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Compiled by Elena Grigorieva and Jennifer Vanos

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A Message from the President

Marie R Keatley

Dear Colleagues,

I hope that the publication of the Bulletin finds you safe and well.

There has been a call for nominations for positions on the Executive Board. **I would strongly encourage all members to participate in the vote when it occurs.** I hope that many of you considered nominating and for those who have done so my thanks. And if not for this coming triennium, then possibly for the next. If you aren't sure what the Executive Board does, the statutes (here I am imagining many eye rolls) outline what is expected for the different roles. Alternatively, feel free to contact any member of the Executive Board.

Our [23rd Congress](#) will be held from May 14th -17th next year in Tempe, Arizona. Here I would like to remind you of the **Call for the Best Paper Tromp Award at ICB 2023** (the details are below) and acknowledge the support of the Tromp Foundation for the award.

For the Congress itself, I encourage you to have your abstracts at the ready and I look forward to seeing you in Tempe.

Kind regards

Marie

Call for the Best Paper Tromp Award at ICB 2023

- The award for an outstanding scientific paper in the field of Biometeorology will consist of € 1,000 plus the registration fee for ICB 2023 and reimbursement of travel costs (economy air ticket) to the conference in Arizona.
- The Tromp Foundation ICB 2023 award is for an outstanding paper published in a journal with high impact. The award is to highlight an exceptional contribution to biometeorology.
- The publication date should be after the last ICB, i.e., after September 22nd, 2021.
- There is no demand for ISB membership.
- The jury will be formed by members of the Board of the Tromp Foundation.
- The winner will be notified about three months before the congress.
- Submission deadline is February 15, 2023.
- The paper and a short CV should be submitted to Peter Hoeppe at info@phoeppe.de

Report on the The EMS annual meeting 2022 and the Workshop on effective communication of agrometeorological services

The European meteorological Society annual meeting 2022 (EMS2022) took place in Bonn, Germany, from 4 to 9 September 2022. The conference was attended by 815 participants from 48 countries: 671 onsite in Bonn and 144 online from across the globe.

Biometeorologists have been attending the Annual Meeting of the European Meteorological Society (EMS) for many years, with relevant sessions like urban climate or biometeorology long established. To strengthen the connections of communities, the ISB (International Society of

Biometeorology) and the EMS in 2021 have signed the Memorandum of Understanding that specifies the arrangements for the cooperation between the two organisations; this is based on the shared vision of advancing meteorology and in particular biometeorology for the benefit of societies within Europe and elsewhere.

At the EMS2022 conference the ISB was among the organizers of a hybrid workshop “Effective communication of agrometeorological services”, which took place as a side event. The workshop was attended by 20 scientists in-person, and 22 attending virtually.

The workshop’s focus was on communication, as is evident also from the workshop title “Effective communication of agrometeorological services”. As climate science becomes increasingly sophisticated and exponentially important, how do agrometeorologists align their communications to optimize value delivery to the primary sector? It is not enough to provide a service, it is also utmost important to communicate it in such a way that the users are empowered to take advantage of the information provided. We are supposedly living through a communications revolution, and the means for disseminating information have certainly increased and multiplied. But are we communicating more effectively? How do we work towards practicing it more effectively?

Agrometeorological theory and practice are closely related to some of the greatest challenges of the 21st century: food security, adaptation to climate change, vector-borne diseases, and climate-smart urban living through greener cities and enhanced urban agriculture. With effectively providing agrometeorological services we contribute to hunger mitigation, contribute to better nutrition and thus better health, we address how to help farmers to adapt to climate change.

The change in climate could have considerable consequences for agriculture, not only due to the direct changes in conditions for crops (milder winters, more drought, increase in CO₂-concentration and the like) but also because

of indirect effects such as new diseases, pests and plagues, a demand for different crops (e.g. bio-fuels) and the risks of business management (yield consistency). It is of paramount importance that the sector and the authorities anticipate the risks and opportunities (of adaptation).

Effective science education and communication of agrometeorological knowledge and skill is crucial in facing these challenges. It is the time for the paradigm change. Our long-term strategy and short-term measures toward this goal are based on the democratization of science and the application of new technologies while reaching the general public, from high school to senior citizens.

For example: Slovenian agrometeorological service is bringing a wide range of information to the customers in the agricultural sector on a national level. In parallel, it supports drought watch on the regional level of SEE in the frame of Drought Management Center. At a time when new sources of data and modern communications are available Drought Watch, Droughtmeter, and Agrometeorological forecast were introduced.

The Tromp Foundation supports biometeorologist to attend the European Meteorological Society Annual Meeting

The EMS Tromp Award for an outstanding achievement in biometeorology was established in 2015 as a collaboration between the Tromp Foundation and the EMS. This award, funded by the Tromp Foundation, is aimed at promoting biometeorology in Europe, and is given for an outstanding achievement in biometeorology. The 2022 EMS Tromp Award was won by Branislava Lalić for the publication *“Identifying Crop and Orchard Growing Stages Using Conventional Temperature and Humidity Reports”*, Proceedings of the Atmosphere 2022.

The Tromp Foundation also established the **Tromp foundation travel award to young scientists (TFTAYS)** in 2016, with the aim to support young scientists who give presentations about aspects of biometeorology at EMS Annual Meetings.

Information provided by: Tanja Cegnar, Slovenian Environment Agency

African Biometeorology Colloquium

The first Online African Biometeorology Colloquium was held online on Zoom on 8 June 2022. Registration for the event was free, and participants could decide whether to present their work, or just attend to listen in. All participants were involved in a panel discussion on challenges encountered in conducting biometeorological research in the African continent. A total of 11 research presentations were delivered on biometeorological research being conducted across the African tropics, in Kenya, Ghana, South Africa, Namibia and Zimbabwe. Of the total of 37 online participants, researchers were either currently or previously resident in Ghana, Kenya, Tanzania, Nigeria, South Africa and Zimbabwe. The presentations spanned a range of biometeorological themes from thermal comfort, to phenology, to tourism and climate change, and the impacts of climate on crime. The panel discussion was vibrant, and key issues around data availability, the scaling of biometeorological indices, and political barriers to research were debated. This is the first but certainly not the last event of its type, as it proved to be an important space for African biometeorologists to meet one another and share their research.

Information provided by: Jennifer Fitchett, University of the Witwatersrand

The first Brazilian Symposium on Human Biometeorology

The Symposium on Human Biometeorology was held from July 4-8, 2022, in Natal, northeastern Brazil. The Symposium was organized by a research collaboration that was started in 2021 by a group of local professionals in the field and culminated with a joint systematic review published on the research carried out on human biometeorology in Brazil (Krüger et al., 2022). The organizing committee is shown in Table 1, with additional input from Ana Carla dos Santos Gomes (Federal University of Western Pará - UFOPA), Ana Helena Aquino Palmeira (Secretary of the Department of Atmospheric Sciences - UFRN) and José Aguiar (IT technician of the Center of Exact and Earth Sciences - UFRN).

Partly sponsored by the ISB, the symposium had the purpose of mirroring the ISB Triennial Congress, which provides “the forum for the latest biometeorology research to be presented, current collaborations to be reinforced and for new interdisciplinary collaborations to be formed” (Keatley, 2017), in the context of Brazil. Specifically, the first Brazilian Symposium on Human Biometeorology aimed to promote human biometeorology in Brazil in response to the deficiencies and knowledge gaps that need to be filled regarding human biometeorology in the country (Krüger et al., 2022). It is intended that a second symposium shall be organized in the near future, on a biannual basis.

Table 1: Organizing committee

Name	Affiliation	Research topic(s) in Human Biometeorology / Allotment
Faculty		
Paulo Sérgio Lucio	Universidade Federal do Rio Grande do Norte (UFRN)	Climate-driven diseases
Ana Carla dos Santos Gomes	Universidade Federal do Oeste do Pará (UFOPA)	Climate-driven diseases
Eduardo Krüger	Universidade Tecnológica Federal do Paraná (UTFPR)	Thermal comfort – urban and architectural biometeorology
João Paulo Assis Gobo	Universidade Federal de Rondônia (UNIR)	Thermal comfort – urban and architectural biometeorology
Anderson Spohr Nedel	Universidade Federal da Fronteira Sul (UFFS)	Atmospheric pollution and health

Fabio Luiz Teixeira Gonçalves	Universidade de São Paulo (USP)	Climate-driven diseases
Marina Piacenti- Silva	Universidade Estadual Paulista "Júlio de Mesquita Filho" (UNESP)	Environment-related human diseases
Technical staff		
Ana Helena Aquino Palmeira	Universidade Federal do Rio Grande do Norte (UFRN)	Department of Atmospheric Sciences, UFRN
José Aguiar	Universidade Federal do Rio Grande do Norte (UFRN)	CCET UFRN
Israel Alves	Universidade Federal do Rio Grande do Norte (UFRN)	CCET UFRN



Figure 1: Group picture at the closing session of the Brazilian Symposium on Human Biometeorology

Keatley, M. R. (2017). Developments in the International Society of Biometeorology over the decade, 2007–2016. *International Journal of Biometeorology*, 61(1), 11-18.

<https://doi.org/10.1007/s00484-017-1396-z>

Krüger, E. L., Gobo, J. P. A., Nedel, A. S., Gonçalves, F. L. T., Lucio, P. S., Tejas, G. T., & Piacenti-Silva, M. (2022). A first approach to human biometeorology research in Brazil: a systematic review and meta-analysis. *International journal of biometeorology*, 1-19.

<https://doi.org/10.1007/s00484-022-02288-0>

Submitted by Eduardo Kruger, Universidade Tecnológica Federal do Paraná (UTFPR)

Dr. Theresa Crimmins wins Women of Impact Award



THERESA CRIMMINS

PH.D. RESEARCH PROFESSOR NATURAL RESOURCES & THE ENVIRONMENT

COLLEGE OF AGRICULTURE & LIFE SCIENCES

Though you may not recognize the word phenology, you definitely know the concept! This term refers to the timing of seasonal events like flowering in saguaros, fledging in quail, and periodic bouts of crane flies clustering on our windowsills. Theresa Crimmins has over 15 years of experience working in the fields of phenology and citizen science and is internationally recognized as a leader in both realms. She currently serves as the Director for the USA National Phenology Network, a national organization based in the School of Natural Resources and the Environment. In addition, Theresa has published over 70 peer-reviewed articles and book chapters. Her writing has appeared in a variety of national outlets and contributes heavily to our identity as a top ranked research enterprise.

CLASS OF 2022
WOMEN OF IMPACT

Congratulations to Dr Theresa Crimmins, a member of the ISB Phenology Commission, who was selected as one of the University of Arizona's Women of Impact for 2022. Theresa is a member of the Phenology Commission and a Research Professor in the College of Agriculture & Life Science where she is the Director for USA National Phenology Network. She has extensive experience working in the fields of phenology and citizen science.

Multiple Research Positions Open at new Agroecosystem Sustainability Center

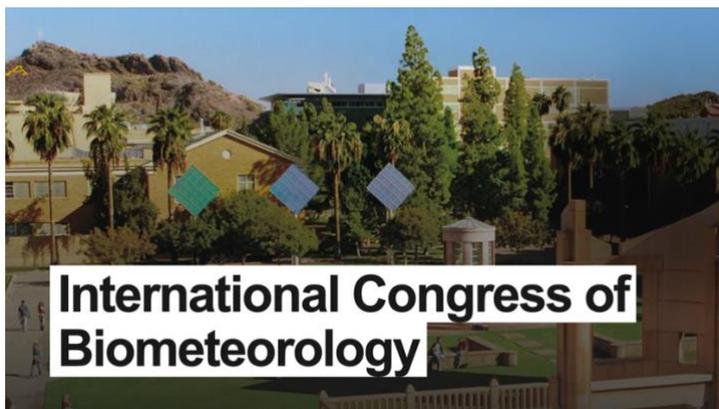
The newly founded Agroecosystem Sustainability Center (ASC) led by Dr. Kaiyu Guan at University of Illinois Urbana-Champaign (UIUC) is recruiting multiple research scientists, postdoctoral scholars and PhD students for ecosystem modeling and sensing (more details at http://faculty.nres.illinois.edu/~kaiyuguan/Guan_UIUC_recruiting_2022.pdf).

Research Scientist Position Open at Arizona State University in Human Biometeorology

The new Walton Center for Planetary Health is hiring a Research Scientist in the area of human exposure and response to extreme heat employing thermal manikin experimentations. The study is led by Dr. Konrad Rykaczewski, Dr. Ariane Middel, and Dr. Jennifer Vanos. More information and application here: <http://apply.interfolio.com/116679>

Upcoming Conferences

Our 23rd International Congress on Biometeorology is scheduled for May 14–17, 2023 in Phoenix, Arizona, USA! Please see info and find abstract submission information! <https://biomet23.asu.edu/>



American Meteorological Society Meeting will take place from 8 to 12 of January, 2023, in Denver, Colorado.

<https://annual.ametsoc.org/index.cfm/2023/> Biometeorology sessions are held in the following conferences: Environment & Health Conference, Applied Climatology, Urban Climates, Climate Variability & Change, among others.

The AAG Annual Meeting will be held March 23-27, 2023 in Denver, Colorado. <https://www.aag.org/events/aag2023/>

European Meteorological Society Annual Meeting 2023: 3–8 September 2023, Slovakia, https://www.ems2022.eu/spotlight/ems_2023.html

International Conference of Urban Climate will be held Aug 23–1, 2023 in Sydney, Australia. <https://icuc11.com/> Abstracts due Dec 15, 2022.

World Climate Research Program next Open Science Conference will be held in Kigali 23-27 October 2023. <https://wcrp-osc2023.org>