



INTERNATIONAL ORGANIZATION OF LEGAL METROLOGY

METROLOGY AWARENESS

A CASE OF ZAMBIA METROLOGY AGENCY

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Van der Valk Hotel Paris CDG Airport, France

Agenda

- 1. The Global Metrology Awareness Challenge**
- 2. Impact of the Awareness Gap**
- 3. A case of Zambia Metrology Agency**
- 4. Strategic Actions for Global Metrology Awareness**



The Global Metrology Awareness Challenge

1. Metrology—the science of accurate and traceable measurement—is the invisible backbone of quality, safety, and trust in global trade.
2. Yet, despite its vital role, it remains one of the most misunderstood and undervalued sciences.
3. This awareness gap is deepened by:
 - a) Confusion with meteorology.
 - b) Limited media visibility and weak public education on its relevance.
 - c) Insufficient integration of measurement science into national policy and development agendas.



Impact of the Awareness Gap

Weak Institutional Support

Limited Government funding and inadequate resources for metrology infrastructure development and maintenance

Policy Blind Spots

Insufficient prioritization in national development plans and economic policy frameworks

Low Stakeholder Engagement

Poor understanding among policymakers, industry players, academia, and the general public

Addressing this challenge demands a global movement to elevate the visibility of metrology—through education, strategic communication, policy engagement, and collaboration across national and international platforms.





A case of Zambia Metrology Agency

Victoria falls, Livingstone- Zambia

BACKGROUND



Category	Detail
Official name	Republic of Zambia
Location	Landlocked in Southern Africa — borders Angola, DRC, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia
Capital city	Lusaka
Area	≈ 752,612 km ²
Population	~19.6 million (2022 census); growth ~2.7-2.8% per year
Demographics	Very young median age; substantial rural population; urbanization increasing

Key sectors

- Mining (Copper 820,670 tonnes, 2024)
- Agriculture
- Energy: Hydro, Solar and Power plants

ZAMBIA METROLOGY AGENCY - BACKGROUND



**HE President - Mr. Hakainde Hichilema
Republic of Zambia – on 18 Sept 2025**

1

2017: Legislative Foundation

Metrology Act No. 6 passed, renaming and redefining the former Zambia Weights and Measures Agency

2

2018: Agency Established

Zambia Metrology Agency officially created as the nation's designated authority

3

Unified Approach

Integration of scientific, industrial, and legal metrology under one institutional framework

Positioned ZMA as Zambia's comprehensive measurement authority, responsible for establishing and maintaining national measurement standards while promoting fair trade and consumer protection.

KEY MANDATE AREAS



1. Promotion of Fair Trade, Consumer Protection, and Public Awareness
2. Custody, Maintenance, and Dissemination of National Measurement Standards
3. Trade Facilitation and Mutual Recognition of Measurement Results
4. Enhancing Compliance and Public Confidence
5. Strengthening Stakeholder Engagement
6. Increasing Visibility of ZMA Services

Minister of Commerce, Trade and Industry, Honorable Chipoka Mulenga MP office welcoming ZMA CEO



MEASUREMENT TECHNICAL SUPPORT TO AGRICULTURE

MEASUREMENT TECHNICAL SUPPORT TO AGRICULTURE



Briefing the Honorable Minister on Preparations for World Metrology Day



1. Situational Analysis

- a) Importance – Agriculture is a cornerstone of Zambia’s economy, contributing significantly to GDP, employment, food security, and trade.
- b) Awareness Deficit and huge post-Harvest Losses
- c) Market Confidence: Buyers (local and international)

2. Challenges

- a) Inconsistent Measurement Practices
- b) Complaints on underweight commodities and
- c) Non-compliant products

3. Government intervention

- a) Input Support
- b) Market and Price Support
- c) Research, Extension, and Mechanization

MEASUREMENT TECHNICAL SUPPORT TO AGRICULTURE



Inspection of Farming Inputs



4. Metrology Interventions:

- a) Measurement technical support to the **production** of farming inputs with correct quality (quality control), quantity and packaging/ labelling.
 - ✓ **Type Approval, Calibration, Statutory Verifications and Inspections of measuring and packaging instruments and inspection of prepackaged commodities.**

- b) Inspection of imported farming inputs to ensure adherence to Metrology requirements:
 - ✓ **Connected to the Single Window (ZESW)–ASYCUDAWorld Revenue Authority custom system**
 - ✓ **Conducts inland risk-based Metrology Inspections**

MEASUREMENT TECHNICAL SUPPORT TO AGRICULTURE



4. Metrology Interventions (cont'd):

c) Multi-Agency Inspection Approach (Campaigns)

- i. Coordinate all National Quality Institutions (NQI) and consumer protection Agencies
- ii. Awareness Workshops for input manufacturers, importers and packers
- iii. Undertake focused joint multi-Agency inspections -to inspect farming inputs – Fertilizer, Seed and Agro chemicals before commencement of farming season.

d) Legal Metrology certification system for manufacturers

e) Grain Marketing- Post Harvest Support

- i. Collaborate with Food Reserve Agency - main buyer
- ii. Undertake field inspections in all Districts and provinces during marketing season
- iii. Collaborate with district local leaders and traditional leaders

MEASUREMENT TECHNICAL SUPPORT TO AGRICULTURE

Results and Communication Highlights:

1. Pay attention to results and communicate them effectively
2. Zambia recorded zero official complaints from farmers on underweight farming inputs, in 2024/25 season, demonstrating improved trust and compliance.
3. Reporting of pre- and post-inspection compliance levels for measuring instruments and prepackaged commodities. Transparency and data-driven evidence of progress.
4. Clear national messaging: “Metrology supports food security, safety, and sustainable farming businesses.”
5. Active media engagement—both mainstream and social-to amplify awareness and public understanding of the outcome.
6. Institutional recognition: Elevate World Metrology Day into a national event celebrated with policymakers and stakeholders.



Media engagement

HIGHLIGHTS OF OTHER SECTORS

1. **Health** – Regulators, Public Health labs, Pharmaceutical, Hospitals (Clinical, Laboratory and specialized equipment)
2. **Mining** – Metal Accounting and Process control (Hydro and Pyro-metallurgy), Tax (exports/imports), Environment Management etc.
3. **Energy** –
 - Petroleum-Tanker Truck Verification Centre, Meter Test Rigs, retail pumps testers
 - Electricity- Generation, new and in-situ meter testing
 - Alternative/ Clean energy: Nuclear, Natural gas, LPG and Solar
4. **Environmental** -
 - 1) Monitoring Emissions and Air Quality - air pollutants (CO₂, SO₂, NO_x, etc.).
 - 2) Wastewater Management–pH, AAS, ICP (pH levels, and pollutants-heavy metals).
 - 3) Energy Efficiency and Renewable Resources
 - **Transparency**: Prevents manipulation or report wrong of environmental data.
 - **Accountability**: Industries comply with environmental licences – certified results
 - **Consumer Protection**: Prevents false eco-labeling and **greenwashing**
 - **Trust**: Builds confidence in environmental¹² statistics used by stakeholders

AWARENESS ACTIVITIES

1. Quarterly Media engagement and Daily Social Media updates
2. World Metrology Day - Officiated by Policy makers
3. Community based projects - Dry Capacity Measures “Meda”
4. Host industry-specific workshops and roadshows
5. Policy Briefs linking metrology to economic growth and national goals
6. Visual tools (infographics, dashboards) showing **metrology impact**
7. Stakeholder partnerships (private sector, academia, regional bodies)



Strategic Actions for Global Metrology Awareness



Sector Prioritization

Identify and support government-prioritized sectors with tailored metrology solutions



Simplify Messaging

Communicate metrology's daily life impact through radio, TV, social media, and community campaigns



Economic Positioning

Frame metrology as foundational to economic growth and national competitiveness



Unified Voice

Coordinate messaging across all metrology pillars, even when in different organizations



Platform Leverage

Maximize visibility through World Metrology Day, trade expos, and regional integration forums

Examples of key Messages to Stakeholders

- ✓ Metrology touches every life, every day.
- ✓ Quality starts with accurate measurement.
- ✓ A strong economy is built on trusted measurements.
- ✓ Metrology: The silent enabler of trade, safety, and innovation."

THANK YOU

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Honorable Minister and Board Chair launching Service Charter