



**Third Session of the Council of  
the South East European Consortium for Operational weather Prediction**

**Belgrade, Serbia, 23 October 2017**

**Minutes**

No.	Agenda item
1.	<p style="text-align: center;"><b>Welcome addresses</b> Prof. Jugoslav Nikolic, RHMSS Director – Council Chair Dejan Ralevic – National Coordinator of the Republic of Serbia for CEI</p>
	<p>The third session of the Council of the South East European Consortium for Operational weather Prediction (SEECOP) was opened by host of the meeting, Professor Jugoslav Nikolic, Director of the Republic Hydrometeorological Service of Serbia (RHMSS). He greeted all present Council Members, Observers, WMO and EUMETNET representatives, the representative of the Central European Initiative (CEI) that sponsored the meeting through its Cooperation Fund, and particularly guest lecturer Professor Zavis Janjic, author of the NMMB model that is used as a principal model of the Consortium. A full list of participants can be found in Annex 1.</p> <p>Professor Nikolic stressed the importance of the “Hands-on training on the use of the NMMB atmospheric model for weather prediction in South East Europe” (SEEWEATHER), that was being organized by RHMSS as a project activity of the Consortium from 23 to 27 October 2017 in Belgrade, Serbia, and attended by experts in the field of numerical weather prediction from SEECOP Members and potential members.</p> <p>Professor Nikolic concluded that it was evident that SEECOP had become a subject of increasing attention in the region, and that it could be expected that this form of regional cooperation of NHMSs would be crucial in the coming period in terms of improvement of the hydrometeorological early warning and alert systems and cross border cooperation in the field of disaster risk management.</p> <p>The second welcome address was delivered by Mr. Dejan Ralevic, representative of the Serbian Ministry of Foreign Affairs – Assistant Foreign Minister for the European Union, in charge of regional cooperation, in the capacity of the National Coordinator of the Republic of Serbia for the Central European Initiative (CEI) and its Cooperation Fund that provided financial support to the SEEWEATHER workshop by partially covering expenses for the participants. Mr. Ralevic greeted the participants and expressed satisfaction on behalf of CEI for being able to financially support this meeting and workshop, bearing in mind that CEI, as one of the oldest regional initiatives in Europe fully supports and highly values the exchange of ideas, views, expertise and know-how on a regional level. Science knows no borders, which is why SEECOP developments can be of value to a much broader community, and the interest of additional countries to become SEECOP Members is highly indicative of the Consortium’s success.</p>
2.	<p style="text-align: center;"><b>Report on SEECOP activities between two Council Sessions</b> Dr. Slobodan Nickovic, RHMSS – SEECOP Coordinator</p>
	<p>Dr. Slobodan Nickovic held a presentation on the SEECOP activities between two Council sessions. The SEECOP community is growing and even surpassing the area of SEE, while at the same time the Consortium is consolidating its place among other European NWP consortia. Belarus, which became a new SEECOP Member</p>

during the previous Council session, will very soon finalize the membership procedure by signing the SEECOP Agreement. Meanwhile, some international organizations, such as WMO, CEI and EUMETNET have shown interest in SEECOP and some new countries (Cyprus, Ukraine, Greece and Turkey) have expressed their willingness either to join or cooperate with SEECOP.

As agreed during the previous Council session, the team from RHMSS managed to prepare and organize the first workshop – hands-on training on the implementation and use of the Consortiums’ principal model – the NMMB model. The workshop is being held from 23 to 27 October 2017 in Belgrade, partially supported by CEI, and consisting of theoretical morning lectures and practical afternoon sessions based on the user guide and the model code, including pre-processing and post-processing, produced by RHMSS NWP experts using the NCEP’s software as a basis. A model code repository, i.e. the SEECOP workshop software repository will be created on the SEECOP website hosted by the NHMS of Montenegro, to be available to the SEECOP Members after the workshop. Bearing in mind that RHMSS experts added value to the basic NCEP’s software, participants will be required to sign a statement on the use of the software system at the end of the workshop.

In line with EUMETNET recommendations, last year the depository of SEECOP products from the global NMMB model was created, and those products have been available on a daily basis on the SEECOP website.

When it comes to R&D activities, the major model feedbacks under development at RHMSS are as follows:

1. Aerosol-atmosphere interactions: cloud-aerosol interactions (indirect aerosol effects) and 2-way integration;
2. Hydrological-meteorological interactions: one-way forcing and two-way interactions; and
3. Data assimilation.

<b>3.</b>	<b>Report on EUMETNET/SRNWP activities</b> Mr. Balazs Szintai – EUMETNET C-SRNWP Manager
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The session was followed by the address of Mr. Balazs Szintai from the NHMS of Hungary, who is at the same time the Manager of the Coordination – Short Range Numerical Weather Prediction (C-SRNWP) EUMETNET Programme. Mr. Szintai congratulated SEECOP on its progress in the past year, briefly described the structure of the EUMETNET Forecasting Programme (umbrella programme under which the C-SRNWP programme operates) and gave a short report on the latest developments within the Forecasting Programme, C-SRNWP Programme and EUMETNET plans for its next 5-year phase.

Ongoing C-SRNWP activities are as follows:

- Obs-SET meeting: held each year in spring; coordination of NWP community needs for observations with the EUMETNET Observations Programme;
- EUCOS support: within the Observations Programme, substantial financial resources are available to EUMETNET Members to conduct EUCOS observation impact studies on the importance of a given observations type for short-range or global NWP;
- SRNWP data pool: maintenance of a database of surface and boundary layer observations from several sites freely available to EUMETNET Members and collaborating universities;
- Global Lake Database: maintenance and development;
- C-SRNWP Expert Teams: 8 expert teams, covering all aspects of NWP, perform coordination of SRNWP consortia (SEECOP Members participate in two expert teams);
- Maintenance of the C-SRNWP website – [srnwp.met.hu/C\\_SRNWP\\_project/Eumetnet\\_List.html](http://srnwp.met.hu/C_SRNWP_project/Eumetnet_List.html);
- EWGLAM/SRNWP Meeting: preparation of the scientific programme for each meeting; the last meeting was held at ECMWF, Reading, UK, 2-5 October 2017, and the next one to be held in Austria, 1-4 October 2018, possibly with EUMETNET funding available;
- Future of C-SRNWP in the next EUMETNET phase (2019-2023): the process of drafting the requirements for the next phase, aimed at strengthening the collaborative effect of C-SRNWP, is currently ongoing.

<b>4.</b>	<b>Members' presentations</b> Representatives of SEECOP Members and Observers
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SEECOP Members provided an overview of the NWP developments in their services introduced in the period since the last SEECOP meeting in Bar, and Observers presented NWP activities of their services.

**The NMHS of Albania** still experiences some difficulties due to the lack of NWP staff, but is gradually tackling this issue and hopes that it will be resolved in the near future. There are three meteorological entities in Albania, and efforts have been undertaken on a national level to coordinate their work and provide better services to users. The NMHS of Albania believes that through the SEECOP framework it could improve the Flash Flood Guidance System (FFGS) by adding an additional model (NMMB) to that platform. Along with that, the Albanian Air Traffic Control Agency has scheduled an online meeting with SEECOP representatives for the beginning of November to discuss possible future cooperation.

**The NMHS of the Republic of Srpska** also struggles with limited NWP capacities, staff and equipment. These issues have been communicated to the Ministry of Agriculture under which the NHMS of the Republic of Srpska operates. In the recent period there have also been some discussions and problems related to the possible formation of a joint forecasting division between the NHMS and the hail suppression institution of the Republic of Srpska. These negotiations have so far produced little results, but hopefully these issues would be resolved by the end of this year, so that more energy and resources could be invested in other activities, including SEECOP.

**The NMHS of the Federation of Bosnia and Herzegovina** uses three meteorological models: NMMB, ICON and WRF. The NMMB model has been in use for 2 years and has recently been updated to the latest version. In the following few days, consultations will be held with the NHMS of Serbia, which performs model verification, to decide on the best setup for the model, and hopefully the model will continue to run successfully at the NHMS of the Federation of B&H.

**The NMHS of the former Yugoslav Republic of Macedonia** regularly uses the model products from the SEECOP website within its NWP unit and is interested to further use those products and participate in the future SEECOP activities.

**The NMHS of Montenegro** uses the WRF-NMM model (the latest implemented version is 3.9.1.1), NMM-HIRES (the first version of the NMM model), WAM (Wave Atmospheric Model) and Eta-DREAM model. Initial and lateral boundary conditions are received from GFS NCEP – Washington (USA) four times a day and, since recently, also four times a day from ECMWF – Reading (UK). Five different model configurations are run with ECMWF input data, and two model configurations with GFS NCEP input data. Through the ECMWF Boundary Conditions Programme, the NHMS of Montenegro has also recently started to receive full GRIB input data twice a day.

**The NMHS of Cyprus**, as an Observer interested in becoming a SEECOP member, presented a general overview of its structure, competencies, observational capacities and activities, particularly focusing on its NWP activities. The main operational NWP model is WRF, run at the Institute of Cyprus, based on a MoU between the two institutions. The model is run twice per day in three domains with GFS NCEP initial and boundary conditions. The NMHS of Cyprus is interested in becoming a SEECOP member and using the NMMB model operationally, primarily due to very severe dust episodes in the eastern Mediterranean, which are not very well predicted with other models. Technical assistance will be required to install and use the NMMB in Cyprus, but the hands-on SEEWEATHER workshop is a step towards the right direction.

**The NMHS of Ukraine**, as an Observer and a candidate for joining SEECOP, also gave a general overview of its NWP activities. The NMHS of Ukraine hopes that the NMMB products could fulfil their needs for a NWP model covering the whole Ukrainian territory, which would help them fulfil their tasks and provide high-quality forecasts. Ukraine has a very good experience with the WRF-NMM model, but a huge gap is the lack of computer resources, which should hopefully be solved through capacity sharing within SEECOP.

**The National Observatory of Athens (NOA) – Greece** is also very interested in cooperating with SEECOP. However, since SEECOP membership is limited to NMHSs only, this cooperation would have to be achieved

through the NMHS of Greece. As a research institute, NOA is currently implementing a 5-year European Research Council (ERC) project including flights with airborne measurements, lidar observations, in-situ measurements and modelling, which is why they were interested in attending the SEEWEATHER workshop and finding ways to use the aerosol component of the NMMB model to investigate the physical processes related to dust transport in the atmosphere.

## **5. Conclusions and recommendations**

Based on the discussions between and after the presentations of SEECOP Members and Observers, the following conclusions and recommendations were made:

- **Based on the need expressed by several NHMSs, in addition to the global NMMB products, it should be considered to upload regional medium or fine resolution NMMB products to the SEECOP website.**
- **It should be considered to introduce several sub-directories at the SEECOP website for the products (with different resolutions/domains) uploaded by different SEECOP members that run the model.**
- **Although the NHMS of Serbia regularly performs validation of the model outputs, it should be stressed that any SEECOP Member is welcome to validate the model results, which is very important for the reduction of possible errors and improvement of products.**
- **The proposal that the NHMS of Cyprus becomes a new SEECOP Member was unanimously adopted.**
- **The proposal that the NHMS of Ukraine becomes a new SEECOP Member was unanimously adopted.**
- **Discussions with the NMHS of Greece should be initiated to find a proper modality for cooperation with NOA.**
- **Next year, the fourth SEECOP Council meeting will be held back-to-back with the next ICSEED meeting, hosted by the NMHS of the former Yugoslav Republic of Macedonia. The exact date will be determined in due course. (NOTE: this decision was made after the closing of the SEECOP Council meeting.)**

## **6. Closing of the meeting**

The meeting was closed on 23 October 2017 at noon, after a lecture titled *NMMB achievements and future development plans*, delivered by Professor Zavisla Janjic, author of the NMMB model.



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**THIRD MEETING OF THE COUNCIL OF THE SOUTH EAST  
EUROPEAN CONSORTIUM FOR OPERATIONAL WEATHER  
PREDICTION (SEECOP)**

**23 October 2017, Belgrade, Serbia**

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