

**WORLD METEOROLOGICAL ORGANIZATION**  
**WMO TECHNICAL CONFERENCE ON METEOROLOGICAL AND**  
**ENVIRONMENTAL INSTRUMENTS AND METHODS OF OBSERVATION**  
*Towards fit-for-purpose environmental measurements*  
*Amsterdam, The Netherlands, 8 - 11 October 2018*

**SUBMITTED ABSTRACT**

<b>0.</b>	<b>Paper Number</b>	31
	<b>Session Name</b>	1. Characterization and standardization of environmental measurements - traceability assurance
<b>1.</b>	<b>Title of the paper</b>	WIGOS & OSCAR: Where Observational Requirements Meet Observational Capabilities

<b>2.</b>	<b>Institution</b>	Federal Office of Meteorology and Climatology MeteoSwiss			
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<b>4.</b>	<b>Abstract of the paper</b>
	<p>Authors: J. Klausen<sup>1</sup> (joerg.klausen@meteoswiss.ch), Lucia Cappelletti<sup>1</sup>, Bertrand Calpini<sup>1</sup>, Timo Pröscholdt<sup>2</sup>, Lars Peter Riishojgaard<sup>2</sup>, Karl Monnik<sup>3</sup>, Luis Nunes<sup>2</sup>, and Members of TT-WMD</p> <p><sup>1</sup>Federal Office of Meteorology and Climatology (MeteoSwiss), Zurich Airport, Switzerland <sup>2</sup>World Meteorological Organization (WMO), Geneva, Switzerland <sup>3</sup>Bureau of Meteorology, Melbourne, Australia</p> <p>The Observing Systems Capability Analysis and Review Tool (OSCAR) is being jointly developed by WMO and MeteoSwiss as web-enabled catalogues of environmental observing requirements and capabilities. Analyses of the gaps between requirements and capabilities as part of the so-called Rolling Review of Requirements process should motivate statements of guidance for the rational evolution of existing capabilities. In addition, the documentation of capabilities serves two other important purposes, namely the discovery of existing observations and the adequate use of observations in applications. During the recent years, the WMO Integrated Global Observing System (WIGOS) metadata standard (WMDS) has been agreed in a process of consultation among representatives of many different communities including meteorology and climatology, atmospheric composition, marine observations, and cryosphere observations. The WMDS has been approved by WMO Congress in 2015, and has since been formalized in an XML schema specification (WMDR) to facilitate the encoding and exchange of metadata. The WIGOS metadata model offers a mechanism to document observations sufficiently well to ensure adequate use of almost any type of environmental observations in a standardized way. In parallel, the OSCAR/Surface metadata repository and web application was developed to support interactive metadata management as well as machine-to-machine metadata exchange. OSCAR/Surface is history-aware, and thus, changes or events possibly affecting the interpretation of observations can be recorded. The presentation will introduce the WIGOS metadata standard and XML schema, as well as the current status of development of the various OSCAR components.</p>