



هيئة التقييس

لدول مجلس التعاون لدول الخليج العربية  
GCC Standardization Organization



## GULFMET Contribution to the Sustainable Development Goals (SDGs)

August 2022



## Report Contents

GulfMet... in brief!

Sustainable Development Goals in Brief

- **SDG (1): No Poverty**
- **SDG (3): Good Health and Well-Being**
- **SDG (9): Industry, Innovation, and Infrastructure**
- **SDG (13): Climate Action**

**GULFMET contributions in Protecting the Planet & Building Prosperity**

# SUSTAINABLE DEVELOPMENT GOALS



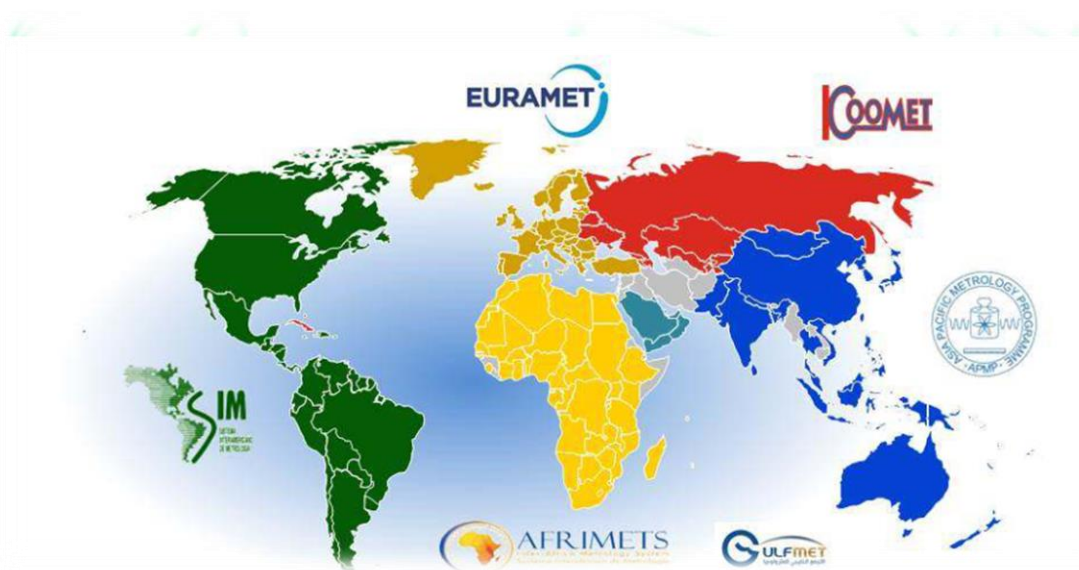


## GULFMET in BREIF

**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

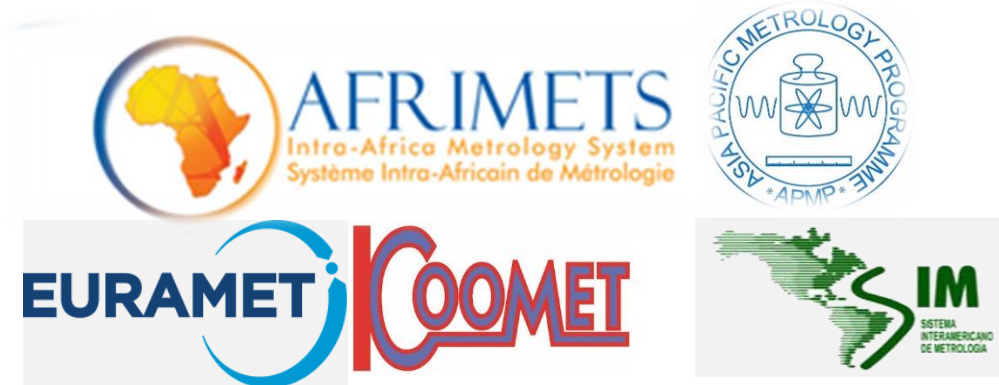




## International Recognition

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 GCC Standardization Organization (GSO) the 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, and
- Hong Kong.



## GULFMET VISION & MISSION 2022 -2025

### To be a self-sufficient and sustainable RMO





## GULFMET STRATEGIES 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

GULFMET Member States stands 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

4 out of 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:

- **SDG (1): No Poverty**
- **SDG (3): Good Health and Well-Being**
- **SDG (9): Industry, Innovation, and Infrastructure**
- **SDG (13): Climate Action**







## NO POVERTY



### SDG (1): 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)



## GULFMET: Enabler for Sustainable Development in GCC Countries

### Good Health and Well-Being

3 GOOD HEALTH AND WELL-BEING



SDG (3):  
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:
  1. Improvement in the quality of healthcare for patients
  2. Reduce false positive and false negative test results
  3. Reduction in costs for government and healthcare insurers
  4. Improvement of efficiency of health care
  5. 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



## Good Health and Well-Being



**SDG (3):**  
Good Health and Well-Being



**SDG (13):**  
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.

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

**2** Inter-laboratories Comparisons

1- Supplementary Comparison for Diagnostic Radiology in Air Kerma for X-ray RQR and QRA Beam Qualities

2- 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





## GULFMET: Enabler for Sustainable Development in GCC Countries

### Industry, Innovation, and Infrastructure

9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



SDG (9):  
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:

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



## GULFMET contributions in Protecting the Planet & Building Prosperity

# 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.

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





# 28

## 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:

- the Consultative Committees of the CIPM (CCs),
- the BIPM
- and 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 ASSISTANT PROGRAMS

### TECHNICAL ASSISTANT

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 assistant to:

- Kingdom of Bahrain (1)
- Saudi Arabia (2)
- State of Kuwait (1)
- Oman (3)

And currently with UAE and Saudi Arabia



# 2

## STUDIES AND RESEARCH PROGRAMS

### Building Technical Competency

GULFMET supports with financial contribution Research and Studies initiatives,

1. Develop a black body reference cavity, appropriate for calibrating ear thermometers.
2. 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.**

