WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

WMO OMM
World Meteorological Organization
Organisation météorologique mondiale
Organización Meteorológica Mundial
Всемирная метеорологическая организация
المنظمة العالمية للأرصاد الجوية
世界气象组织

Secrétariat
7 bis, avenue de la Paix – Case postale 2300
CH 1211 Genève 2 – Suisse
Tél.: +41 (0) 22 730 81 11
Fax: +41 (0) 22 730 81 81
wmo@wmo.int – wmo.int

Our ref.: 6786837/2026/ESDP/SPC/RFC 3 November 2026

Subject: Publication of the 2026 edition of the WMO/ITU *Handbook on Use of Radio Spectrum for Meteorology: Weather, climate, water and related environmental applications* (WMO-No. 1197) and preparations for WRC-27

Action required: To engage with your national radio frequency authority, using the Handbook and the WMO Position on the WRC-27 Agenda, in preparation for WRC-27

Dear Sir/Madam,

Further to circular letter 03970/2025/I/SSU/RFC of 16 May 2025, in which Members were invited to review the preliminary text, I am pleased to inform you that the 2026 edition of the joint WMO/International Telecommunication Union (ITU) *Handbook on Use of Radio Spectrum for Meteorology: Weather, climate, water and related environmental applications* (WMO-No. 1197) has now been formally published and is available in all six official languages of the United Nations (Arabic, Chinese, English, French, Russian and Spanish) in the WMO e-Library.

The Handbook was officially launched on 28 September 2026 at the opening of the Global ITU/WMO Seminar Spectrum use for meteorology: challenges, opportunities and evolving requirements, held at the ITU headquarters in Geneva, with remote participation, from 28 to 30 September 2026.

The Handbook was jointly prepared by the WMO Expert Team on Radio Frequency Coordination (ET-RFC) of the Commission for Observation, Infrastructure and Information Systems (INFCOM) and Working Party 7C (Remote Sensing Systems) of Study Group 7 (Science Services) of the ITU Radiocommunication Sector (ITU-R). I wish to thank all experts and Members who contributed to it, including through the review of the preliminary edition.

With national and regional preparations for the World Radiocommunication Conference 2027 (WRC-27) under way, I would like to draw your particular attention to the WMO Position on the WRC-27 Agenda, prepared by ET-RFC and available in all official United Nations languages, which addresses the WRC-27 agenda items of prime interest or concern to WMO Members. As WMO participates in WRCs only as an observer, the protection of the radio-frequency bands essential to meteorology depends on the positions taken by national administrations. I therefore strongly encourage you to engage now with your national radio frequency authority, in coordination with your National Focal Point on radio frequency matters, using both the WMO Position and the Handbook to ensure that the requirements of meteorology are reflected in national and regional positions.

The 2026 edition of the Handbook has been comprehensively updated to reflect the decisions of WRC-15, WRC-19 and WRC-23 as well as the evolution of observing technologies. For each meteorological and related environmental system, it describes the radio-frequency bands used, the criteria for predicting harmful interference from other radiocommunication systems, and the potential impact of such interference on weather, climate, water and related

To: Permanent Representatives of Members of WMO

cc: National Focal Points on radio frequency matters

environmental data, forecasts and warnings. The Handbook is structured in seven chapters, complemented by an annex of acronyms and abbreviations:

1. WMO global infrastructure – the WMO Integrated Global Observing System (WIGOS), the WMO Information System (WIS) and the WMO Integrated Processing and Prediction System (WIPPS), and the role of radio-based systems within them;

2. Meteorological satellite service – frequency allocations, geostationary and non-geostationary systems, including data collection systems and alternative data dissemination mechanisms;

3. Meteorological aids service – radiosondes, dropsondes and ozonesondes, their operational requirements, the use of the 401–406 MHz and 1 668.4–1 700 MHz bands, and future trends;

4. Meteorological radars – weather radars, wind profiler radars and oceanographic high-frequency radars, including their spectrum requirements and vulnerabilities;

5. Passive and active spaceborne remote sensing – passive microwave radiometry and active sensors such as synthetic aperture radars, altimeters, scatterometers, precipitation radars and cloud profile radars, together with their interference and performance criteria;

6. Space weather – space weather observations and sensor systems using radio spectrum, reflecting the recognition of space weather in the ITU Radio Regulations by WRC-23;

7. Other radiocommunication systems – data dissemination systems, weather-sensing uncrewed aircraft systems, hydrological systems, meteorological uses of Global Navigation Satellite Systems, lightning detection systems, ground-based microwave radiometers and microwave radio attenuation systems.

The Handbook constitutes an authoritative reference, jointly published by WMO and ITU, for WMO Members and, in particular, for their National Focal Points on radio frequency matters. Among other things, it can assist Members in:

a) explaining to national authorities why specific frequency bands are essential for observations, forecasts and early warnings, and why bands used for passive sensing, which are determined by fundamental physics, cannot be replaced by other frequencies;
b) supporting national and regional preparations for WRC-27 and WRC-31, including within regional telecommunication organizations;
c) identifying and addressing cases of harmful interference, and taking spectrum considerations into account when planning and procuring observing and data dissemination systems;
d) raising awareness and building capacity among staff of National Meteorological and Hydrological Services, partner institutions and industry on spectrum matters.

I would also encourage you to bring the Handbook to the attention of other relevant national institutions. Any questions regarding the Handbook, or radio frequency matters more broadly, may be addressed to Ms Natalia Donoho, WMO Secretariat (ndonoho@wmo.int).

I would like to take this opportunity to express my sincere appreciation to you and your Service for your continued and valuable contributions to the work of WMO.

Yours faithfully,



Ms Ko Barrett
for the Secretary-General