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| **World Meteorological Organization**  **Commission for Instruments and Methods of Observation**  **First Session of the CIMO Editorial Board (CIMO EdBd)** Offenbach am Main, Germany, 30 January – 1 February 2018 | **CIMO/EdBd-1/Doc. 7** |
| Submitted by: Secretariat  25.01.2018 |

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# proposal for an updated CIMO Guide structure

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| **Summary and purpose of document**  This document provides information on the proposed changes to the structure and title of the CIMO Guide, aiming at easier accessibility and simpler maintenance of this publication in the future. |

**Action proposed**

The Meeting is invited to consider the proposal and recommend suitable changes to the CIMO Management Group for their consideration.

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**Appendix:** [Comparison of the current and proposed future CIMO Guide structure](#Appendix)

**PROPOSAL FOR UN UPDATED CIMO GUIDE STRUCTURE**

***Background of the CIMO Guide structure***

1. The WMO Guide to Meteorological Instruments and Methods of Observation (WMO-No. 8), also known as the CIMO Guide, has its origin in 1946, when the International Meteorological Committee decided to prepare a series of technical manuals, including one on instruments and methods of observation. Following a recommendation of the Commission for Instruments and Methods of Observation (CIMO) of the International Meteorological Organization, the Conference of Directors decided in 1947 that manual on instruments and methods of observation should take the form of a guide containing advice on methods required to keep observing stations up to international standards, recommendations for international observing practices for the taking of observations before coding, information about uniform procedures for applying corrections with a view to eliminating errors, and in general the best methods of obtaining correct observations.

2. The first edition of the CIMO Guide was published in 1954 and consisted of twelve chapters. The number of chapters increased and reached 25 in 1983, when the fifth edition was published. The structure of the CIMO Guide was significantly changed with its sixth edition in 1996, when a three-part structure was introduced. Altogether, 32 chapters were organized in the following parts: Measurement of Meteorological Variables, Observing Systems, and Quality Assurance and Management of Observing Systems. In 2014, a new part on Space-based Observations was introduced as the third part, while the former third part became the fourth part. The most recent version of the CIMO Guide, published in 2014 and updated in 2017, consists of 38 chapters organized in four parts. It has more than 1000 pages.

***Need for change - Inclusion of practices from the wider WIGOS communities***

3. The CIMO Guide is continuously reviewed to ensure that its regular update incorporates modern guidance material which reflects the rapid development of technologies and their implementation in the field of meteorological instruments and methods of observation. It is the authoritative reference for all matters related to instrumentation and methods of observation in the context of WIGOS.

4. Last year, experts from Global Cryospheric Watch (GCW) programme expressed an interest to have all the observational practices collected in the same publication. At a CIMO-GCW Workshop, it was suggested that a solution could be to create a new part in the CIMO Guide that would be dedicated to cryospheric variables, following the practice for meteorological variables. The GCW Steering Group, at its meeting in January 2018, supported this proposal.

5. The existing and planned contents of the CIMO Guide are far beyond the original focus on meteorological variables only. Consequently, the current title of the CIMO Guide, originated from the very beginning, does not reflect its contents properly. Now, the contents of the CIMO Guide fit well with the proposed mission of measurements and observations within WIGOS which is to achieve “*Fit-for-purpose environmental measurements through leadership, standards and guidance*”. It is anticipated that the title of the CIMO guide might be adjusted to reflect the contents of the guide, as well as the proposed mission.

***Need for change – Speeding up the publication of approved changes***

6. Recent experience with maintenance of the CIMO Guide has shown that the publication is already too big to be updated smoothly and regularly, as expected by WMO Members. This is due to the fact, that all the chapters have to be considered simultaneously by the WMO editors, and the new edition can only be issued when the editors have completed the review of all chapters. This could become even worse if a new part would be added. Therefore, a more flexible, easily maintained structure is desired and needed.

***Proposed changes***

7. The meeting is invited to consider and decide on the following proposed changes:

* Following CIMO-GCW proposal, a new part relevant to cryospheric variables should be included in the CIMO Guide, as indicated in the appendix to this document.
* According to the WMO publication rules, minor changes of the publication title are acceptable and do not require a change of publication number, while substantial change would lead to a new publication number. Following these rules, but also aiming at a title that should appropriately reflect the contents of the CIMO Guide, a compromise solution might include the replacement of the word “meteorological” from the title, by the word “environmental” or “measurements, ”, or just the deletion of the word “meteorological”. With this change the CIMO Guide would remain WMO publication No. 8.
* Taking into account the positive experience with maintenance of the WMO Technical Regulations (WMO-No. 49), it is envisaged that a similar approach could be applied to the future CIMO Guide structure. That means that instead of current “Parts”, the CIMO Guide could be organized in “Volumes”. The volumes would correspond to the current parts and the current structure within each corresponding part would be preserved. This new structure would ensure an independent update of each volume, whenever needed, which would hopefully be faster and easier than it is now. Handling volumes should be also easier and more friendly for readers, as the size of each publication/volume would be much smaller than the size of the current publication which has more than 1000 pages. Although being independent publications, all the volumes would comprise the CIMO Guide, and be published under the same ISBN number. In case this proposal would be adopted, it might be necessary to draft a short introduction at the beginning of each volume, similar to “General Provisions” of WMO TRs. Additionally, the text (in particular cross-references) would have to be adjusted accordingly.

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**APPENDIX**

**COMPARISON OF THE CURRENT AND PROPOSED FUTURE STRUCTURE OF THE**

**CIMO GUIDE**

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| **Current structure (2017)** | **Proposed future structure** |
| |  |  | | --- | --- | | **PART I** | [**MEASUREMENT OF METEOROLOGICAL VARIABLES (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3175) | | 1 | [General](http://library.wmo.int/opac/doc_num.php?explnum_id=3148) | | 2 | [Measurement of temperature](http://library.wmo.int/opac/doc_num.php?explnum_id=3149) | | 3 | [Measurement of atmospheric pressure](http://library.wmo.int/opac/doc_num.php?explnum_id=3150) | | 4 | [Measurement of humidity](http://library.wmo.int/opac/doc_num.php?explnum_id=3151) | | 5 | [Measurement of surface wind](http://library.wmo.int/opac/doc_num.php?explnum_id=3177) | | 6 | [Measurement of precipitation](http://library.wmo.int/opac/doc_num.php?explnum_id=3152) | | 7 | [Measurement of radiation](http://library.wmo.int/opac/doc_num.php?explnum_id=3153) | | 8 | [Measurement of sunshine duration](http://library.wmo.int/opac/doc_num.php?explnum_id=3154) | | 9 | [Measurement of visibility](http://library.wmo.int/opac/doc_num.php?explnum_id=3155) | | 10 | [Measurement of evaporation](http://library.wmo.int/opac/doc_num.php?explnum_id=3156) | | 11 | [Measurement of soil moisture](http://library.wmo.int/opac/doc_num.php?explnum_id=3157) | | 12 | [Measurement of upper-air pressure, temperature, humidity](http://library.wmo.int/opac/doc_num.php?explnum_id=3158) | | 13 | [Measurement of upper wind](http://library.wmo.int/opac/doc_num.php?explnum_id=3159) | | 14 | [Observation of present and past weather; state of the ground](http://library.wmo.int/opac/doc_num.php?explnum_id=3160) | | 15 | [Observation of clouds](http://library.wmo.int/opac/doc_num.php?explnum_id=3161) | | 16 | [Measurement of atmospheric composition](http://library.wmo.int/opac/doc_num.php?explnum_id=3162) | | **PART II** | [**OBSERVING SYSTEMS (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3178) | | 1 | [Measurements at automatic weather stations](http://library.wmo.int/opac/doc_num.php?explnum_id=3179) | | 2 | [Measurements and observations at aeronautical meteorological stations](http://library.wmo.int/opac/doc_num.php?explnum_id=3180) | | 3 | [Aircraft-based observations](http://library.wmo.int/opac/doc_num.php?explnum_id=3181) | | 4 | [Marine observations](http://library.wmo.int/opac/doc_num.php?explnum_id=3182) | | 5 | [Special profiling techniques for the boundary layer and the troposphere](http://library.wmo.int/opac/doc_num.php?explnum_id=3183) | | 6 | [Electromagnetic methods of lightning detection](http://library.wmo.int/opac/doc_num.php?explnum_id=3184) | | 7 | [Radar measurements](http://library.wmo.int/opac/doc_num.php?explnum_id=3185) | | 8 | [Balloon techniques](http://library.wmo.int/opac/doc_num.php?explnum_id=3186) | | 9 | [Urban observations](http://library.wmo.int/opac/doc_num.php?explnum_id=3187) | | 10 | [Road meteorological measurements](http://library.wmo.int/opac/doc_num.php?explnum_id=3188) | | **PART III** | [**SPACE-BASED OBSERVATIONS (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3189) | | 1 | [Introduction](http://library.wmo.int/opac/doc_num.php?explnum_id=3190) | | 2 | [Principles of Earth observation from space](http://library.wmo.int/opac/doc_num.php?explnum_id=3199) | | 3 | [Remote-sensing instruments](http://library.wmo.int/opac/doc_num.php?explnum_id=3200) | | 4 | [Satellite programmes](http://library.wmo.int/opac/doc_num.php?explnum_id=3201) | | 5 | [Space-based observation of geophysical variables](http://library.wmo.int/opac/doc_num.php?explnum_id=3209) | | 6 | [Calibration and validation](http://library.wmo.int/opac/doc_num.php?explnum_id=3202) | | 7 | [Cross-cutting issues](http://library.wmo.int/opac/doc_num.php?explnum_id=3203) | | **PART IV** | [**QUALITY ASSURANCE AND MANAGEMENT OF OBSERVING SYSTEMS (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3204) | | 1 | [Quality management](http://library.wmo.int/opac/doc_num.php?explnum_id=3205) | | 2 | [Sampling meteorological variables](http://library.wmo.int/opac/doc_num.php?explnum_id=3206) | | 3 | [Data reduction](http://library.wmo.int/opac/doc_num.php?explnum_id=3210) | | 4 | [Testing, calibration and intercomparison](http://library.wmo.int/opac/doc_num.php?explnum_id=3207) | | 5 | [Training of instrument specialists](http://library.wmo.int/opac/doc_num.php?explnum_id=3208) | | |  |  | | --- | --- | | **Volume I** | [**MEASUREMENT OF METEOROLOGICAL VARIABLES (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3175) | | 1 | [General](http://library.wmo.int/opac/doc_num.php?explnum_id=3148) | | 2 | [Measurement of temperature](http://library.wmo.int/opac/doc_num.php?explnum_id=3149) | | 3 | [Measurement of atmospheric pressure](http://library.wmo.int/opac/doc_num.php?explnum_id=3150) | | 4 | [Measurement of humidity](http://library.wmo.int/opac/doc_num.php?explnum_id=3151) | | 5 | [Measurement of surface wind](http://library.wmo.int/opac/doc_num.php?explnum_id=3177) | | 6 | [Measurement of precipitation](http://library.wmo.int/opac/doc_num.php?explnum_id=3152) | | 7 | [Measurement of radiation](http://library.wmo.int/opac/doc_num.php?explnum_id=3153) | | 8 | [Measurement of sunshine duration](http://library.wmo.int/opac/doc_num.php?explnum_id=3154) | | 9 | [Measurement of visibility](http://library.wmo.int/opac/doc_num.php?explnum_id=3155) | | 10 | [Measurement of evaporation](http://library.wmo.int/opac/doc_num.php?explnum_id=3156) | | 11 | [Measurement of soil moisture](http://library.wmo.int/opac/doc_num.php?explnum_id=3157) | | 12 | [Measurement of upper-air pressure, temperature, humidity](http://library.wmo.int/opac/doc_num.php?explnum_id=3158) | | 13 | [Measurement of upper wind](http://library.wmo.int/opac/doc_num.php?explnum_id=3159) | | 14 | [Observation of present and past weather; state of the ground](http://library.wmo.int/opac/doc_num.php?explnum_id=3160) | | 15 | [Observation of clouds](http://library.wmo.int/opac/doc_num.php?explnum_id=3161) | | 16 | [Measurement of atmospheric composition](http://library.wmo.int/opac/doc_num.php?explnum_id=3162) | | **Volume II\*** | **MEASUREMENT OF CRYOSPHERIC VARIABLES** | | 1 | General | | 2\*\* | Measurements of snow | | 3 | Measurements of glacier and ice caps | | 4 | Measurements of ice sheets and ice shelves | | 5 | Measurements of sea-ice | | 6 | Measurements of lake and river ice | | 7 | Measurements of permafrost and seasonally frozen ground | | **Volume III** | [**OBSERVING SYSTEMS (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3178) | | 1 | [Measurements at automatic weather stations](http://library.wmo.int/opac/doc_num.php?explnum_id=3179) | | 2 | [Measurements and observations at aeronautical meteorological stations](http://library.wmo.int/opac/doc_num.php?explnum_id=3180) | | 3 | [Aircraft-based observations](http://library.wmo.int/opac/doc_num.php?explnum_id=3181) | | 4 | [Marine observations](http://library.wmo.int/opac/doc_num.php?explnum_id=3182) | | 5 | [Special profiling techniques for the boundary layer and the troposphere](http://library.wmo.int/opac/doc_num.php?explnum_id=3183) | | 6 | [Electromagnetic methods of lightning detection](http://library.wmo.int/opac/doc_num.php?explnum_id=3184) | | 7 | [Radar measurements](http://library.wmo.int/opac/doc_num.php?explnum_id=3185) | | 8 | [Balloon techniques](http://library.wmo.int/opac/doc_num.php?explnum_id=3186) | | 9 | [Urban observations](http://library.wmo.int/opac/doc_num.php?explnum_id=3187) | | 10 | [Road meteorological measurements](http://library.wmo.int/opac/doc_num.php?explnum_id=3188) | | **Volume IV** | [**SPACE-BASED OBSERVATIONS (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3189) | | 1 | [Introduction](http://library.wmo.int/opac/doc_num.php?explnum_id=3190) | | 2 | [Principles of Earth observation from space](http://library.wmo.int/opac/doc_num.php?explnum_id=3199) | | 3 | [Remote-sensing instruments](http://library.wmo.int/opac/doc_num.php?explnum_id=3200) | | 4 | [Satellite programmes](http://library.wmo.int/opac/doc_num.php?explnum_id=3201) | | 5 | [Space-based observation of geophysical variables](http://library.wmo.int/opac/doc_num.php?explnum_id=3209) | | 6 | [Calibration and validation](http://library.wmo.int/opac/doc_num.php?explnum_id=3202) | | 7 | [Cross-cutting issues](http://library.wmo.int/opac/doc_num.php?explnum_id=3203) | | **Volume V** | [**QUALITY ASSURANCE AND MANAGEMENT OF OBSERVING SYSTEMS (contents)**](http://library.wmo.int/opac/doc_num.php?explnum_id=3204) | | 1 | [Quality management](http://library.wmo.int/opac/doc_num.php?explnum_id=3205) | | 2 | [Sampling meteorological variables](http://library.wmo.int/opac/doc_num.php?explnum_id=3206) | | 3 | [Data reduction](http://library.wmo.int/opac/doc_num.php?explnum_id=3210) | | 4 | [Testing, calibration and intercomparison](http://library.wmo.int/opac/doc_num.php?explnum_id=3207) | | 5 | [Training of instrument specialists](http://library.wmo.int/opac/doc_num.php?explnum_id=3208) | |

\* Note 1: Text highlighted in yellow represents a new entry as proposed by GCW community.

\*\* Note 2: The chapter 2 is already submitted to the CIMO EdBd, while others are under development and should be submitted within 1-2 years.

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