

MEDIA BRIEF ON THE UPCOMING METROLOGY CONFERENCE (SCHOOL) – IMPORTANCE TO THE DEVELOPMENT OF INDUSTRY AND COMMERCE

BRIEF ON AFRIMETS AND AFRIMETS 2011 METROLOGY SCHOOL

The Intra-Africa Metrology System (AFRIMETS) was created to promote metrology in Africa, with a main aim to facilitate intra-African and international trade. AFRIMETS has placed metrology in Africa on the international map and increased awareness of measurements in Africa.

The successful creation of AFRIMETS has brought praise and attention of key stakeholders outside Africa who are now sponsoring AFRIMETS 2011 Metrology School 7-16th February 2011. The school creates an opportunity to equip a younger generation with the knowledge necessary to take AFRIMETS to the next level.

The AFRIMETS Metrology School is the first of its kind to be held in Africa. The training has attracted over 100 participants from over 40 African countries to learn the best international practices and exchange experiences of their countries with an aim of establishing or improving the technical competence that is needed to underpin the international acceptance of African measurement capabilities and thus reduce technical barriers to trade (TBTs).

Kenya will host the Intra-Africa Metrology System (AFRIMETS) Training in Nairobi from 7th – 16th February 2011, in conjunction with the United Nations Industrial Development Organization (UNIDO), KEBS and Weights and Measures Department.

What is Metrology

Metrology, the science and practice of measurement, is strategically important in our nation's development. When we trade, we measure, and the international trading system relies on these measurements being "right" wherever they are made. But how do we know that these measurements are "right"? That is the job of metrologists – scientists who specialize in measurement techniques and who provide the international framework for accurate measurement that industry, legislators, regulators and the general public can rely upon.

Did you know? The applications of metrology in daily life

Measurements are important in all aspects of society: in commerce and industry, healthcare, environment, science, technology and innovation

- Did you know that the common clinical thermometer and pressure measuring instrument used by doctors to measure your temperature and pressure respectively need to be calibrated as they may influence the treatment you get?
- Did you know that when you are X-rayed, you may be exposed to harmful radiation if the X-ray machine is not calibrated?
- Did you know that few hospitals in Kenya have calibrated diagnostic measuring instruments?
- Would you be comfortable being treated in a hospital/health facility whose measuring instruments' accuracy is not known?
- Did you know the quality of our roads is affected by the overloading of transport vehicles? That is why we have fixed and mobile weighbridge stations to them.

- Did you know that the weight of an aeroplane has to be precisely known in order to be cleared for takeoff? That is why we have aircraft weighing kits to them.
- Do you care whether the kilogram of sugar, meat or unga you buy is really one kilogram? You may be getting less or more!
- Do you care to find out whether you pay for the right airtime in your mobile phone communication? Is the billing per second or minute really right?
- Is the quality of air and environment you live in safe for you and your family?

Calibration of measuring instruments ensures that their results are traceable to the International System of Units (SI).

The International system of Measurements

The World Measurement System is fairly simple and combines the efforts of a number of organizations. A working level, measurement is made in a laboratory accredited by an Accreditation Body within the Arrangement drawn up by the International Laboratory Accreditation Cooperation (ILAC) – e.g. KEBS metrology laboratories by German Accreditation body, DAkkS. ILAC requires traceability of the measurement results to the International System of Units (SI) and National realizations of these Units are maintained by National Metrology Institutes (NMIs) for example KEBS Metrology department.

The formal system for demonstrating equivalence of the SI realizations at the top-level is managed by the International Bureau of Weights and Measures (BIPM). Where these measurements relate to the regulated sector, the International Organization for Legal Metrology (OIML) operates a similar Arrangement that establishes mutual confidence in the evaluation of measuring instruments by its participants and mutual acceptance of their evaluation results.

There is now much documented evidence that National standards are “more equivalent” than in the past – and can be shown to be so. Major regulators like the US Federal Aviation Agency (FAA) and companies like Boeing now rely on aviation industry measurements traceable to the SI through NMIs which are signatories to the CIPM MRA, wherever they are made. And there are an increasing number of case studies which show that internationally operating companies can save millions of dollars by using the calibration services of local CIPM MRA signatories (i.e. KEBS in Kenya).

Metrology at KEBS

Kenya’s Vision 2030 has set a target for economic growth rate of 10 per cent per annum. The status of a country’s measurement system is a good indicator of its development level. In line with our aspirations to be a middle-income country as outlined in the *Kenya Vision 2030*, a robust national measurement system that supports this vision must be established.

The Republic of Kenya (through KEBS) became a full member of the International Bureau of Weights and Measures (BIPM), from 1st January, 2010 including the ratification of its constituent instrument, the *Metre Convention*.

This very important achievement for Kenya comes with the opportunity to enjoy the many advantages provided by this status. Among the principal advantages is access to the most effective manner of obtaining international recognition of our national metrology programme. Further, the availability of a collaborative forum at the BIPM multiplies our investment in national metrology programmes through synergy with the national metrology efforts of the

other Member States. Some of the additional advantages derived from participation in the BIPM activities include:

- The opportunity to have our national calibration and measurement capabilities (CMCs) internationally recognized and listed in the BIPM's database, which is publicly available;
- The opportunity to participate in international comparisons of national measurement standards;
- The right to attend and vote at the General Conference (CGPM);
- The right to obtain internationally recognized measurement traceability at no additional cost;
- The right to purchase a national prototype kilogram;
- The opportunity to participate in international metrology working groups;
- The opportunity for our metrologists to work at BIPM on research programmes conducted there.

All these activities contribute to the elevation and recognition of Kenya's metrology programme in the international measurement community.

Kenya's Vision 2030 has projected an economic growth rate of 10 per cent per annum and further identified the role or use of **Science, Technology and Innovation** for raising productivity and efficiency in the economy, society and political establishment.

The initiative on Science, Technology and Innovation (STI) has been identified as one of the anchors of the economic, social and political pillars of Kenya's Vision 2030. A successful STI programme is firmly based on "good" measurements. "Good" measurements in turn depend on a sound national measurement system that is linked to the international measurement system. The international measurement system is coordinated by the BIPM which ensures world-wide uniformity of measurements and their traceability to the International System of Units (SI).

Trade and Industry depend on "good" measurements for efficiency in their activities. The small and medium enterprises (SMEs) as well as the micro enterprise (Jua Kali) need measurement to improve on the quality of their products. The fish, horticulture and floriculture industry require measurements in order to meet the strict export requirements of their major customers in Europe and widen their global presence. In order to meet the ever demanding needs of industry, the Government has continued to invest in the national metrology programme. An example is the new initiative on metrology in chemistry.

The metrology facilities at the Kenya Bureau of Standards (KEBS) offer national traceability of measurements to the International System of Units (SI) through the custody and maintenance of the national measurement standards. The establishment of a National Metrology Institute (NMI), in line with the international best practices, enhances development in the area of measurements.

