

GULFMET Contribution to the Sustainable Development Goals (SDGs)



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GULFMET... in brief!



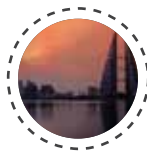
Forward

GULFMET is a Regional Metrology Organization (RMO) established under the auspices of GCC Standardization Organization (GSO), bringing together National Metrology Institutes (NMIs) of the United Arab Emirates, Kingdom of Bahrain, Kingdom of Saudi Arabia, Sultanate of Oman, State of Qatar, State of Kuwait and the Republic of Yemen

GSO Member States



United Arab Emirates



Kingdom of Bahrain



Kingdom Saudi Arabia



Sultanate of Oman



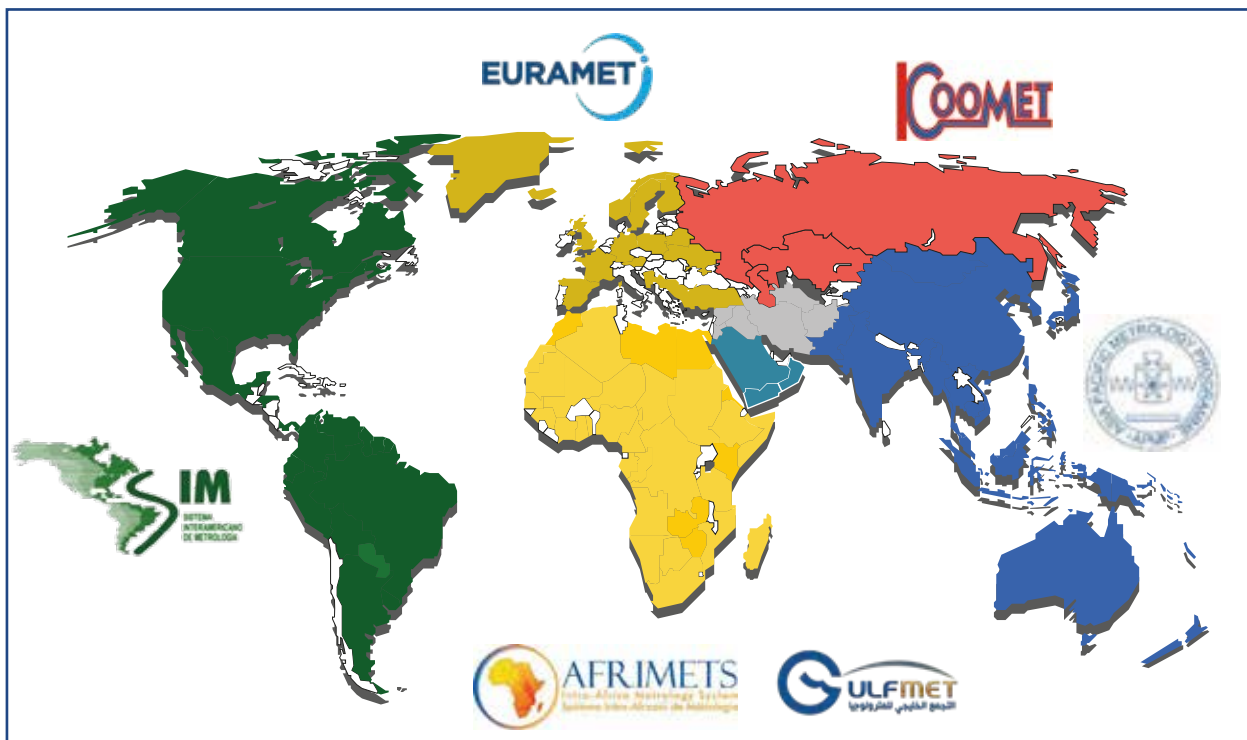
State of Qatar



State of Kuwait



Republic of Yemen



International Recognition

Decision CIPM/110-13 (2021)

Following JCRB Recommendation JCRB/43-1 (2021), the CIPM decided to admit the regional metrology organization Gulf Association for Metrology (GULFMET) as a full member of the JCRB, with a voice and the right to vote.



MEMBERSHIP

The membership is limited to the GSO Member States. States that are not members of the GSO may join GULFMET as Associate Members for an annual fee decided by GSO.

GULFMET Associate Members are:



Bosnia and Herzegovina



Egypt



Turkey



South Korea



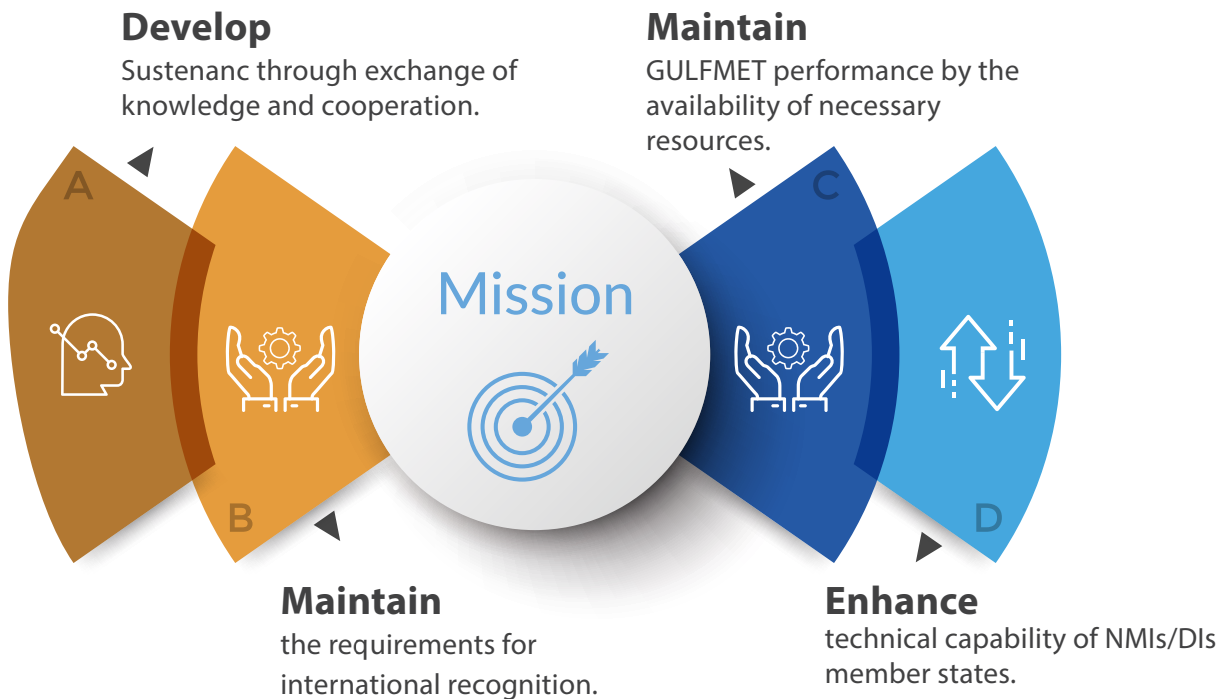
Hong Kong



GULFMET VISION & MISSION 2022 -2025



Vision: To be a self-sufficient and sustainable RMO



GULFMET STRATEGIC OBJECTIVES 2022 -2025

FACILITATE the recognition of CMC's of Member States

EFFECTIVELY SUPPORT stakeholders' through cooperation and coordination

STRENGTHEN TCs capabilities

SUPPORT Research and studies in the field of Metrology

DEVELOP Partnership with other RMOs and international organizations

SUPPORT Member states to fulfill CIPM-MRA requirements

CAPACITY BUILDING by providing proper training for member states.



Sustainable Development Goals in Brief



Sustainable Development Goals in Brief

GSO Member States stand with UN Member States in achieving the Sustainable Development Goals (SDGs), were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

The 17 SDGs are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic, and environmental sustainability.



Figure (1): UN Global Goals (SDGs)

This ambitious action plan to enhance peace and prosperity, eradicate poverty and protect the planet is recognized globally as essential for the future sustainability of our world.



GULFMET

Enabler for Sustainable Development in GCC Countries



GULFMET: Enabler for Sustainable Development in GCC Countries

4 out of the 17 UN SDGs directly link to the focus of GULFMET as a contribution of GSO Member States in achieving the social, economic, and environmental sustainability:

Linked Goals:

1 NO
POVERTY



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



3 GOOD HEALTH
AND WELL-BEING



13 CLIMATE
ACTION





SDG1 NO POVERTY

Meeting the Needs of People

- ⦿ Metrology legislation:
- ⦿ The GCC common Metrology Law- approved by GSO's BoD in its meeting no. 13, 03/11/2010
- ⦿ It aims at disseminating tranquility among the people through:
 - ⦿ Ensuring fairness in the trading transaction,
 - ⦿ Improving the quality of products and industrial processes,
 - ⦿ Protecting the health and safety of individuals,
 - ⦿ Protecting the environment and,
 - ⦿ Imposing laws and regulations fairly in cases that require measurement processes.
- ⦿ **Helps to reduce fraud**
- ⦿ Legal metrology controls will improve economic conditions for all concerned and assist in poverty reduction.
- ⦿ The Technical Committee of Legal Metrology
- ⦿ The GULFMET TC legal is responsible for carrying out the activities required by GULFMET as Regional Legal Metrology Organization (RLMO) in particular, the following tasks:
- ⦿ Harmonization of metrological legislation, which covers the following:
 - ⦿ Legal units of measurement.
 - ⦿ Technical regulations and standards for measuring instruments that cover metrological, technical, and administrative requirements.
 - ⦿ Legal metrological control over measuring instruments subject to legal control.
- ⦿ The GULFMET TC legal members: 6 GCC countries + Yemen
- ⦿ The GULFMET TC legal outputs:
 - ✓ Verification of measuring Instruments subject to metrological control
 - ✓ Metrological Control of Prepackaged Products
 - ✓ Type Approval for Measuring Instruments Subject to Metrological Control
 - ✓ Approval of National Measurement Standards
 - ✓ Designation and license of Verification bodies
 - ✓ Metrological Control of certified Reference Materials (CRM)
 - ✓ Definition of the multiples and subdivisions of the SI units and their notation
 - ✓ Guidelines for Technical Committees (TCs)





SDG3 GOOD HEALTH AND WELL-BEING

Meeting the Needs of People

- **Treatment of diseases and other medical conditions.** Getting measurements right improves patient outcomes, saves time, and reduces costs.
- **Internationally recognized and accepted equivalence of measurements** in laboratory medicine and traceability to appropriate measurement standards will lead to:
 - 01 Improvement in the quality of healthcare for patients
 - 02 Reduce false positive and false negative test results
 - 03 Reduction in costs for government and healthcare insurers
 - 04 Improvement of efficiency of health care
 - 05 Global acceptability of measurements and tests, which removes technical barriers to trade

Protecting the Planet

- Accurate measurement is central to understand climate change by identifying long-term trends of small magnitude from data that can vary enormously over very short timescales
- Millions of measurements are made every day covering some 50 essential Climate Variables using different techniques all around the world
- The data has to be consistent so that it is meaningful and can be combined, by making measurements that are fully traceable to SI units ensuring stability of measurement over time



SDG13 CLIMATE ACTION

The Technical Committee of Ionizing Radiation

GULFMET TC IR is concerned with the metrology of ionizing radiation related to medical, industrial, environmental, scientific, and radiation protection applications.

2 Inter-laboratories Comparisons

- 01 Supplementary Comparison for Diagnostic Radiology in Air Kerma for X-ray RQR and QRA Beam Qualities.
- 02 Supplementary Comparison of Air Kerma Standards from Radiation Protection level Cs-137 and ISO 4037 Narrow Beam X-ray Series in Range 40 kV to 300 kV.

22 Technical Experts working together to protect the health and the environment.





SDG9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Building Prosperity

- The economic success of the GCC Countries depend upon the ability to manufacture and trade precisely made and tested products and components that are accepted by trading partners.
- To control manufacturing processes and guarantee quality of products, there is a need to align instruments to reference standards and ensure measurement traceability.
- The ability to develop and deploy appropriate metrological methods is key for industry, support product innovation, process improvement and quality assurance to ensure that:
- Components and finished products meet regulatory requirements, documentary standards and specifications.
- Consumer and industrial quality expectations are met, including product value/price and reliability.



GULFMET contributions in Protecting the Planet & Building Prosperity



1 Steering Committee for Metrology

The Steering Committee for Metrology is considered an advisory Committee to GULFMET and operates in accordance with its guide adopted by the GSO Board of Directors.

Main tasks:

- 01 Report GULFMET decisions and recommendations to the GSO Technical Council.
- 02 Raise all technical subjects that are discussed in GULFMET meetings to the GSO Technical Council for consideration and decision-making and to recommend appropriate action.
- 03 Oversee the activities of technical committees.

9 GULFMET Technical Committees (TCs)

The Technical committees (TCs) for Metrology are considered specialized committees in the GULFMET and they perform their work in accordance with the technical committee's directive that is approved by the GSO Board of Directors (Recently the Ministerial Committee for Standardization).

The TCs are responsible for carrying out their activities required by GULFMET as a Regional Metrology Organization (RMO) for the fulfillment of the Mutual Recognition Arrangement of the International Committee of Weights and Measures (CIPM-MRA).

With **123** Technical Experts



30 Key and Supplementary Comparisons are registered in BIPM KCDB

INTER-LAB COMPARISON (ILCs)

CIPM MRA defines the technical basis of the arrangement as a set of results obtained over the course of time through scientific key comparisons carried out by:

- 01 the Consultative Committees of the CIPM (CCs),
- 02 the BIPM, and
- 03 the regional metrology organizations (RMOs)

All ILC should be registered and published by the BIPM and maintained in the KCDB.

46 Published CMCs in BIPM KCDB

CALIBRATION AND MEASUREMENT CAPABILITIES (CMCs)

- ☉ In the context of the CIPM MRA and ILAC Arrangement the common definition is:
- ☉ A CMC is a calibration and measurement capability available to customers under normal conditions:
 - ☉ – as published in the BIPM key comparison database (KCDB) of the CIPM MRA; or –
 - ☉ as described in the laboratory's scope of accreditation granted by a signatory to the ILAC Arrangement.
- ☉ Calibration and measurement capabilities (CMCs) are developed by GULFMET National Metrology institutes (NMIs) and submitted for first-stage review by relevant GULFMET TC (intra-regional review).
- ☉ Once this review process has been completed, the relevant GULFMET TC submits the CMCs to a second-stage inter-regional peer-review process.



7 TECHNICAL ASSISTANCE PROGRAMS

TECHNICAL ASSISTANCE

The GULFMET seeks to provide a path for the development of calibration and measurement capabilities of the GULFMET member states as a mechanism for these members to gain international recognition of calibration and measurement capabilities (CMCs).

In this sense, GULFMET has provided technical assistance to:



Kingdom of Bahrain



Kingdom Saudi Arabia



State of Kuwait



Sultanate of Oman

And currently with UAE and Saudi Arabia

2 STUDIES AND RESEARCH PROGRAMS

Building Technical Competency

GULFMET supports with financial contribution Research and Studies initiatives:

- 01 Develop a black body reference cavity, appropriate for calibrating ear thermometers.
- 02 Development of Transfer Standards for Traceability of Hardness Diamond Indenter Calibration Systems



CONCLUSION



Metrology

is essential to protect the **planet**, ensure dignified lives for
all **people** and achieve inclusive
economic growth and **prosperity**.

The new SI system will help to further increase efficiency and accuracy
and thus contribute to achieving the

Sustainable Development Goals.



