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| **World Meteorological Organization**  **Commission for Instruments and Methods of Observation**  **CIMO Management Group**  **Fifteenth Session** Geneva, Switzerland, 26 – 29 March 2018 | **CIMO/MG-15/INF. 5** |
| Submitted by: Secretariat  21.03.2018 |

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# WORK PROGRAMME of the commission – evaluation of progress, proposals for future activities and recommEndations to cimo-17

# report on ICAWS-2017

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| **Summary and purpose of document**  This document provides information on arrangements of International Conference on Automatic Weather Stations (ICAWS-2017), held in Offenbach, Germany, from 24 to 26 October 2017, and on feedback from participants. |

**Action proposed**

The Meeting is invited to note the provided information and consider CIMO’s potential engagement in a similar event that might take place in 2019.  
The meeting is also invite to consider:  
1) Organizing a similar conference in 2019,  
2) Following up on the recommendations of the conference, in particular on the potential development of a standard for the testing of low-cost AWSs.

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**Appendix:** Outcomes of feedback survey on ICAWS-2017 (available as a separate, pdf file).

**EXECUTIVE SUMMARY**

1. In the past, questioned confidence on suitability of Automatic Weather Stations (AWSs) for climate observations led to four AWS conferences held from 1996 to 2006. Taking into consideration constant need to exchange knowledge of and experience with AWSs, the WMO Commission for Instruments and Methods of Observations (CIMO) took the lead in reviving this concept and organized, in collaboration with the Commission for Basic Systems (CBS), the International Conference on Automatic Weather Stations in 2017 (ICAWS-2017). The conference was held in Offenbach am Main, Germany, at the kind invitation of *Deutscher Wetterdienst (DWD)*, from 24 to 26 October 2017.
2. The theme of ICAWS-2017 was “*Automatic weather stations for environmental intelligence – the AWS in the 21st century*”. Altogether four keynote (KN), 31 oral (O) and 22 poster (P) presentations were presented under the following topics:
3. Initiating automation and supporting migration from manual to automated measurements (1 KN, 12 O, 8 P);
4. Communications, data transmission, encoding, archiving and storage (1 KN, 4 O, 2 P);
5. Sustainability of the measurements (1 KN, 7 O, 5 P);
6. New developments, interoperability, intelligent measurements, and integration (1 KN, 8 O, 7 P),

Participants also benefited from three, lively and well-attended discussion sessions on:

* Automation of measurements – training needs and competences.

Summarized outcomes include a need: to develop more focused guidance material on different areas of automation of measurements, to present and make accessible already available material in a concise manner, to prepare a guidance document on donor funding projects, and to use more videos and social media in training.

* Working with non-NMHS (partner) data.

Webportal WOW, of MetOffice, was mentioned as a good example of exchanging and presenting the data from different sources. Data quality management, including quality assurance and quality control, was highlighted as a critical factor for providing the right information to the right audience. It was stressed that WMO regulations should be made widely known to partner networks.

* Low-cost AWSs – opportunity of threat to meteorological measurements.

During the discussion session, the need to organize more intercomparisons of low-cost AWSs was expressed, as well as to share results among the WIGOS community for quantitative and qualitative rational assessment of those results. It was recommended to standardize information on what fit-for-purpose means and to link it to user requirements for different application areas.

Particular attention was given to the idea of developing a testing scheme and standardized laboratory tests for (low-cost) AWSs, at least for the most influential parameters, and to develop relevant guidance material.

The development of a testing framework for low-cost AWSs, could be an activity of one CIMO ET, and a potential for a joint WMO/ISO standard.

1. Around 100 participants attended the conference and benefited from experience and knowledge exchange on best practices with AWSs and on latest AWS-related technological innovations, as well as from socialisation and direct interaction among themselves.
2. All the posters and presentations from ICAWS-2017 are compiled as an Instruments and Observing Methods No. 127 (IOM-127) report and accessible from:

<https://library.wmo.int/opac/index.php?lvl=notice_display&id=20023#.WrNbuK5KthF>

While the video recordings from the conference can be found at: <https://www.wmo.int/pages/prog/www/IMOP/AWS-conference/ICAWS-2017.html>.

1. Results of the feedback survey show that 2/3 of respondents found the quality of presented papers as excellent and would like to see the next ICAWS organized in 2019. For more than 80 % of participants being a part of this event was well worthwhile and duration of three days was considered as just right duration. Proposals for the improvement in the future include: organization of these conferences should be one of the priorities of WMO, more manufacturers should be engaged, an event should take place closer to developing countries, accommodation should be much more affordable (costs were very high due to a fair).

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