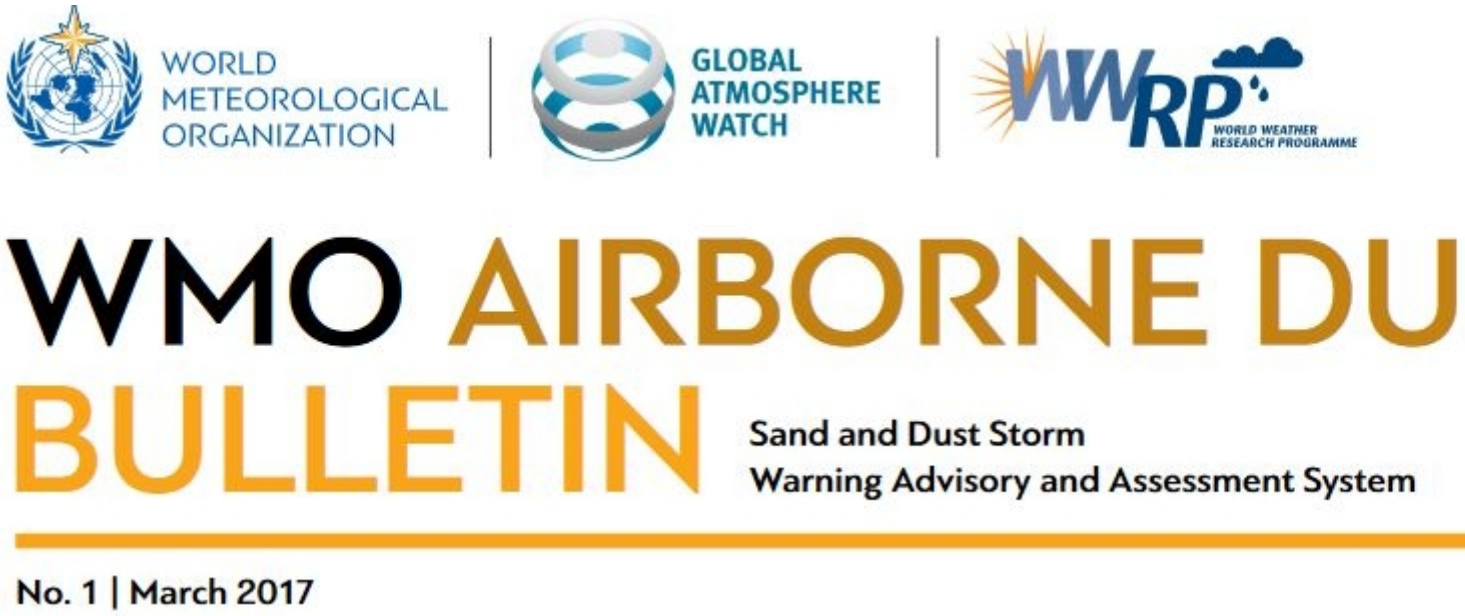
WMO launches the Airborne Dust Bulletin



This first Airborne Dust Bulletin reports on the atmospheric burden of mineral dust through 2016, its geographical distribution and its inter-annual variation. This bulletin will be published annually and is available here: library.wmo.int/opac/doc_num.php?explnum_id=3416

A key challenge is that the availability of suitable dust observations is limited. Extracting specific dust signals from satellite observations is complicated by the presence of other kinds of aerosols and substances in the atmosphere. In addition, observations from sensors with visible channels are not available over bright surfaces such as deserts (Benedetti et al., 2014). For these reasons, this report relies on model simulations. Numerical models incorporate observations through data assimilation techniques, but uncertainties still persist. The estimates of dust content in 2016 presented here are derived from daily forecasts that are provided by the Copernicus Atmosphere Monitoring Service (CAMS, https://atmosphere.copernicus.eu/) based on the Integrated Forecasting System for Composition of the European Center for Medium-range Weather Forecast. Reference values are computed from the CAMS Interim Reanalysis of Carbon Monoxide, Ozone and Aerosol for 2003–2015 (Flemming et al., 2016), which is based on the same modelling system.

The publication also reports on two outstanding dust cases in 2016, in SE Iran in July and in China-Mongolia in May. Finally, it presents a compilation of dust-related news and events.

WMO Airborne Dust Bulletin (pdf)
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