

World Metrology Day 2024 – We measure today for a sustainable tomorrow

World Metrology Day is celebrated every year on 20 May to commemorate the anniversary of the signing of the Metre Convention in 1875. This treaty provides the basis for a worldwide coherent measurement system that underpins scientific discovery and innovation, industrial manufacturing and international trade, as well as the improvement of the quality of life and the protection of the global environment.

The theme for World Metrology Day 2024 is **Sustainability**, chosen for its relevance to various measurement opportunities crucial for fostering a sustainable global economy and environment. Examples include measuring energy use in industries, buildings and transportation, managing resources in agriculture and forestry, identifying pollution sources, and setting targets for environmental protection. Accurate measurements of vehicle emissions and fuel consumption are vital for regulatory compliance and designing sustainable transportation options. The assessment and management of manufacturing processes and waste streams, facilitated by accurate measurements, contribute to improved environmental stewardship.

The theme of sustainability encourages us to explore how metrology contributes to improving our lives every day. For example, accurate and reliable measurements enable better monitoring of environmental parameters, better assessment of the impact of human activities, and the development of strategies that promote ecological balance. Metrology empowers us to make informed decisions, whether by quantifying carbon emissions, measuring waste, or monitoring natural habitats.

Metrology is also of key importance because it supports the Sustainable Development Goals (SDGs) and the efforts of the United Nations in achieving sustainable global development and our collective responsibility to safeguard our planet

Across the world, national metrology laboratories continually advance measurement science by developing and validating new measurement techniques at the necessary level of sophistication. The national metrology institutes participate in measurement comparisons coordinated by the *Bureau International des Poids et Mesures* (BIPM) or by the Regional Metrology Organizations, to ensure the reliability of measurement results worldwide.

The *International Organization of Legal Metrology* (OIML) develops International Recommendations, which aim to align and harmonize requirements worldwide in many fields. The OIML also operates the OIML Certification System (OIML-CS) which facilitates international acceptance and global trade of regulated measuring instruments.

These international metrology systems provide the necessary assurance and confidence that measurements are accurate, providing a sound basis for global trade today and helping us to prepare for the challenges of tomorrow.

World Metrology Day acknowledges and honors the contributions of individuals working in intergovernmental, regional, and national metrology organizations and institutes year-round.

This year also marks a new chapter in the promotion of World Metrology Day following the Resolution adopted by the 42nd Session of the UNESCO General Conference in November 2023 to grant official recognition by UNESCO to its celebration on 20th May each year. This will provide new opportunities to promote metrology, and aligns with UNESCO's mission to construct a better world through science and education.