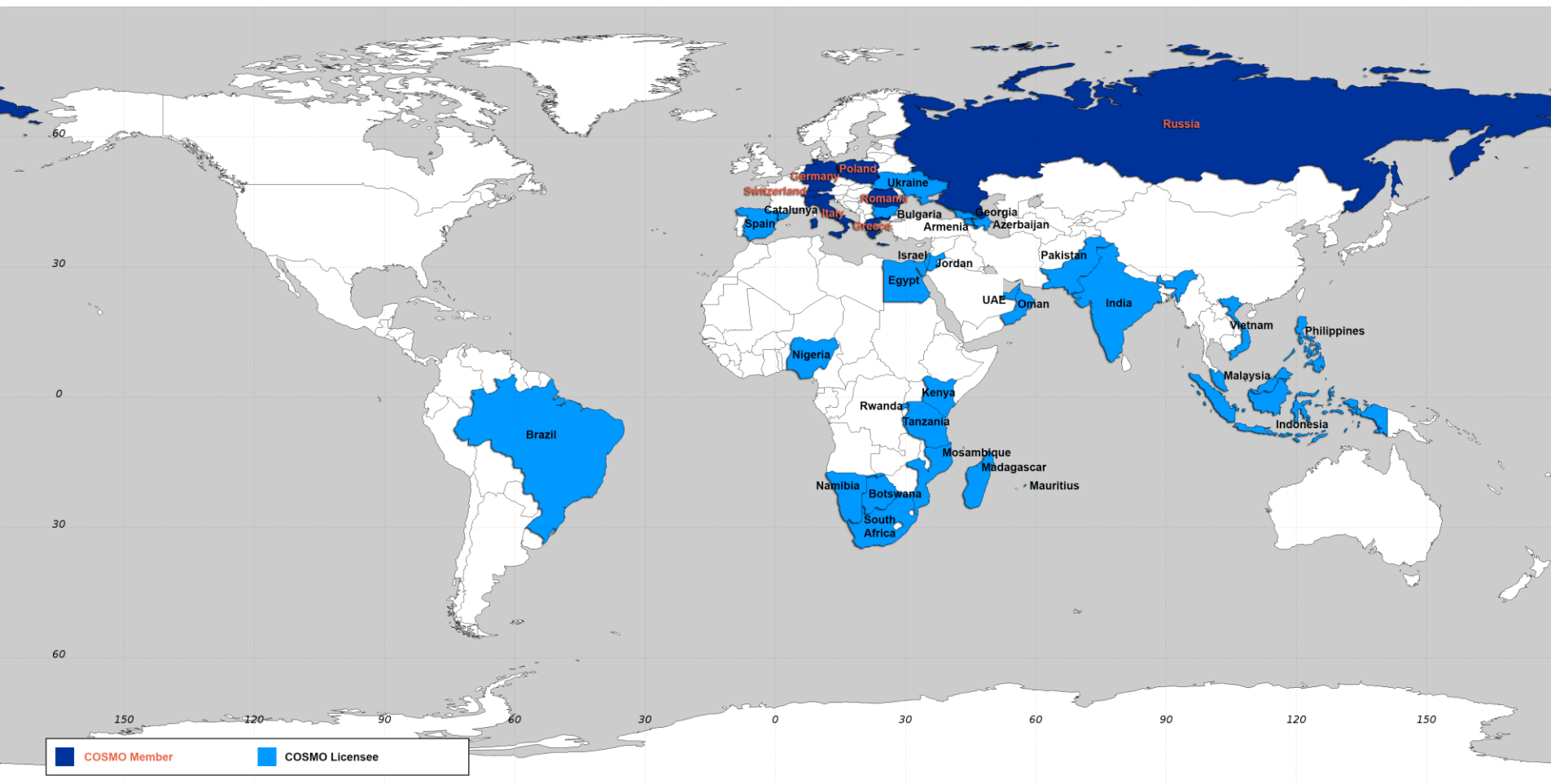
IMS as COSMO Applicant



- Declaration of Application signed 17.8 / 26.8.2014
- Hence IMS is officially applicant from 1.9.2014 on
- Application period of (at least) 2 years started
- Implication of IMS in different PP/PT planned:
 - CALMO
 - VERSUS2
 - (RC)²
 - Possibly POMPA
- Two IMS scientists partipate to GM 2014:
Pavel Khain
Alon Shtivelman

COSMO-Model – Worldwide distribution

Deutscher Wetterdienst
Wetter und Klima aus einer Hand



7 (2014) 8? (2015) paying licensees

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



FROST-2014: preparation for the Olympics of Sochi






Prediction of good visibility window, 17.2.14 by various systems

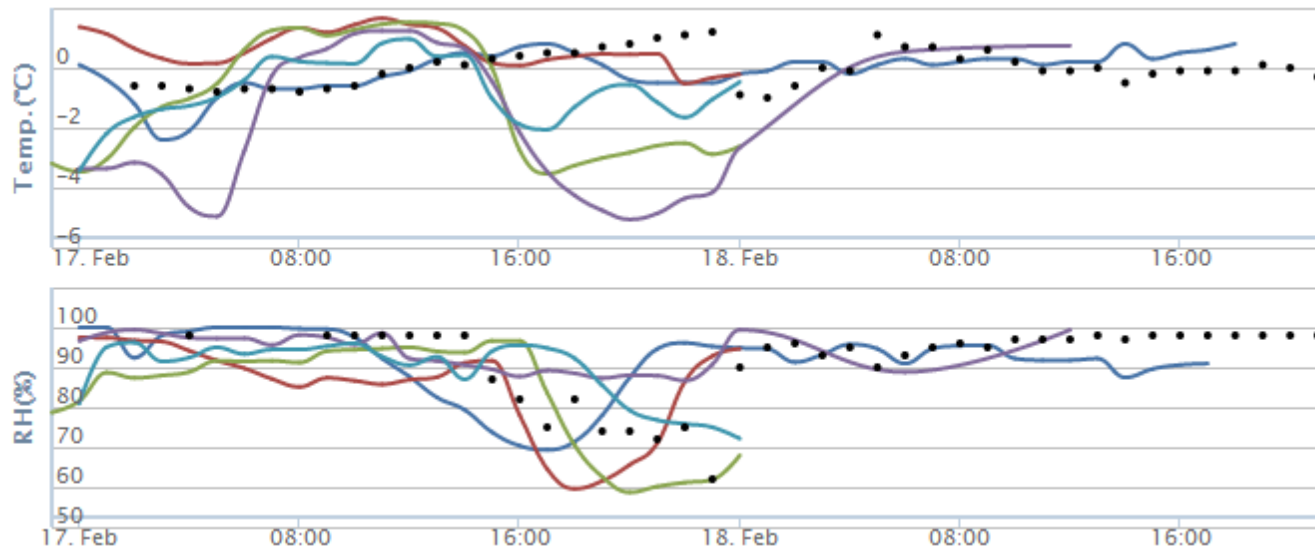
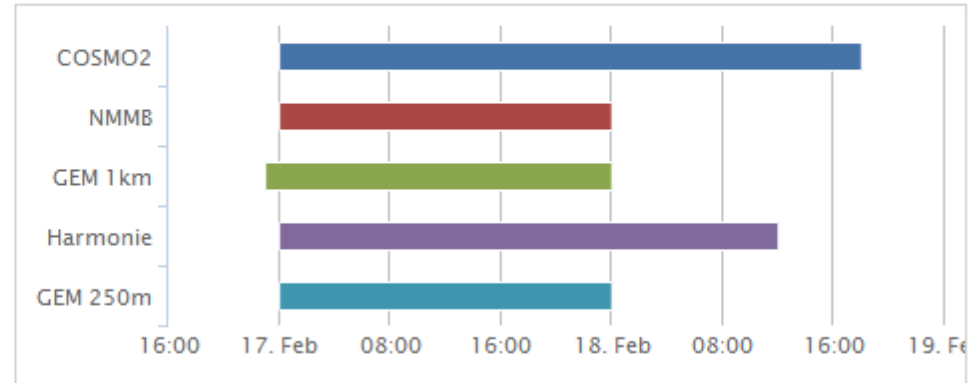
Forecasts ▶ Multi-system point forecasts

[Abbreviations used for the Forecasting Systems](#)

[Locations of the AMSs](#)

[AMSs on Google Maps](#)

Model	Init time	
<input checked="" type="checkbox"/> COSMO2	2014-02-17 00:00:00	 ⏪ ⏩ ⏮ ⏭
<input checked="" type="checkbox"/> NMMB	2014-02-17 00:00:00	 ⏪ ⏩ ⏮ ⏭
<input checked="" type="checkbox"/> GEM 1km	2014-02-16 23:00:00	 ⏪ ⏩ ⏮ ⏭
<input checked="" type="checkbox"/> Harmonie	2014-02-17 00:00:00	 ⏪ ⏩ ⏮ ⏭
<input checked="" type="checkbox"/> GEM 250m	2014-02-17 00:00:00	 ⏪ ⏩ ⏮ ⏭



RKHU-1 (2320m)
RKHU-3 (2043m)
RKHU-8 (1740m)
RKHU-4 (1580m)
RKHU-7 (Finish, 980m)
Snowboard-1025
Freestyle-1080
Biathlon-1500
Biathlon-1400
Biathlon Stadium
Ski Stadium
Nordic Combination-675
Nordic Combination-615
Ski Jump-650

**Deep gratitude to the COSMO community
for support of the Sochi Olympic
meteorological services !**

Thank you!

<http://frost2014.meteoinfo.ru>



Decisions on current PP/PT (1)



- PP KENDA: extended plan until 9.2015 approved
Target: LETKF version for operations as good as nudging
- PP CELO: no new plan submitted
Study required on the feasibility and the benefit of a switch of the main development to the compressible EULAG version
- PT ConSAT: extended plan until 9.2015 approved
- PP CALMO: extended plan until 9.2015 approved
Consideration of variables useful in case of high impact weather required



Decisions on current PP/PT (2)

- PP VERSUS2: modification of the plan required
After the implementation of the feed-back files, the highest priority must be given to the preparation of an operational use
 - Portability
 - Performance: DB size, support high-resolution ensemble
 - Usability (automatization, concurrent users, improvement of file handling and naming)

The STC questions the use of the not widely used php in COSMO for the front-end to read the feed-back files.
References to the “VERSUS system” to be removed.

- PP POMPA: extended plan until 9.2015 approved
Additional tasks to propose an extension of the rules for source code management to cover the new C++ parts



Decisions on new PP/PT (3)

- PT CORSO-A (After CORSO) approved
 - PT leaders: Gdaly Rivin & Inna Rozinkina (RHM)
 - Goal: transfer of results of the PP CORSO to COSMO
- PT SNOWE (Snow water equivalent) approved
 - Leader: Inna Rozinkina (RHM)
 - Goal: derivation of initial SWE from continuous calculations of SWE values for full snow periods with use of SYNOP measurements
- PT (RC)² (Revised Cloud Radiation Coupling) approved
 - Leader: Ulrich Blahak (DWD)
 - Goal: improve cloud radiation coupling



Other considerations (1)

- **WG2: new dycore developed in PP POMPA:**
 - STC decided, in a first phase not to deliver it to licensees (apart of R&D applications)
 - A parallel phase with the dycore in Fortran and C++/Stella will be conducted until 9.2017
 - The development framework in C++ will be improved. Evaluation and decision on termination or extension of the parallel phase to be taken in 2017
 - Required actions to synchronize the two versions discussed, but decisions postponed to next meeting



Other considerations (2)

- WG3b tasked to plan the necessary extensions of EXTPAR (needed urban fraction, anthropogenic heat emission) which would enable the integration of the urban scheme **TERRA_URB** from CLM
- WG3b tasked to specify and implement the necessary extensions of the **web-interface to EXTPAR** for the needs of the NWP application



Other considerations (3)

- WG5 tasked to elaborate a **COSMO strategy for the verification tools**.
For which purposes shall VERSUS be used?
Shall additional COSMO verification tools be foreseen?
For which purposes?
- WG5: FTEs will be attributed for the **production of the common verification plots**, but only on the common area.
For conditional verification, the requirements must be specified every year new by the WG3a/b.
Not only a description, but an analysis of the verification results is expected in the reports.



Other considerations (4)

- WG6 tasked to investigate different **improvements in the source code management** (issued by the PP POMPA):
 - switch the release planning from content to due date-driven
 - introduction of a common code repository
 - try to perform the functional test of updates with code as near as possible to the one inserted in the official version
 - introduce the technical test suite
 - introduce a bug reporting and tracking system
 - assess the introduction of a regression testing system (e.g. night builds of the current development version)
- STC to study ways to improve the knowhow transfer within COSMO



Elections

- 1) Philippe Steiner reelected Chair of the STC for one year
- 2) Antonio Troisi elected PPL VERSUS2 during the absence of A. Celozzi (5 months, date to be announced by CNMCA)



Source code management: rules

New version of the COSMO Standards document accepted:

- Precisions for the (now available) NWP test suite
- Specification of documentation for scientifically oriented code (it must be 'in house' as e.g. Technical Report or Newsletter article)
- Definition of recommended CLM-community version
- Appendix D: Steps of Code Development for CLM-Community Model



Source code management: V5.2

- Version V5.2 discussed:
 - First common version of the main physics parameterizations with ICON
 - For the turbulence, probably an additional, not extensively tested version
 - Additional parametrization from ICON: IFS/Berchtold convection scheme
 - The implementation and coordinated of fully actual parameterizations from ICON planned for V5.3



Science plan

- The STC thanks all contributors for their worthwhile contributions which are much appreciated
- The result will build an important basis to guide the scientific work of COSMO
- The STC asks for a final revision of the science plan:
 - Eventually deeply consider the review comments
 - Unify the effort estimations
- New version to be submitted to the STC for approval at its next meeting (beginning of March)



Collaboration with ICON (1)

- Will become a focus in the next years, according to the COSMO strategy approved last November
- ICON coordinator for physics (Martin Köhler) shall be invited to SMC meetings
- SPM shall be invited to ICON user days
- Representations shall be documented in the Annex F
- SCA for COSMO and ICON coordinator for physics tasked to define the additional rules in the Source Code Management for the common physics package



Collaboration with ICON (2)

- ICON-RM (regional mode) will be available to COSMO for tests in Q1.2016
- A new PP shall be submitted in 9.2015 for the evaluation of ICON-RM by COSMO and comparison with the different COSMO versions used.
- Further PP (from 9.2017 on?) will depend on the outcomes
- Other activities can already be included in other PP/PT, like the possible integration of the radiation scheme RRTM in the follow-on project of (RC)²



Next COSMO GMs

- COSMO GM 2015: 7-10.9.2015 in Wroclaw (PL)
- COSMO GM 2016: 5-8.9.2016 in Offenbach (D)



Thank you for your attention





COSMO GM 2015, Wrocław

September						
Mo	Tu	We	Th	Fr	Sa	Su
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				
5:0 13:0 21:0 28:0						

Wrocław



16th COSM
Philippe.Steiner@wroclawcosm





COSMO GM 2015, Wrocław



Wrocław

16th COSM
Philippe.Steiner@wroclaw.pl

Motto: Wrocław – Miasto Spotkań / Wrocław –
the meeting place



Coordinates: 51°6'28"N 17°2'18"E

Country	Poland
Voivodeship	Lower Silesian
County	city county
Established	10th century
City rights	1242
Government	
• Mayor	Rafał Dutkiewicz
Area	
• City	292.92 km ² (113.10 sq mi)
Elevation	105-155 m (-400 ft)
Population (2012)	
• City	631,188 ^[1]
• Metro	1,164,600
• Donym	Wratislavian, Wrocławster
Time zone	CET (UTC+1)
• Summer (DST)	CEST (UTC+2)
Postal code	50-041 to 54-612
Area code(s)	+48 71
Car plates	DW
Website	www.wroclaw.pl



COSMO GM 2015, Wrocław



ORBIS Hotel Wrocław

Central train station



COSMO General Meeting 2015



Wrocław

~1-1.5
hour
bus
drive

Książ Castle

Książ Castle

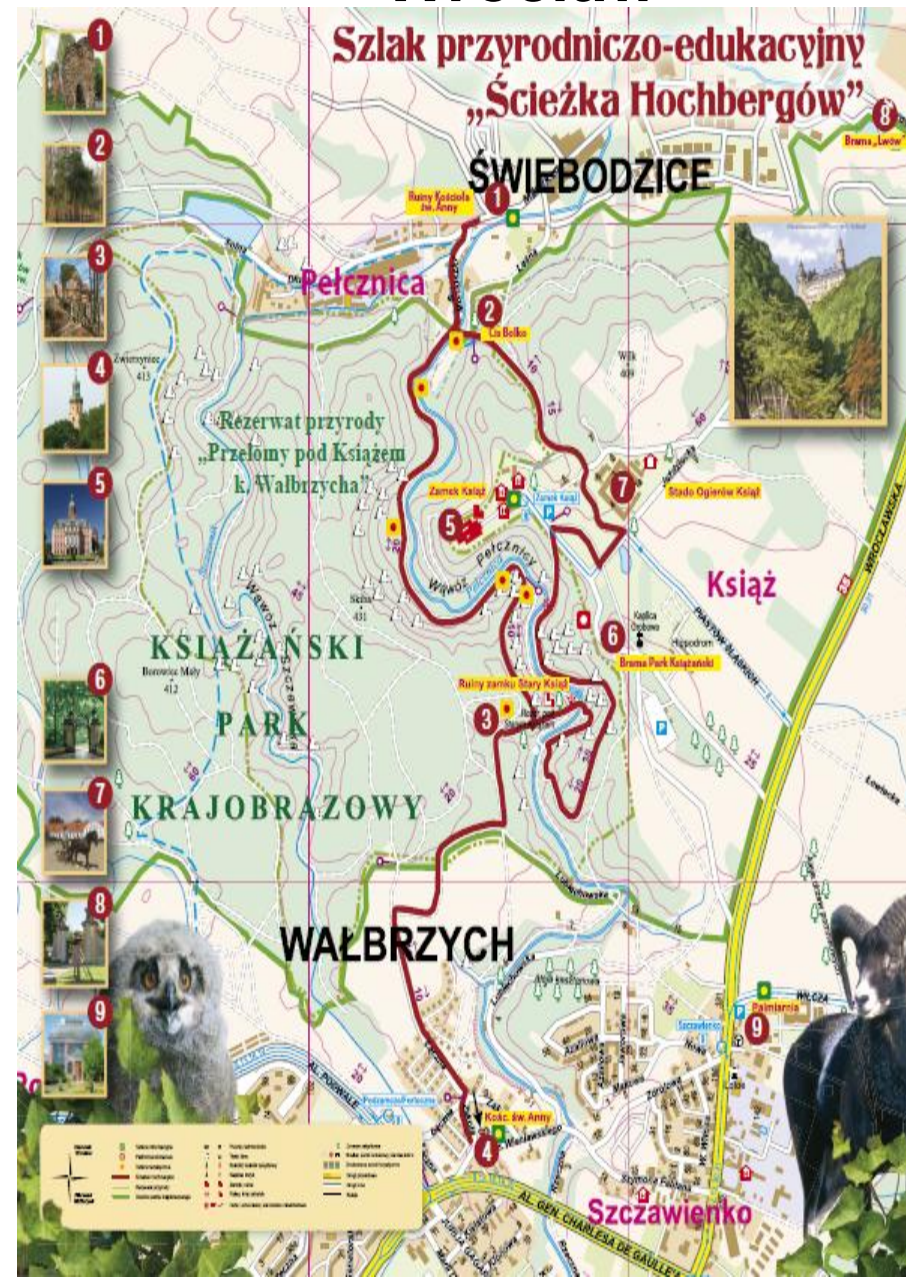


built in 1288-1292
under Bolko I the Strict





COSMO GM 2015, Wrocław



Książ
Landscape
Park





See you in Wrocław!

