



Kenya Bureau of  
Standards

Quality Products for Quality Life

# the Benchmark

The official magazine of the Kenya Bureau of Standards

## World Standards Day

Tackling climate change  
through standards

Clean fuel now a guarantee

New Board and Review of  
Standards Act

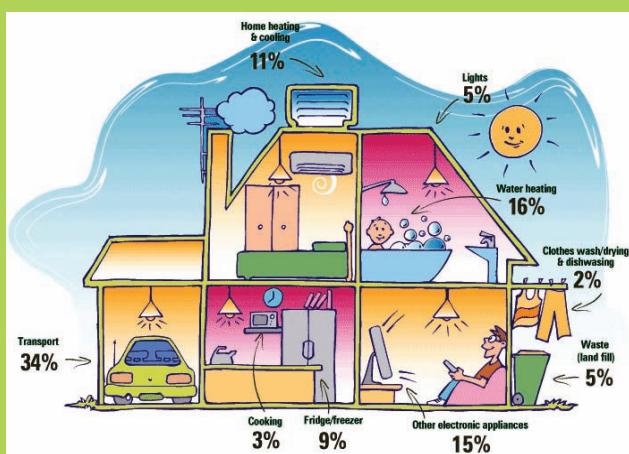


Pastoralists wait to sell their emaciated cattle that can hardly stand or withstand the ravages of the current famine

## Do you Know?

### Household greenhouse gas emissions

Here's a picture that shows how energy is consumed in a typical household.



### Ways to reduce your energy consumption today

#### Transport

Walk, cycle or use public transport.

#### Water heating

Take shorter showers, use a AAA-rated showerhead or install a gas-boosted, solar hot water system.

#### Green electricity

Install solar power or purchase renewable energy.

#### Appliances

Always purchase appliances with the highest star rating for energy-efficiency.

#### Appliances

Turn them off at the powerpoint when not in use.

#### Heating

Insulate your home (and keep doors and windows closed).

#### Cooling

Use natural ventilation and close your blinds to keep direct sunlight out on hot days.

#### Lighting

Turn off all lights when not in use.

#### Lighting

Use low-energy compact fluorescent or fluorescent lights.

#### Lighting

Use natural lighting wherever practical.



**Kenya Bureau of Standards**

Quality products for quality life

[www.kebs.org](http://www.kebs.org)

## the Benchmark

The magazine for Kenya Bureau of Standards

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# Message from the Minister for Industrialization,

Hon. Henry Kiprono Kosgey, EGH, MP



**Today Kenya is pleased to join the international community in celebrating World Standards Day under the overall theme of tackling climate change through standards.**

Fellow Kenyans, we are blessed with an elegant and immensely beautiful country, that has continued to attract visitors from across the globe, including great world leaders such as Sir Winston Churchill and Theodore Roosevelt, who made very successful tours.

Climate change poses a major threat to our strategic natural resources and it has the potential to reverse all the positive gains we have made over the years in the tourism, agriculture, livestock and manufacturing sectors.

In 1995, the Intergovernmental Panel on Climate (IPCC), a panel of experts assembled by the United Nations, concluded after detailed scientific reviews that: "the balance of evidence suggests a discernible human influence on global climate."

One such human influence is energy production and consumption pattern, whose negative impacts include deforestation and Carbon dioxide (CO<sub>2</sub>) emissions, responsible for global warming and climate change.

It has been estimated in Kenya's Vision 2030, that nationally, wood fuel and other biomass account for 68% of the total primary energy consumption, followed by petroleum at 22%, electricity at about 9 % and others including coal at about 1 %. The manufacturing sector is a major consumer of energy.

It is therefore crucial to achieve sustainable patterns of production and consumption in order to diminish the pressures on ecosystems and to secure economic growth as projected in Kenya's Vision 2030.

The Government of Kenya will continue to make necessary policy interventions that encourage sustainable use of natural resources, the efficient use of energy and the conservation of ecosystems. The Green Energy Facility measures announced by the Minister for Finance in the 2009/2010 budget speech for instance, is one such intervention.

Standards will in this regard be particularly essential in supporting interventions aimed at the mitigation of climate change.

The Master Plan Study for Kenyan Industrial Development (MAPSKID) has identified access to industrial information as a way of improving business environment.

KEBS will in this regard continue to provide all actors with standards information services to support the transfer of manufacturing technologies in general, and those covering energy efficient appliances and equipment in particular. KEBS will also provide standards information services to support the transfer of renewable energy technologies.

Energy cost is a major impediment to the competitiveness of Kenya's manufacturing sector. Renewable energy and energy efficient technologies offer the benefit of not only mitigating climate change but also lowering energy costs. Increasing

energy efficiency of appliances and equipment in residential, commercial and industrial sectors for example, will reduce energy related Carbon dioxide (CO<sub>2</sub>) emissions.

Recycling makes an indirect contribution to mitigating climate change as forests that may have been used to produce paper are left untouched, leaving the carbon sinks intact. Technology based on recycling for instance, emerges as the most sustainable practice in the pulp and paper industry.

By adopting existing best technology industry-wide, industry can reduce its Carbon dioxide CO<sub>2</sub> emissions and its total energy use quite significantly.

The Ministry of industrialization will in this regard continue to make necessary sustainable industrial policy interventions aimed at addressing specific constraints that are holding back industrial development.

The ministry is in this regard formulating a national policy agenda for industrialization to position the industrial sector to support the country's social development agenda through the creation of jobs, the generation of foreign exchange, and a growth rate of 10 per cent per annum as envisioned in Kenya's Vision 2030. These measures will in addition enhance the resilience of local industries.

The contribution of standards therefore has the potential of inducing opportunities for sustainable economic growth, employment and indeed attainment of millennium development goals.

Fellow Kenyans, former cabinet minister the late Tom Mboya, observed during the presentation of Kenya's sessional paper number 10 of 1965 on African socialism that: 'a leader who fails to lead fails entirely'.

The people of Kenya are equal to the challenges of climate change and the cabinet shall play its critical role of offering the country sustainable leadership this much and more, we promise.



# *Message from the Minister for Environment and Mineral Resources,*

Hon. John N. Michuki, EGH, MP



The Ministry of Environment and Mineral resources welcomes the opportunity to participate in celebrating this year's World Standards day. We wish to pay particular tribute to KEBS for their demonstrated efforts in support of national goals and strategies on environment.

**Climate change is a major challenge facing humanity today. It constitutes a very strong impediment to economic growth, food security and attainment of the Millennium development goals.**

The challenge of climate change therefore demands concerted commitment across the globe, to understand and respect ecosystem integrity. Human influence is the major contributor to climate change. Examples of such influence include

emissions of three greenhouse gases in particular - Carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O).

Such gases act like a blanket around the Earth, trapping heat emitted from the Earth's surface causing global warming and climate change. Greenhouse gas (GHG) emissions are mainly related to the production and use of energy - and particularly the burning of fossil fuels.

The bulk of the remaining human influence on climate is associated with agriculture and changes in land use, such as deforestation.

The contribution of standards towards environmental integrity - and by extension a sustainable planet - is fundamental. Standards support good environmental practice and information, energy efficiency and the dissemination of new, eco-friendly and energy performance technologies.

Standards contribute to the mitigation of climate change, while offering the potential to reduce its effects in the future as new technologies are developed and mature. Air quality monitoring system and sustainable management of natural resources as envisaged in Kenya's vision 2030 for instance require established standards as a basis for monitoring.

Kenya is a signatory to a number of Multilateral Environment Agreements (MEAs). This is a clear indicator that as a nation we are truly committed, in a spirit of solidarity and partnership, to addressing environmental integrity challenges in general and climate change in particular.

Kenya's Vision 2030 has outlined specific strategies to address environmental integrity challenges. The ministry of environment and mineral resources is specifically formulating a National climate change strategy to enable the country deal with climate change and its impacts effectively.

Fellow Kenyans, the celebration of the World Standards day under the theme of 'tackling climate change through standards', is taking place against the background of the Government's sustained efforts to rehabilitate and restore the Mau forest, Kenya's largest water tower.

Interventions by the Government, in all such cases, shall be entirely informed by best national interest.

Forests serve as carbon sinks, absorbing carbon from the atmosphere and storing it in the wood, soil,

and other organic material. Reducing the world's forested area permanently decreases the Earth's capacity to store future carbon emissions.

The world's forests store an estimated 4,500 gigatons of carbon dioxide in their ecosystems, an amount larger than all carbon currently found in the atmosphere. A release of this stored carbon into the atmosphere, even over a long period of time, would have catastrophic effects on the planet.

Forests therefore play a crucial role in climate stabilization, not to mention their capacity to protect water, soil, and biodiversity. Biodiversity provides the world's population with food and medicine.

The Government of Kenya has in this regard set aside funds in the 2009/2010 budget for tree planting in all constituencies, in order to support national goals of increasing the forest cover as envisaged in Kenya's Vision 2030.

The tree planting exercise will in addition contribute to the international goal of planting at least 7 billion trees worldwide, by the end of 2009. Carbon trading for forest conservation can offer the funds needed to create biodiversity and we shall continue to engage our development partners to support such activities.

Immediate impacts of climate change include droughts, floods, disease, rising sea levels, increased temperatures, crop failures and loss of livestock. The Government will continue to implement measures to mitigate and adapt to climate change.

Adaptive options include reforestation, research into drought-resistant crops, enhancing the resilience of infrastructure and industries and information dissemination to better prepare the country against climate disasters.

Fellow Kenyans, national values have the potential of driving national goals. The hospitality of the Kenyan people for instance has continued to drive the growth of the tourism sector and subsequent economic growth and employment.

Embracing a national culture that respects established standards has enormous potential of supporting measures aimed at mitigating climate change and consequently inducing the desired benefit of a clean, secure and sustainable environment.

# *Message from the Permanent Secretary Ministry of Industrialization,*

*Professor John Krop Lonyangapuo*



**The challenge of climate change demands that all our efforts aimed at developing a productive, efficient and globally competitive Kenya, should always take into consideration our strategic natural resources - the basic foundation of economic development and public well-being.**

The theme of this year's world standards day should thus serve to remind us, the people of Kenya and the global community in general, that the consequences of failing to make sustainable interventions to mitigate climate change are too grave to contemplate.

Kenya is currently witnessing unprecedented prolonged droughts, crop failures, drying rivers and acute water shortages all attributed to climate change. The Ministry of industrialization will continue to implement identified cross-cutting measures aimed at mitigating climate change.

Standards in this regard offer useful tools of mitigating climate change. For instance, standards promote good practice for environmental management and design and also energy management. Standards also provide a basis for benchmarking for good practices, including environmental and energy efficiency labelling.

The Master Plan Study for Kenyan Industrial Development (MAPSKID) has identified environmental protection as a key dimension of sustainable development.

MAPSKID action plans include promotion of environmental audits and dissemination of best environmental practises, all of which are aimed at minimizing pollution from the industry and subsequent reduction of emission of green house gases that cause global warming and climate change. Implementation of these measures obviously requires established standards, a clear testimony of the contribution of standards in tackling climate change.

The ministry of industrialization encourages all actors, particularly regulators to use Kenya standards as a basis of technical regulations and subsequently ensuring good regulatory practice, increased competitiveness of enterprises and removal of barriers to trade.

I am pleased to note that KEBS and NEMA have signed an MOU, in order to enhance coordination of standardization activities, ensure efficient utilization of national resources and eliminate duplication of efforts. The numerous challenges facing the world today demand greater mobilization of resources.

Kenya standard(s) through reference provides the technical requirements in technical regulation(s). The administrative provisions can be given by regulators through description, in the technical regulation(s). Being readily available, Kenya standards are the most convenient choice as a basis in the development of technical regulations as they can readily be amended (through the national TC process) to keep up with technology and have the benefit that they comply with the World Trade Organization (WTO) Code of Good Practice (CGD) for the preparation, adoption and application of standards.

The Government will in this regard, continue to strengthen the national quality infrastructure to enable Kenya cope with emerging challenges of climate change. KEBS is in this regard currently expanding its testing capacity to support the increased demand for testing services.

Ultimately standards will significantly contribute to environmental protection and preservation of the integrity of our strategic natural resources, identified in Kenya's Vision 2030.

# ***Message from the Chairman National Standards Council,***

*Eng. Aggrey Chabeda*



KEBS is the National standards body responsible for the establishment and maintenance of Kenya Standards. The National Standards Council is responsible for overseeing KEBS' strategic and policy affairs on behalf of the Minister for industrialization.

The National Standards Council will continue to ensure that standardization goals and objectives are aligned with national goals as outlined in Kenya's Vision 2030.

KEBS 2007-2012 strategic plan has broad objectives that include facilitation of trade, the realization of Kenya's social and environmental priorities through standardization. KEBS has put in place effective monitoring and evaluation mechanisms to ensure compliance with the goals of the strategic plan.

As members of the global community, we are collectively responsible for ensuring that our development activities, do not compromise the ability of future generations to meet their needs. Engagement of all actors is therefore necessary in order to combat climate Change.

Standards support the three dimensions of sustainable development namely economic, social and environmental integrity. By extension therefore, standards offer practical solutions in the mitigation of climate change.

Eco-labelling programs for instance, such as claims of biodegradability or use of recycled paper, has the potential of pulling the market by providing consumers with the requisite information to make responsible purchasing decisions, and hence encourage manufacturers to design and market more eco-friendly products. Standards are however required to verify such claims and to ensure that such products meet national specifications.

KEBS will continue to work closely with all actors involved in the formulation and implementation of national climate change strategies by providing needed standards.

The National Standards Council takes this opportunity to reassure the public that KEBS will continue to offer effective and efficient standardization services to support the mitigation of climate change in particular and national goals outlined in Kenya's Vision 2030 in general.

# *Message from the Acting Managing Director Kenya Bureau of Standards*

**Mr. Joel Kioko**



The Kenya Bureau of Standards (KEBS) is pleased to join the international community in celebrating the World Standards Day under the global theme of tackling climate change through standards.

KEBS sincerely appreciates the outstanding contributions that national technical committee (TC) members have made and continue to make, towards standardization. We earnestly thank all our distinguished national TC members and we look forward to your continued active participation.

October 14th was chosen as the World standards day, because it was on that day in 1946, that delegates from 25 countries first gathered in London and consequently decided to create a new international organization dedicated to the coordination and unification of standards work.

The International Organization for Standardization (ISO) was officially formed one year later and the first World Standards Day was celebrated on October 14th, 1970.

The goal of World Standards Day is to raise awareness on the importance of international standardization to the world economy and to promote its role in helping meet the needs of all business sectors.

Broad environmental aspects that standards support include good environmental practice and information, energy efficiency and the dissemination of new, eco-friendly and energy performance technologies.

Standards can be used for the monitoring and measurement of air quality and carbon footprint. KEBS has in this regard published a number of Kenya standards covering the environment sector.

During 2008/9 financial year alone, a total 51 standards on air quality were published. NEMA has referenced a total of 91 Kenya Standards in the draft air quality regulation, currently under publication and subsequent enforcement by NEMA.

This is an impact indicator on the use of standardization services in support of national environmental protection goals. The expected direct benefit to be induced through enforcement of the proposed regulations by NEMA will be clean air and protection of the environment.

Environment related standards that KEBS has published include:

KS 1966-2 standard on tolerance limits for effluents discharged into public sewers and KS 1966-1 on tolerance limits for effluents discharged into surface waters. Others include KS ISO 14024 standard on environmental labels and declarations and several many more.

In total KEBS has published over 5400 Kenya Standards to date, covering environment, chemical, engineering, food and agriculture, and the services sectors. To support national strategies on clean fuels, KEBS shall periodically review existing Kenya standards on fuels in order to address emerging concerns.

The national TC on fuels is in this regard reviewing sulphur levels in the diesel standard and the targeted date of completion is December 2009. In addition, the national TC on fuels is currently formulating a standard on Bio diesel and targeted date of completion is December 2009.

Energy efficiency labelling of domestic, commercial and industrial appliance enable consumers to make informed choices regarding expected reduction of consumption load and standards can be used to verify stated claims.

The use of energy saving bulbs for lighting for instance as proposed by the Minister for Finance in the 2009/2010 budget speech has the potential of reducing consumption loads significantly.

Energy efficiency leads to reduction of demand for energy and subsequent reduction of CO<sub>2</sub> emissions. It is estimated that a global switch to replace one in five light bulbs by 2030 would decrease global carbon dioxide emissions by 400 million tons.

KEBS has published standards on energy saving lamps covering performance and safety aspects. This includes KS IEC 60969 Kenya standard for the performance of self-ballasted lamps for general lighting services.

Eventually, a program to phase out inefficient energy systems is a viable option open to Kenya for it has the added benefit of reducing energy cost to consumers.

KEBS will continue to align all national standards with international standards through effective participation in international standardization activities.

This will in effect enable timely transfer and support of technologies that support mitigation of climate change in addition to facilitating the dissemination of standards information on international best practices on environmental and energy management.

Climate change is a trans-boundary challenge and KEBS will in this regard also continue to facilitate harmonization of environmental standards within EAC partner states.



# *Message from ISO President,*

*Dr. Alan Morrison*



The world is facing a critical challenge. Increasing greenhouse gas emissions are raising the earth's average temperature. As a result, dramatic climate change is forecast and global scientific opinion predicts enormous developmental, economic, social and environmental stresses on our planet.

Leading climate change experts have put forward a series of practical solutions to tackle climate change. These solutions include the technical standards published by the world's three leading international standardization organizations: the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the International Telecommunication Union (ITU).

In its groundbreaking report published in 2007, the Intergovernmental Panel on Climate Change (IPCC) cited technical standards, like those published by the IEC, ISO and ITU, as a means of mitigating climate change now, while offering the potential to reduce its effects in the future as new technologies are developed and mature.

The three global organizations are coordinating their work to ensure that government, business and society are provided with the necessary tools to help combat global climate change and to support the reduction in greenhouse gas emissions by increasing energy efficiency, while facilitating sustainable development.

The standards produced by the three organizations reach across all sectors identified in the IPCC report where mitigation technologies, policies and measures, constraints and opportunities exist, including energy supply, transport, buildings, industry, agriculture, forestry, and waste.

The IEC, ISO and ITU offer a system of standardization whose output includes standards for the following aspects of the fight against climate change:

- ▶ Monitoring and measurement of greenhouse gas emissions
- ▶ Measuring the carbon footprint of networks and products
- ▶ Designing and building energy efficient homes and workplaces
- ▶ Benchmarking for good practices including environmental and energy efficiency labelling
- ▶ Promoting good practice for environmental management and design, and for energy management
- ▶ Disseminating innovative technologies that promise to help reduce the effects of climate change
- ▶ Fostering the introduction of new energy-efficient technologies and services

International standards offer policy makers, industry and users the common tools they need to work together on tackling climate change. The three partner organizations also offer a comprehensive system in which nations and the private sector can participate to establish the priorities for tackling climate change in the years ahead. As such, they offer practical solutions with the potential to be used as part of any international agreement following on from the Kyoto Protocol.

Standards from the IEC, ISO and ITU offer the world's governments and industry the best possible benchmarks to be referenced in any policy making decisions or future climate treaties.

The three organizations are working together with other international organizations to ensure that participants at the upcoming United Nations Climate Change Conference on 7-18 December 2009 in Copenhagen, Denmark, will be fully aware of the solutions offered by existing and future International Standards.



**Participants at the Animal Feed Workshop.**

## Animal Feeds sensitization workshop

On 22nd August 2009, The Kenya Bureau of Standards (KEBS) in collaboration with the Association of Kenya Feed Manufacturers (AKEFEMA), Ministry of Livestock Development-Department of Livestock Production (DLP) and Department of Veterinary sciences (DVS) held an Animal feeds stakeholders' sensitization workshop.

The workshop, which brought together stakeholders from Feed Manufacturers, Feed Users, Government Departments, Research Institutions, Non-Governmental Organizations and Representatives from FAO and WHO, had an open forum discussion on the challenges, facing the feed industry and opportunities.

The theme of the workshop was "Challenges in the Feed Industry: Quality and Safety" with its objectives being to enhance awareness and

sensitize stakeholders on quality assurance and safety of feed, identifying areas in industry and the feed chain that require support while sharing an international experience and the best practices in the feed industry.

Margaret Aleke, KEBS Food and Agricultural Manager said that there has been a proliferation of poor quality materials and some feeds do not meet the required standards. Hence, some of the animal feeds in the market are of poor quality and the conference emerged to discuss and curb the problems facing the industry.

The Feed sector has experienced rapid growth due to the simplicity of the manufacturing technology, which composes of milling and mixing of ingredients.

Rapid growth of the Feed sector has resulted in challenges associated with quality assurance and safety of the feeds.

"The industry has over the years experienced numerous challenges with regard to the regulation of the industry due to the rapid growth of the sub-sector and entry of producers who have limited knowledge on animal nutrition, feed quality and safety and inadequate database on available raw materials", said KEBS Director Standards Development and International Trade, Eva Oduor.

Mrs. Aleke said it is of importance to look at the matter in a holistic way, "look at farm to fork" – meaning tracing the process of food development right from planting, for crops to the breeding process for meat.



manufacturing in the form of the standardization mark. KEBS has a scheme permitting the use of the standardized mark on locally manufactured products and Import Standardization mark on the imported goods. This mark is a proof that goods produced are of quality, having been approved by KEBS.

Speaking at the workshop, Ms. Oduor said that there has been an upsurge of unregulated manufacturing that has led to the influx of substandard products in the market.

Furthermore, no input of standardization and quality assurance is in place in such cases and therefore you find similar products manufactured by the same entrepreneurs being different. Standards set are fundamental to society since consumers want better quality goods and services.

The one-day workshop was also attended by International Delegation from International Feed Industry Federation (IFIF) led by Dr. Roger Gilbert. The workshop exposed the IFIF delegation to the Kenyan animal feed sector as they got to tour the Pembe Flour Mills factory.

The IFIF secretary General said that the organization would partner with KEBS to ensure that International regulations to trade in feed would be removed.

He said that the organization would provide energized, resources and technology to local feed manufacturers.

The participants at the end of the workshop agreed that there was need for the animal feed sector to implement HACCP/ISO 22000:2005 to provide quality and safety of the feed and also training on the particular certification.

They also ought to have the standardization mark on their products and counterfeiting cases should be dealt with legally.

Ms. Aleke also said that there was the need for manufacturers and other players in the industry to have annual meetings to touch base with the current developments in the industry.

It was also agreed that AKEFEMA should educate its members on ration formulation of the feeds and that laboratories need to be accredited to increase accuracy and reproducibility of the test results. The members unanimously agreed that the government needs to take up the supervisory role and also enact the animal feeds act.

The Director of Veterinary services Dr. M.G. Gathura praised KEBS for enforcing strict quality requirements for local manufactures making them gain easy access to both and regional markets.

The workshop was attended by poultry, pig and dog feed manufacturers as well as those in feed and mineral supplements.

Food production is a chain process and animal food ought to be protected and safe before it becomes hazardous to human health. Ms. Oduor further added that in some cases the quality of raw materials is not considered; notion that contaminated food products unfit for human consumption can be used or diverted for use as animal feed.

Everything in the food process has to be monitored to ensure safety at every stage. Kenya Poultry Association (KEPOFA) was challenged to educate its members to test their products and take an interest to know where the final products are supplied to ensure traceability of their products.

KEBS collaboration with the feed industry stakeholders in the sensitization workshop was to ensure that locally manufactured feeds meet the international standards and also familiarizes animal feeds manufacturers on the importance and need to have the standardization mark on their products.

KEBS helps in double-checking quality and provision of documentation of safe ingredients and

## Toxic Toys Surveillance



**F**ollowing media report that toxic toys were in circulation in the market, KEBS launched its investigations on the issue. Mr. Raymond Michuki, Chief Manager Surveillance at KEBS, said that investigations were undertaken to establish whether the toys had chemical as reported. Officers from KEBS took some samples of the toys to verify the toxic claims. The warning stickers on the toys read, "the material used on this product may contain chemicals known to the state of California to cause cancer and birth defects and or other reproductive harm. Wash hands after handling."

The toys are believed to be from China whereas KEBS banned the importation of toys from the country in 2007. Mr. Michuki further said that they embarked on a mission to find the toxic toys in the market and where they were being sold. He confirmed that one major chain of outlets was found to be in possession of the toys. The chain's outlet in Tom Mboya was found to be in possession of 680 toys while its Muindu Mbingu outlet had 492 of the toys. Its warehouse along Mombasa road had 10,824 toys. All the toys were seized as Mr. Michuki confirmed.

Mr. Michuki further added that they have a database of all the people in the market issued with the standardization mark. However, fake KEBS stickers have been found to be on products, meaning that buyers may have been purchasing substandard goods as they may not be tested by the standards body.

The implementation of the Pre-Export Verification of Conformity (PVoC) in 2005 entails the provision of objective evidence by the supplier or exporter to any appointed inspection body, that quality requirements specified in the relevant Kenya standards or approved specifications have been fulfilled.

Mr. Michuki said that the results of the tests would be given out soon.

# Market Surveillance: Fighting Counterfeits



**The fight against counterfeit batteries/dry cells gained a major boost in the first quarter of this financial year with the seizure of a batch of some worth an estimated Sh500 million.**

Kenya Bureau of Standards Market Surveillance head Raymond Michuki told Benchmark this is the largest and most significant seizure the government standards body has had in recent times.

The seizure was made during a raid on a factory within the Export Processing Zone in Athi River following complaints from Eveready Kenya Ltd, who have been worst hit by the counterfeits industry.

"Eveready, as you know, are more affected by this problem. They noticed there were batteries bearing their identifying marks plus the Standardization Mark, meaning they had been manufactured here in Kenya. The mark they were using had expired and we therefore traced and pounced on the factory," said Mr Michuki in an interview.

After going through the due court process, orders were issued by the court for the batteries to be removed from Kenya, meaning that the owner would then have to ship them out or destroy them locally.

Mr Michuki said another significant seizure was that of a load of fake Bic ball-point pens following a complaint from Haco Industries, who are the sole manufacturers of the popular pens in the country.

The pens were seized at a shop at Cross Road in Nairobi, a street off River Road and next to Nyamakima that has found its way into infamy as the location of many a forger.

The impact of having counterfeit products in the market cannot be underestimated given the social and economic impact they could have on wananchi. Batteries, for example, can explode or damage electronic equipment. Upon realizing that a certain product may be fake, customers are also likely to avoid even genuine products in the future.

Mr Michuki says the department is working on plans to have its staff accompanied by armed policemen at all times to ensure they are secure and to enable them access areas considered insecure.

Some of these are the so-called 'Mungiki zones' and downtown areas of Nairobi such as streets south of Tom Mboya Street, which have become difficult to police as the surveillance officers sometimes come under threat.

"There was a recent case in Nyamakima where our officers were surrounded by some fellows. They did not say or do anything but we could tell they were not the kind to be joked with and had to leave and follow up on the matter differently," said Mr Michuki.

KEBS staff have also been threatened while working in the Kamukunji area, a factor which Mr Michuki said was also contributing to delays in service delivery.

Mr Michuki said the management appears keen to give the department established last year more and adequate resources to strengthen its presence in the Kenyan market.

This would also put them in the league of other standards bodies, such as those in China and the European Union, that make it hard for unscrupulous

people to gain from their activities and therefore easily ensure the safety of their citizens.

Mr Michuki said that in spite of the current skeleton staff, the implementation of the various marks of quality and the use of technology, quality assurance is on an upward trend.

The officers are equipped with palmtops and handheld scanners to check the validity of the various marks on the products. For locally made products, the officers give feedback to the Quality Assurance department.

The Quality Assurance department, which controls the issuance of the marks of quality and constantly monitors the manufacturers for the quality of their products, then liaises with them.

For imported products, the department liaises with the Pre-Export Verification of Conformity programme, which controls the entry points for imported products.

According to the KEBS service charter, the department should respond to complaints within 24 hours in order for Kenyans to avoid waiting for too long to know whether suspect products are safe for use.

The strengthening of the Market Surveillance department by recruiting more staff will also be a big boost as it will enable it carry out programmed surveillance as opposed to the current system.

"Most of the work we are doing now is based on the complaints we receive. We need to have strong presence in the market since it directly contributes to the improvement of quality," said Mr Michuki.

Two recent cases brought to KEBS' attention by Kenya's premier television station, KTN, have served as a good illustration of the kind of responses the Kenyan society demands.

The first was a case of condoms that were suspected to have been faulty after reports that Zambia had banned the range after some failed tests conducted by KEBS counterpart in the southern African country.

The Contempo range was then subjected to thorough testing and one of the eight was found to be unsafe for use in Kenya and orders were then given for them to be withdrawn from all shops and other points of sale (see separate story).

The safety of condoms is practically a do-or-die affair given that we are now living in the era of the HIV and Aids scourge, already declared a national disaster in Kenya.

The second case involved the sale of second-generation traditional brews packaged in plastic bottles and sold in parts of Central Province. KEBS also swung into action and played its role effectively in this case aired on KTN.

Mr Michuki said with the forthcoming implementation of the 2D barcode, the department will be in a better position to weed out those who misuse the quality marks.



## ***KEBS moves to protect Kenyans from bad condoms***

The fight against HIV and Aids has intensified in Kenya in the last 10 years and anti-Aids campaigners have used the simplest of formulae to advice on how to avoid the disease-ABC.

Abstinence and being faithful are the best options for both the single and the married, but the condom is favoured by all for the ease of its use and its guarantee of safe sex.

According to the Kenya Aids Indicator Survey, 7.1 per cent of Kenyans aged between 15-64 are infected with HIV, the virus that causes Aids. The prevalence rates are on the increase, mainly because a lot more Kenyans are taking life-prolonging anti-retrovirals.

Combined with statistics from the same study that show less than 50 per cent of sexually active Kenyans use them, news about the quality of condoms are bound to draw much attention.

In mid-August, reports that a certain brand of

condoms had been banned from Zambia raised a storm when a local television station-KTN- first brought the matter to the attention of the Kenyan public.

The 'Hot' variety is one of eight brands in the Contempo range, which has a three per cent market share in Kenya, with the Government and other brands taking up 97 per cent.

In Zambia, the brand had failed the tests for credibility and had subsequently been banned from the country. The matter was then referred to the Kenya Bureau of Standards as the body that would offer an unbiased judgment on the condoms.

Condoms used in Kenya are imported and are among the list of goods which are subject to mandatory verification prior to shipping to the country. Others are; food products, electrical and electronic products, cosmetics and toys.

KEBS selects the goods based on the assessment of their impact on the health and safety of the consumer and the environment.

The condoms were subsequently tested and found not to be in compliance with the requirements of the Kenya Standard on condoms.

"This product is therefore banned and should not be offered for sale in Kenya. All distributors of the

above product are therefore instructed to recall all "HOT brand" condoms in the market. Retail outlets must remove immediately the "HOT Brand" of CONTEMPO Range from their shelves and NOT offer them for sale," said KEBS.

KEBS then deployed inspectors to carry out market surveillance and seize the condoms with vendors being prosecuted for offering for sale sub-standard products.

Trust, Contempo Hot, Contempo Wet n Wild, Contempo King Size, Trust, Durex brands were also tested and found to be safe for use.

Kenya Bureau of Standards (KEBS) is mandated by the Kenya Government, through the Standards Act Cap 496, to carry out conformity assessment (inspection and testing) on both locally and manufactured goods based on Kenya Standards or approved specifications.

In order to adequately meet this requirement, KEBS has adopted both pre- inspection (PVOC) and destination inspection regime and condoms are covered under the PVOC program; hence they have always been subjected to pre- inspection by the PVOC agents.

With PVOC, the inspection body is required to undertake physical inspection, quality documents review and testing as may be appropriate. Goods which are found to conform to the requirements specified in Kenya standards or approved specification are issued with Certificates of Conformity (CoCs) and hence may be shipped to Kenya. However, goods which are not compliant or substandard are issued with Non Conformity Report (NCR), in which case they are not allowed into Kenya.

The Contempo range has been registered under Route B of PVOC certification procedures based on type examination by British Standards Institute (BSI). It is to be noted that all the brands have been certified and issued with CoCs prior to importation.

The confirmation of the quality status of the condoms was further supported by test reports on surveillance samples picked during port clearance and KEBS then sought to assure the public of its role in ensuring only quality products are used in the country.

For instance, Spicy Love, Romantic, Sure, Salama, Durex, Raha, Contempo Rough Rider, Trust, Ministry of Health (male condoms) brands accompanied by CoCs have been sampled and tested by KEBS over the last one year and were found to meet all the requirements of the KS ISO 4074: 2002.

Latex rubber, which is used to make condoms, may age depending on handling and storage conditions and more so under high temperature and humidity as currently being experienced in the country.

Kenyans were however assured that KEBS will continue to play its role to protect them from hazardous and substandard products.



**KEBS officials during an official visit at BATA shoe Company in Limuru**

## Re-engineering the African Standards Organization

A meeting of the African Regional Organisation for Standardisation last July in Addis Ababa resolved to take critical steps to re-engineer the organization and re-define its work.

One of the decisions surrounded the issue of balance between the technical and non-technical staff. "There was a large number of non-technical staff as opposed to technical staff and ARSO could not run on its own," said Mr. Andrew Maiyo, the Acting Secretary General for ARSO.

He said that the technical staff would be sent to the ARSO headquarters to serve in the ARSO sabbatical programme for a period of 3 to 6 months.

The technical crew would be from the different African National Standards Body (NSBs) and at a time, there would be two members of NSBs undertaking the programme.

Mr. Maiyo said that the need for the programme would to increase ARSO's effectiveness and also build capacity of the technical staff of NSBs as they would have experience on operating in an international environment.

The second decision was a commission on a study on the standards harmonization effort of Regional Economic Communities (RECs), with COMESA, EAC and SADC being involved in its pilot.

"The aim of the study is meant to help ARSO coordinate the standards harmonization process for the tripartite arrangement using the African Standardization Harmonization Model (ASHAM)," said Mr Maiyo.

He further said the pilot study can be used as a

basis for harmonization of standards in other RECs such as ECCAS, ECOWAS and UEMOA as there is great importance of standardization in trade and thus the need to harmonize standards.

The impact of the volume of trade will be established between the country, within each REC and between the RECs. The study was commissioned by African Union Community (AUC) and ARSO.

ARSO also has a database of African experts currently totalling 328 experts in the areas of standardization, quality and conformity assessment.

"These experts will be used in building competence or capacity targeted at African countries both for building competence and human resource development in the area of standards and quality," said Mr. Maiyo.

He said ARSO has utilized some of the experts in building the capacity of seven African countries on method validation and uncertainty of measurement.

A course in regard to this was held in Nairobi for African countries from July 27-30 2009.

ARSO has other specialized courses as part of capacity building process that include: training on African Standardization Harmonization Model (ASHAM), ISO 17025, process improvement for NSBs and Quality management Systems for Medical laboratories.

ARSO is developing the African Register of Certified Auditors (ARCA) to improve the capacity of African

quality auditors/African Management system auditors through a recognition system.

In this, ARSO encourages national standards bodies to develop personnel certification system under ISO 17024.

This initiative will enable the NSBs to have a national register of its auditors and further ARSO will recognize any auditor registered by NSB.

Auditors in this case have an upper edge as they are able to diversify and move out of their specific country and NSBs, they are able to explore the African region and in some instances also work in other continents.

At the ISO General Assembly in Cape Town in September 13-19, pledges were made by the African countries in attendance to make ARSO a strong body so as to foster interest in the realm of standardization, conformity assessment to facilitate intra-African and global trade.

ARSO pledged to work closely with ISO DEVCO (Committee for developing countries) in building trade capacity through standardization.

For the pledge to be realized, ARSO is realigning its strategic plan to meet the needs of African countries who are the major stakeholders.

"A possible area of cooperation is the area of encouragement for African NSBs to propose new work items which are of interest to the African economy," said Mr. Maiyo.

One standard area proposed during the Cape Town assembly meeting was, an international workshop agreement for food safety in the tourism industry based on ISO 22000.

Mr Maiyo further said that the likely secretariat would be KEBS or South Africa Bureau of Standards (SABC) that were ranked position six and first respectively in the volume of tourism in Africa in 2008, according to Economic Commission for Africa (ECA) report.



# Environmental Management Systems

International Standards covering environmental management are intended to provide organizations with the elements of an effective environmental management system (EMS) that can be integrated with other management requirements and help organizations achieve environmental and economic goals.

These Standards enable an organization to develop and implement a policy and objectives which take into account legal requirements and information about significant environmental aspects.

It is intended to apply to all types and sizes of organization and to accommodate diverse geographical, cultural and social conditions.

The success of the system depends on commitment from all levels and functions of the organization, and especially from top management.

A system of this kind enables an organization to develop an environmental policy, establish objectives and processes to achieve the policy commitments, take action as needed to improve its performance and demonstrate the conformity of the system to the requirements of this International Standard.

The overall aim of this International Standard is to support environmental protection and prevention of pollution in balance with socio-economic needs.

It should be noted that many of the requirements can be addressed concurrently or revisited at any time.

These Standards describe requirements for an organization's environmental management system can be used for certification/registration and/or self declaration of an organization's environmental management system, and a non-certifiable guideline intended to provide generic assistance to an organization for establishing, implementing or improving an environmental management system.

Environmental management encompasses a full range of issues, including those with strategic and competitive implications.

Demonstration of successful implementation of this International Standard can be used by an organization to assure interested parties that an appropriate environmental management system is in place.

Key tasks for managers establishing, implementing, maintaining or improving an environmental management system include the need to

- ▶ recognize that environmental management is among the highest organizational priorities,
- ▶ establish and maintain communication and constructive relations with internal and external interested parties,
- ▶ identify the environmental aspects of the organization's activities, products and services,
- ▶ identify the legal requirements and other requirements to which the organization subscribes, that relate to the organization's environmental aspects,
- ▶ ensure the commitment of management and all persons working for or on behalf of the organization to the protection of the environment, with clear assignment of accountability and responsibility,
- ▶ encourage environmental planning throughout the product or service life cycle,
- ▶ establish a process for achieving environmental objectives and targets,
- ▶ provide appropriate and sufficient resources, including training, to comply with applicable legal requirements and with other requirements to which the organization subscribes, and to achieve environmental objectives and targets on an ongoing basis,
- ▶ evaluate environmental performance against the organization's environmental policy, objectives and targets and seek improvement where appropriate,
- ▶ establish a management process to audit and review the environmental management system and to identify opportunities for improvement of the system and resulting environmental performance, and
- ▶ encourage contractors and suppliers to establish an environmental management system.
- Organizations may use this International Standard, or related ISO documents, in various ways, including
- as guidance to establish, implement, maintain or improve its environmental management system, knowing that this International Standard is not

intended for self-declaration or other conformity assessment purposes, and

- in support of the implementation or improvement of its environmental management system.

The choice will depend on factors such as

- an organization's goals,
- the maturity of an organization's management systems (i.e. whether the organization has a management system in place that is capable of supporting the inclusion of environmental concerns),
- possible advantages and disadvantages, as determined by such factors as an organization's current and desired market position, reputation, external relations and the views of interested parties, and
- the size of an organization.

An effective environmental management system helps an organization to avoid, reduce or control the adverse environmental impacts of its activities, products and services, achieve compliance with applicable legal and requirements and with other requirements to which the organization subscribes and assist in continually improving environmental performance.

Having an environmental management system can help an organization assure interested parties that

- ▶ a management commitment exists to meet the provisions of its policy, objectives, and targets,
- ▶ emphasis is placed on prevention,
- ▶ evidence of reasonable care and regulatory compliance can be provided, and
- ▶ the system's design incorporates the process of continual improvement.

Economic benefits can be gained from implementing an environmental management system.

An organization whose management system incorporates an environmental management system has a framework to balance and integrate economic and environmental interests.

Economic benefits can also be identified to demonstrate to interested parties the value to the organization of sound environmental management.

It also provides the organization with the opportunity to link environmental objectives and targets with specific financial outcomes and thus to ensure that resources are made available where they provide the most benefit in both financial and environmental terms.

An organization that has implemented an environmental management system can achieve significant competitive advantages.

# Clean fuel now a guarantee



The Kenya Bureau of Standards made another important step in ensuring Kenyans use products that are duly tested and certified for their safety with the successful launch in August of the National Fuel Inspection and Testing Programme.

The programme basically involves testing of fuel products before they enter the country to ensure they satisfy the set Kenya standards are fit for consumption locally.

The new testing regime will ensure Kenyan motorists are not exposed to sub-standard, and therefore hazardous, fuels. The launch of the programme was presided over by Industrialisation Minister Henry Kosgey at KEBS headquarters on August 27.

Kebs is partnering with Geo Chem Middle East, an internationally recognized and reputable testing firm, to test all petroleum imports coming through the port of Mombasa.

"It is a government programme, which has said that under The Standards Act, Cap 496, Kebs is mandated to ensure fuel is of a certain quality. GeoChem have therefore set up a facility at Mombasa to do just that," said John Wepukhulu in an interview with Benchmark.

"The government felt there was a need to have a neutral body with the country's interests at heart to do the job and the partnership between us and GeoChem has so far worked very well," said Mr Wepukhulu.

On arrival at the port of Mombasa, GeoChem

inspectors board the tanker and quickly pick samples to determine whether the fuel imports meet the minimum required quality for Kenya.

This is usually done within one and a half hour of docking at the port.

At that point, the vessel awaits certification before being allowed to discharge into the shore tanks and is allowed to do so once a Pre-Discharge Certificate is issued.

Further testing is then conducted to check whether the fuel meets at least 20 parameters before a final certificate of quality is then issued, allowing the fuel to be pumped from the shore tanks.

Refined imports, which currently constitute 50 per cent of fuel brought into Kenya, are pumped into the mainline while crude oil undergoes a few more tests before it is pumped to the Kenya Petroleum Refineries Limited.

Forty per cent of refined fuel from KPRL then goes into the Kenya Pipeline Company system to be pumped into the hinterland while 50 per cent is collected by marketers.

The marketers are billed for the inspection.

As Mr Wepukhulu explains, the fuel inspection system was previously open to abuse by the marketers, even as much as the imported product could have been of a high quality.

He says the importer, who in most cases also doubles as the marketer, bore the responsibility of ensuring quality by appointing an inspector to check the quality of the imports.

The inspectors use dips into the tankers to determine the quality, based on testing, and quantity, derived from calculating volumes from the inner dimensions of the vessel.

Given that the importer/marketer was the one appointing the inspector, it is not too hard to imagine the possibilities of abuse of the system to sneak in sub-standard products.

"Quality was mostly not a problem. Cheating, when it occurred, would happen on the quantities. The government had established that the figures at discharge port and those at the out-pump (the market) would differ," said Mr Wepukhulu.

Mombasa is a transit port for fuel meant for neighbouring landlocked countries such as Uganda, Rwanda and Burundi plus Eastern Democratic Republic of Congo. This creates the opportunity for unscrupulous traders to divert some of the fuel into the domestic market and therefore robbing the government of much-needed revenue.

Diversion also distorts the local market while exposing Kenyans to unregulated products, placing their lives at risk.

Perhaps the biggest effect of the new testing regime lies in the benefits to the government via the Kenya Revenue Authority.

"Our extra role is to determine the quantities for revenue collection by using a certificate of quantity to the Kenya Revenue Authority so they can calculate the taxes due before the fuel can be released into the market," said Mr Wepukhulu.

By going through this new inspection regime, therefore, Kenyans will not only be assured that whatever they are suing in their vehicles, at home for lighting and cooking and in aircraft.

The quality of fuel in the market is further checked by the Petroleum Monitoring Units deployed in various parts of the country to check the quality of fuel in the market.

"This is mainly used to prevent adulteration by punishing those who are established to have done so by the units," said Mr Wepukhulu.

Tests are also carried out at the KPC booster stations on the pipeline while the distributors are also issued with the Final Certificate of Quality for each consignment of fuel.

The fuel is also issued with a certificate of quality and quantity at the discharge port-country of origin and the reports should also be made available to enable comparisons.

This means that one can virtually trace the petrol in their tank from the country of origin right to the station from which it is purchased.

Could marketers cite the charges to justify an increase in the prices of fuel in the country? "They should not...but I think we know how businessmen are since if they want to increase prices, any justification is enough," concludes Mr Wepukhulu.

# ISO Regional workshop

**B**ringing together African representatives of National Standards Body (NSBs), the first three day workshop was on 'The Role of standards in Economic Development and Trade'. In attendance were standardization officials from NSBs belonging to COMESA, EAC and SADC, who form the Regional Economic Communities. The workshop was an initiative of ISO with a specific target on the developing nations. The sensitization workshop was a focus on how standards can be put in place in the different countries for the facilitation of economic development and trade.

Mr. Daniele Gerundino, a representative of ISO Central secretariat said, "Standards have a positive impact on economic development and growth hence developing countries need to be active in stimulating the initiative."

Having standards and more so international standards are a boost to the economic welfare of a country, as it creates a benchmark for trade within a country as well as outside its regions. Standards are there to vet the quality of goods and services, enabling them to gain access to international markets and also ease the process of trade. Trade improving nationally, regionally and globally

translates to countries being developed and riding on a better economic wheel. In Kenya, this will help in the realization of the vision 2030, as it aims to be more industrialized by then. For sustainability of African economies to be realized, then the quality of goods and services emerging from respective countries have to comply with standards, more so international standards. KEBS in general supports the standards, metrology and conformity assessment for goods and services in the region.

Mr. Gerundino said that the 3 key issues that were being deliberated on during the workshop were: How standards help organizations, especially from the private sector become efficient and create value for their businesses, secondly the performance of public sector in improving the social value in regards to health or environment and standards on sustaining development and trade. Apart from improving the quality of products in the market, the quality of life of people has also got to be improved. The session also included the sharing of experiences by the regional members on the benefits of standards implementation to their countries' economic growth. For prosperity of the nations, different innovations have to be churned and intertwined with knowledge and skill set of

individuals for economic success and progression to take its roots.

KEBS facilitated the workshop in collaboration with Swedish International Development Cooperation Agency (SIDA). NSBs in the various nations will have to play a major role as they establish standards and also work towards their implementation. However, it will also be essential that NSBs work with various organizations and sectors in their countries like the private sectors to ensure fostering of economic growth is derived from all possible quarters.

A key issue also discussed during the workshop was the benefits of standards and how the benefits could be measured. This brought in the ISO methodology that encompasses the methods to be used to quantify the effects of the standards.

Similar workshops will be held in the future for the sensitization of economic development and trade in the developing nations, which is an ISO action plan for developing countries.

# New health programme for KEBS staff on the way

KEBS is working on a program that will run from the months of November all through to January, to ensure its employees' health is not at risk.

The program ensures that employees go through a periodic medical examination, since they may be exposed to different factors that would affect their health while at KEBS.

Henry Onyango, Safety and Ergonomics manager at KEBS told Benchmark in an interview his first step was to identify the job tasks of every individual working at KEBS, to enable him identify the staff that are eligible to the periodic medical examination.

He said not all employees will go through the examination but only specific departments: testing, metrology, people at the ports, Airports, telephone operators and chemical store keepers are the identified targets for this program. This task is to be performed in all KEBS regional offices.

In 2005, a fundamental issue that had previously not been properly outlined in the safety laws of Kenya

was addressed: occupational illnesses arising from one's nature of job.

The medical examination rule implemented in the law requires employers to monitor the health of its employees, by having their medical baseline and ensuring that they do not work in environments that would endanger their health and safety.

Employers are also meant to cater for the medical expenses in case the employees are found to have fallen sick arising from the nature of their jobs.

To put the program together, KEBS will work with medical practitioners licensed under the department of Occupational Health and Safety Services (OHSS) in the Ministry of Labour.

KEBS is already working with one practitioner licensed with OHSS, who is assisting with the logistics of the program.

The periodic examination will be different and each will be tailored to fit each individual's occupation.

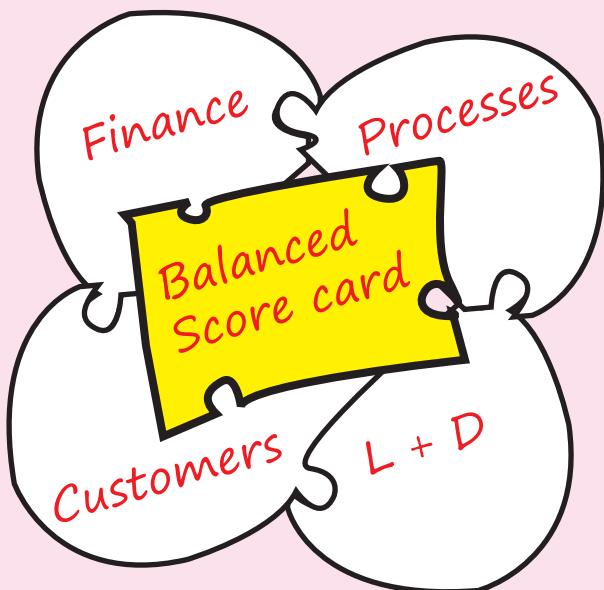
Mr. Onyango said that there are rules specified for different types of exposures, hence the difference in medical examinations and also its timing. If one works in the laboratories, his period for examination then differs with the telephone operator's medical examination since the level of risk and the exposure to hazardous substances varies greatly.

A number of employers have failed to implement the new law, and Mr Onyango said the initiative is more of a moral obligation and one way through which the organization can boost staff morale.

Further saying that the least employers can do apart from paying their employees is to ensure that they reduce the levels of hazardous exposure to their employees and some measures have to be put in place to mitigate the effects.

Mr. Onyango urges employees to take part in the initiative as it's for their own good and more so it will not be at their own expense. This also helps them know their medical condition for any eventualities in the future.

# Tracking the success of the Balanced Score Card



With the aim of ensuring KEBS vision and mission are eventually met by every individual, the first evaluation of the earlier implemented balanced scorecard will be at the end of September.

The balanced scorecard (BSC) falls under the arm of the performance contract, an initiative between the government and Kenya Bureau of Standards (KEBS).

All employees have since signed the contract and its progress is being monitored. Employees will work closely with their supervisors to ensure BSC's effectiveness.

The BSC will be measured at the end of every quarter and in four perspectives; financial perspective, customer perspective, internal business processes and learning and growth (people and culture).

Giving updates on the balanced scorecard, Mr. Simon Cheruiyot, Chief Manager HR & Administration said that in the financial category, the intended scenario is to increase revenue by specific budgets and reduce expenditure on most levels.

In every department, employees are to ensure that they eliminate wastage, be it on electricity, water and other consumables like printing paper. It is everyone's mandate, in every department to cut down on costs, which would translate to the revenue increase of KEBS by 40% as planned and Mr. Cheruiyot said that the move will be monitored in each and every department.

A customer satisfaction research done by a local firm rated KEBS to be at 73%, but Mr. Cheruiyot said that they intend to increase the customer base and achieve 88% by mid next year.

For this to happen, everyone at KEBS has the responsibility of collectively assembling the 5% increase in customer interaction.

Apart from this, there are measures to segment the customers so that they can get the right service from the right department from the organization. Instead of visitors being tossed around when they visit a particular office in the premises, the segmentation factor will be a consideration to the customers' needs, ensuring that they are served effectively and efficiently.

With the changing times in the market, the embrace of technology is an integral part of a company's performance.

With this, Mr. Cheruiyot said that on the internal business process scale, they intend to automate their services, for instance moving from the use of paper to non-paper.

He further explicates that this move will have its impact on various aspects of work at KEBS, from cutting down on costs of paper used to communicate around the offices; since it's cheaper and cost-effective to use the internet. Off-setting a myopic attitude, the move also trickles down to KEBS being environment friendly; less paper translates to less trees being cut down for the production of paper.

KEBS has also ensured they are compliant

with the labour laws, by adhering to health and safety regulations in their work environment and hence ensuring that its employees' health is not jeopardized in any way.

More so, there are implementations set for HIV/AIDS Awareness and employees are encouraged to know their status, hence safeguard their health. In line with this, KEBS is also on a venture to ensure that they are operating and working in a conducive environment.

Incorporating OHSAS 18001 Occupational Health and Safety management, plans are underway to get rid of dust inhibiting environment, like carpets, which have an effect on some people like asthmatics.

Already, some offices have done away with carpets and in place re-tiled to add to the aesthetic value of the offices.

The learning and growth perspective focuses on the employees' welfare. Mr. Cheruiyot said that there is need to increase skills level of employees in the organization.

One of the key things that the balanced scorecard will be measuring is how skilled the employees are and by this embark on improving the skill gap. Mr. Cheruiyot said that they intend to do this by training, coaching, attachments and mentorship.

KEBS can partner with another organization, and then send its own staff to the other company for duration of time. On coming back, the particular employee transfers the knowledge received from the other organization, say, to KEBS Human resource department. The specific employee not only develops himself, but also his workmates and the partner organization also stand to benefit as well.

Mr. Cheruiyot explained that there is a tool they have developed, which will be used in measuring the four perspectives. He said that the tool also has room to show why the staff has not achieved what they were meant to achieve initially. Upon this, the supervisor and staff member working together will come up with strategies to achieve the set goals of the employee.

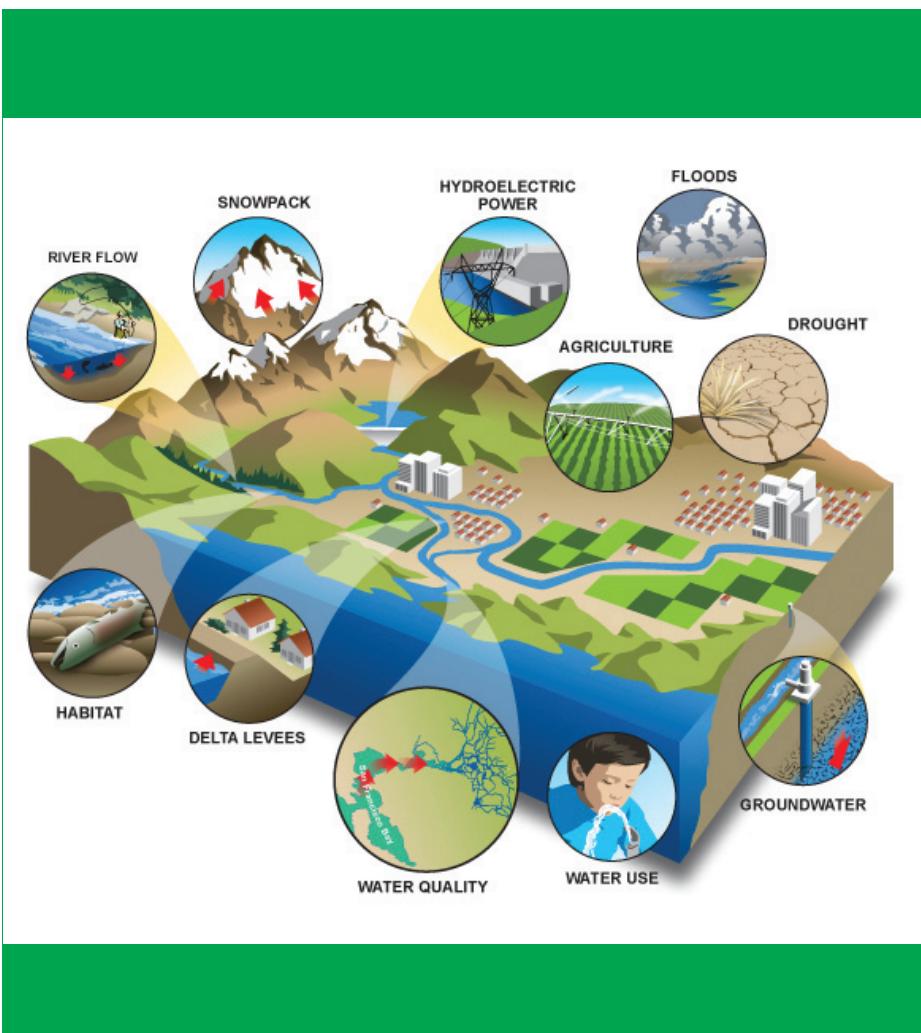
Mr. Cheruiyot said that the move will help inculcate corporate core values; teamwork, customer focus, integrity and impartiality and quality with people. At the end of the day, Mr. Cheruiyot said that there is need for "continual improvement in whatever one is doing."

For the BSC to be implemented, employees were taken through a 3 day seminar and taken through its intricacies. This engaged all the employees more so ensuring that all employees have an input in the management decisions of the organization.

Mr. Cheruiyot said that so far, the BSC is working and that people are appreciating it. "We want to be the best in the industry in the implementation of the balanced scorecard," he concluded.

The following is a list of standards on environmental management that have been adopted as Kenya standards

1. **ISO Guide 64:2008** Guide for the inclusion of environmental aspects in product standards
2. **ISO 14001:2004** Environmental management systems -- Requirements with guidance for use
3. **ISO 14004:2004** Environmental management systems -- General guidelines on principles, systems and support techniques
4. **ISO 14015:2001** Environmental management -- Environmental assessment of sites and organizations (EASO)
5. **ISO 14020:2000** Environmental labels and declarations -- General principles
6. **ISO 14021:1999** Environmental labels and declarations -- Self-declared environmental claims (Type II environmental labelling)
7. **ISO 14024:1999** Environmental labels and declarations -- Type I environmental labelling -- Principles and procedures
8. **ISO 14025:2006** Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures
9. **ISO 14031:1999** Environmental management -- Environmental performance evaluation -- Guidelines
10. **ISO/TR 14032:1999** Environmental management -- Examples of environmental performance evaluation (EPE)
11. **ISO 14040:2006** Environmental management -- Life cycle assessment -- Principles and framework
12. **ISO 14044:2006** Environmental management -- Life cycle assessment -- Requirements and guidelines
13. **ISO/TR 14047:2003** Environmental management -- Life cycle impact assessment -- Examples of application of ISO 14042
14. **ISO/TS 14048:2002** Environmental management -- Life cycle assessment -- Data documentation format
15. **ISO/TR 14049:2000** Environmental management -- Life cycle assessment -- Examples of application of ISO 14041 to goal and scope definition and inventory



- analysis
16. **ISO 14050:2002** Environmental management -- Vocabulary
17. **ISO/TR 14062:2002** Environmental management -- Integrating environmental aspects into product design and development
18. **ISO 14063:2006** Environmental management -- Environmental communication -- Guidelines and examples
19. **ISO 14064-1:2006** Greenhouse gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
20. **ISO 14064-2:2006** Greenhouse gases -- Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements
21. **ISO 14064-3:2006** Greenhouse gases -- Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions
22. **ISO 14065:2007** Greenhouse gases -- Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition
23. **ISO 19011:2002** Guidelines for quality and/or environmental management systems auditing
24. **ISO 14050:2009** Environmental management -- Vocabulary

# Pictorial



*Sad and hungry faces dot Kenya's countryside in what has come to be the worst famines of all time'*



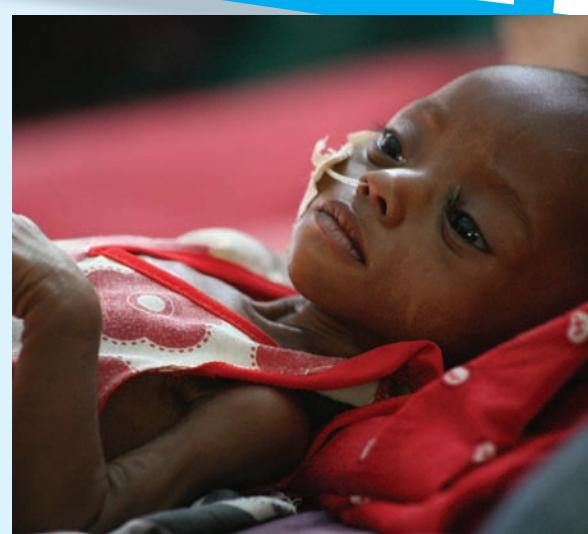
*Counting your losses. A man inspects a rotting cattle carcass as millions of pastoralists continue to incur losses from the drought*



*Quenching Thirst. A cow tries to sip drops of water as pastoralists look for water in parts of Samburu.*



*An untimely loss. A pastoralist watches helplessly as his cattle breath their last gasps on the way to the market*



*Punishing the Innocent. The shortage of food and water has acutely affected vulnerable children as this malnourished kid illustrates a hospital in Samburu*



**Eva Oduor, Director Standards Development and International Trade joins Minister for Co-operative Development & Marketing, Hon. Joseph Nyagah and his Assistant, Hon. Linah Jebii Kilimo**



**The Technical Committee for Quality Assurance Management**



**Marketing Officers exhibiting KEBS services at the uganda International Trade Fair**



**Hon. Anyang' Nyong'o receives the certificate on behalf of KMTC during ISO 9001 certification ceremony**



**Facilitators of the role of standards in Economic Development and Trade workshop Mr. Alex Inklaar (left) and Mr. Daniele Gerundino (right)**



**Weighing scales are checked for accuracy by use of accurate weights and therefore to ensure fairness in trade.**

## A country cannot industrialize without Metrology measurement.

KEBS metrology department is Kenya's yardstick in metrology concerns and the reference point for all national physical measurement and link to international measurement system. The department is beneficial to the country's economy as it forms part of the National Quality Infrastructure. For a country to be developed or to develop, standards have to be set on the measurement techniques used to ensure products penetrating the market are not substandard and that they meet the minimum requirements.

The standard, ISO/IEC 17025 is one of quality management standard on laboratories and entails, 'General requirements for the competence of testing and calibration laboratories'. This involves the management of the laboratories and how they are run, the technical requirements also touching on the competence of the staff and how work in those laboratories is handled. It is a scope of what happens within the laboratories premises.

Although working from the behind the scenes, KEBS metrology department gives support to the

nation on three aspects: measurement, standards and conformity assessment. The department works closely with various industries in the market ranging from sectors such as health and safety, food, manufacturing, environment as well as the technology industry. A common factor in all these sectors is the issue of handling measurement equipments in their line of work with KEBS role being to ensure that the various equipments are of quality standards.

"Measurements are found in all spheres of trade and commerce and a country cannot industrialize without metrology measurement," said Mr. Peter Kahihia, Manager, Metrology Liaison and QMS. In the health sector, some of the equipments that may need calibration include X-ray machines in hospitals to attest the radiation penetrating the DNA structure. The dosimetry laboratory is in charge of this particular area of expertise. Other equipments in the health sector that need calibration would include the clinical thermometers, pressure apparatus, weighing scales and also incubators.

In the aviation industry, the metrology department works on their communication equipments as well as the maintenance. In the telecommunications industry we are working with the mobile operating companies, Mr. Kahihia says that they calibrate the signals of generators and the frequency. In the acoustics and vibration department, calibration is carried out on noise and measuring equipments as well as vibration censors. With the sound level standards in place, then noise levels are able to be monitored.

Quality products in the market means better provision of goods and services further translating to economic growth and development. Hence KEBS supports the various industries ensuring their measuring equipments are up to par, by offering calibration services to them. By this, they compare their customers' measurement equipment with standard measurement equipment. The metrology's main concern is to ensure traceability of measurement to an international standard (SI Unit).

From the international standards perspective, businesses then transcends the local market since the products and services offered are also recognizable at an international level, hence trade is not confined to the local arena and it all trickles down to the economy. Once services are offered to customers, calibration certificates are issued a proof of quality goods and services being offered in the market.

Mr. Dennis Moturi, Chief Manager Metrology department said that currently, there is a lot of demand on measurement in the market and that they are assisting different entities carry out their work. Some of these entities include government bodies, multinationals, research institutions and companies run on an individual basis. There is demand on accuracy of measurement equipment with Mr. Moturi saying that there is always need to be ahead of the industry with the anticipation of new developments in the market.

The force laboratory was recently accredited with the other 7 laboratories meant to be accredited within one year. Mr. Kahihia said that all the laboratories have quality management system to 17025. This gives the KEBS laboratories an upper edge since it's recognized for its competence in its provision of quality laboratory services set on international standards.

In January 2010, Kenya through KEBS hopes to be a full member state of the International Bureau of Weights and Measures (BIPM). Attaining full membership provides the lab technicians with an entry point into the BIPM labs situated in Paris for their attachment programme.

KEBS metrology is also an active member of the EAC metrology programme as well as AFRIMET, which is an African body dealing with metrology systems in the region and consists of several countries in the continent.



## ISO 9001 Certification does improve Organization's Performance!

The results of an empirical study commissioned by the National Quality Institute (NQI) last year reveal that ISO 9001:2000 certification improves the performance of recipient firms in Kenya.

The research titled "Effects of ISO 9001:2000 Certification on the Performance of Recipient Organizations Registered in Kenya by March 2008" was done by Mr. Andrew Maiyo, Mr. Dominic Ngaba and Mr. Shadrach Bett at the Kenyatta University School of Business.

From a sampling frame of 212 certified organizations a sample of 43 firms which had been certified to ISO 9001:2000 for at least three years was drawn using systematic random sampling methodology. The overall response rate was 55.8% which is big enough for making generalizations.

The researchers examined the variables: profit margin, productivity, market share, cost reduction and the quality of products and services as the determinants of performance. The research instrument for data collection was a questionnaire that contained both quantitative and qualitative questions. To operationalize the quantitative measurement for the performance

variables, a five-point Likert scale was used to measure the perception of the respondents regarding the degree to which ISO 9001:2000 improved the performance as compared to the status before certification.

The results are as indicated below:

### **Effect on Profit Margin**

Of the respondents sampled 83.3% indicated that ISO 9001:2000 certification improved the Profit Margin, with 41.7% reporting substantial increase in profit margin.

### **Effect on Productivity**

The study revealed that there was high productivity in the organizations with 91.7% of the respondents indicating that productivity increased substantially after ISO 9001:2000 certification.

### **Effect on Market Share**

On the extent that ISO 9001:2000 certification increased the market share of the products or service, the respondents who reported that there was moderate increase in market share were 33.3% and those who reported that there was substantial increase in market share constituted 33.3% with 16% of the respondents

stating that there was very substantial increase in market share, and 8.3% stating that there was no effect in market share as a result of ISO 9000 certification. Of the respondents 4.2% said that there was minor increase in market share after implementing ISO 9001:2000.

### **Effect on Cost Reduction**

The study revealed that the majority of the respondents (83.3%) indicated that certification to ISO 9001:2000 led to reduced cost of operation.

### **Effect on Quality of Products and Services**

Most respondents (87.5%) indicated a substantial improvement in quality of their products and/or services after certification to ISO 9001:2000.

It is evident in this study therefore that the question as to whether ISO 9001:2000 certification improves the quality of products and services of the recipient organizations was answered in the affirmative. The study earned the principal investigator, Andrew Maiyo an MBA degree at Kenyatta University. The full results of the study will be released upon publication of the research paper.

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NQI (National Quality Institute) has embarked on a number of events, mainly on training, research and extension services. NQI's objective is to develop capacity in various fields in the professional market, by training people, external of KEBS common bond. All trained are from outside KEBS vicinity and once trained, NQI uses them to train others on their (NQI) behalf. This is done to entrench a culture of quality in all sectors.

NQI facilitated the September 7-25 seminar on implementation of ISO/IEC 27001:2005 that was an Information Security Management System (ISMS) seminar. The seminar was in partnership with KEBS and the British Standards Institute (BSI), the resource entity for the seminar. The participants, some from the private sector, will then be used to train others on the same agenda, come the next session. The seminar was a first to be held.

In the same month, NQI conducted training of Trainers (TOTs) for external personnel to establish external capacity in training. The training was in the fields of:

- ISO 9001 on Quality Management System on September 1 that had 27 participants.
- ISO 22000 on food safety management on September 4 and had 6 participants.
- ISO 14001 on Environment Management System on September 9 with 10 participants.
- OHSAS 18001 on Occupational Health and Safety Management that had 6 people in attendance.
- ISO 17025 on Laboratory Management on September 29 with 6 people.

On September 28, NQI also conducted a one month training program for East Africa Portland cement (EAPC) on the OHSAS 18001 system.

All these trainings are meant to create capacity as they train on NQI's behalf.



**Women SMEs at a capacity Building Workshop**

Its next agenda is to identify research items in the field of quality and determining the forum for designation of the results of the first research done on effects of ISO 9001 certification in Kenya.

KEBS is also engaging stakeholders for the rollout of the ISO 14000 kids program, which will target middle primary school children on the advantages of environmental management. They will work with pilot schools on better environmental management at their homes and at school. On this, kids will learn how to conserve the environment on commodities such as water and electricity. This is an aim to create and inculcate an environmental conservation culture in the kids.

A regional workshop scheduled for October, KEBS in conjunction with other stakeholders will assist in the

practical application of standards in the cosmetics sector. Manufacturers, stockists and distributors are required to have a better appreciation on the use of standards as well as develop a code of conduct for all the players in the field.

Dubbed Business Continuity Management (BCM), NQI is working with the banking sector in Kenya to ensure continuity of their businesses in the event of tragedies. Initial consultations have been held with central bank and the modalities are being worked on, on how to engage the sector players.

In the hospitality sector, the Rapid Result Initiative (RRI) is a move to certify hotels to the ISO 22000, Food and Safety Management. A pilot project is being worked on to have 5 hotels certified to ISO 22000 and training materials are already being developed.



# Quantifying Green House Gas emissions

ISO 14064 is emerging as the global benchmark on which to base programmes for reducing GHG emissions and emissions trading programmes.

ISO has developed a number of standards to ensure good practice in environmental claims and communications. They include ISO 14020 (environmental labels and declarations); ISO 14063 (environmental communication), and ISO 21930 (environmental declaration of building products).

ISO has already developed standards with an impact on climate change for areas such as building environment design, energy efficiency of buildings and sustainability in building construction, intelligent transport systems, solar energy, wind turbines, nuclear energy and hydrogen technologies. Such GHG initiatives rely on the quantification, monitoring, reporting and verification of GHG emissions and/or removals.

ISO 14064-1 details principles and requirements for designing, developing, managing and reporting organization- or company-level GHG inventories. It includes requirements for determining GHG emission boundaries, quantifying an organization's GHG emissions and removals and identifying specific company actions or activities aimed at improving GHG management. It also includes requirements and guidance on inventory quality management, reporting, internal auditing and the organization's responsibilities in verification activities.

ISO 14064-2 focuses on GHG projects or project-

based activities specifically designed to reduce GHG emissions or increase GHG removals. It includes principles and requirements for determining project baseline scenarios and for monitoring, quantifying and reporting project performance relative to the baseline scenario and provides the basis for GHG projects to be validated and verified.

This part of ISO 14064 details principles and requirements for verifying GHG inventories and validating or verifying GHG projects. It describes the process for GHG-related validation or verification and specifies components such as validation or verification planning, assessment procedures and the evaluation of organization or project GHG assertions. This part of ISO 14064 can be used by organizations or independent parties to validate or verify GHG assertions.

ISO 14064 is expected to benefit organizations, governments, project proponents and stakeholders worldwide by providing clarity and consistency for quantifying, monitoring, reporting and validating or verifying GHG inventories or projects. Specifically, use of ISO 14064 could enhance the environmental integrity of GHG quantification,

- enhance the credibility, consistency and transparency of GHG quantification, monitoring and reporting, including GHG project emission reductions and removal enhancements;
- facilitate the development and implementation of an organization's GHG management strategies and plans;

- facilitate the development and implementation of GHG projects,
- facilitate the ability to track performance and progress in the reduction of GHG emissions and/or increase in GHG removals, and
- facilitate the crediting and trade of GHG emission reductions or removal enhancements.

Users of ISO 14064 could find benefit from some of the following applications:

- corporate risk management: for example, the identification and management of risks and opportunities;
- voluntary initiatives: for example, participation in voluntary GHG registry or reporting initiatives;
- GHG markets: for example, the buying and selling of GHG allowances or credits;
- regulatory/government reporting: for example, credit for early action, negotiated agreements or national reporting programmes.

A standardized approach for quantification, monitoring and reporting is required for GHG projects and any resulting GHG emission reductions and/or removal enhancements, in order that they are comparable among intended users and GHG programmes.

Quantification and monitoring of project-level GHG emissions, removals, emission reductions and removal enhancements is challenging because actual project performance is assessed against a hypothetical baseline scenario that represents what would have happened in the absence of the GHG project. Consequently, it is difficult to verify GHG emissions, removals and/or stocks of the baseline scenario. It is therefore important to demonstrate that the baseline scenario is consistent with the principles of this part of ISO 14064, including conservativeness and accuracy, in order to increase the level of confidence that GHG emission reductions and/or removal enhancements are credible and not over-estimated. Generally, the baseline scenario is determined on the basis of an assessment of alternative scenarios.

Explanation will generally include documentation of the following:

- How approaches were used or decisions taken.
- Why approaches were chosen or decisions made.
- Some clauses require users of this part of ISO 14064 to justify the use of certain approaches or decisions taken. Justification will generally include documentation of the following:
  - How approaches were used or decisions taken.
  - Why approaches were chosen or decisions made.
  - Why alternative approaches were not chosen.



## Codex Food Safety Workshop

The National Executive Codex Committee (NECC) held a sensitization workshop on emerging food safety issues in September.

The NECC sensitized consumers on the health issues which have no consensus in international Codex committee meetings and educate consumers on food safety issues.

Codex is a joint organization between WHO/FAO and was formed for the purpose of making sure that there is fair trade on safe food. The health of people is of great concern therefore services in trade should be acceptable and fair for sustainability purposes. The national codex committee addresses national and global food safety issues with its major concern being to develop national positions that are presented in international codex meetings.

Hence the purpose the workshop's main agenda was to highlight the challenges, opportunities and threats associated with food safety systems in particular heavy metals, street vended foods, hydrogenated fats and benzene in soft drinks.

Director of Metrology and Testing, Mr. Joel Kioko, emphasized on the need to ensure food testing becomes an integral part of food processing. "Food should be adequately tested and quality ascertained before reaching the consumers to ensure that food safety meets the required standards," said Mr.

Kioko. He said that it is important for organizations involved in the food safety chain to embrace and implant food security measures such as risk analysis, communication and risk assessment including implementation of International Organizations for standardization (ISO) 22000:2005 which calls for food safety management system that has already been adopted as a Kenyan standard.

Alice Onyango from the Secretariat office for Codex at KEBS said that food safety should be monitored closely from its production to its point of consuming. Food safety should be regulated from the manufacturers industries and the whole process carefully monitored till the packaging of the product, so as not to endanger consumers' health.

Street vended foods have got several negative implications such as encroachment of roadside and pavements, with the lack of water and sanitation making the food sold hazardous to human consumption. Street vended foods are however cheap and convenient thus its importance. Codex has developed guidelines to cater for the developing countries. Manuals have been developed to train food safety officials, vendors and how to develop vendor associations.

The workshop was also based on hydrogenated fats, which are harmful as opposed to saturated fats

since they are artificial. The health implications of these fats include diabetes, cancer, cardiovascular diseases, obesity and while at the same time affecting pregnancies and lowering the immune system. The recommendations in regards to hydrogenated fats were that there should be natural fat replacement for hydrogenated or solid fats and also reduction of TFA (Trans Fatty Acids) contents of food.

Benzene is a compound present in the environment and may be from vehicle emissions and could be found in food and water in small amounts. In food, it results from cooking in high temperatures or through the migration or leaching of packaging materials like plastics. Through a study conducted, benzene was found to exist in water, meat, cheese, fruits, banana and eggs. In this study, food stuffs and drinks Ph, temperature, presence of benzoate salts and ascorbic acid were found to be determinants of benzene formation. The study recommended that countries should work towards low and achievable levels of benzene.

Heavy metals are essential in human bodies but in very small levels. Contrary to this, large amounts of heavy metal may be detrimental to health. Vegetables irrigated with raw sewage water or grown by the roadsides have been found to have high concentrations of heavy metals.

Participants in the workshop were from various industries; food manufacturing, government, learning, consumer, biotechnology, suppliers, laboratories, healthcare and research institutions. The workshop was targeted at every individual.

# Tackling Climate Change through Standards

Never before in world history have the effects of climate change been discussed as much as this year; indeed, 2009 could easily be called the year of the climate change and the environment.

It has not been without reason; scientists have through countless studies indicated that without a radical change in the relationship between man and his environment, trouble beckons in the form of rising sea levels and unpredictable weather patterns.

Manifestations of climate change at both global and regional levels include the reduction in mountain glacier, frequent and prolonged droughts, heat waves, flooding, landslides, resurgence of pests and diseases and loss of biodiversity.

The effects could be worse for developing countries like Kenya and many of her African counterparts who have agriculture, more so the rain-fed variety, as the backbones of their economies.

Tourism, Kenya's main foreign exchange earner, would also be under threat; the effect of the melting of the ice on Mount Kenya or the Amboseli without the snow-capped Mt. Kilimanjaro for a backdrop.

"Climate change poses a major threat to our strategic natural resources and it has the potential to reverse all the positive gains we have made over the years in the tourism, agriculture, livestock and manufacturing sectors," said Industrialisation Minister Henry Kosgey in his message on the forthcoming World Standards Day.

Climate change has informed the theme of this year's World Standards Day: "Tackling Climate Change Through Standards," which emphasises the role standards can play to mitigate the effects of dramatic atmospheric changes.

October 14 was chosen as the World standards day, because it was on that day in 1946, that delegates from 25 countries first gathered in London and consequently decided to create a new international organization dedicated to the coordination and unification of standards work.

The International Organization for Standardization (ISO) was officially formed one year later and

the first World Standards Day was celebrated on October 14th, 1970.

Organizations of all types, in public and private sectors, are seeking practical tools to enable them manage the impact of their activities on the environment. Pressure to improve environmental performance may be legal, through government legislation, market-influenced-customer requirements, or internal-more often intended to improve overall efficiency.

Standards bodies the world over need to be at the forefront to ensure newer and more environmentally-friendly initiatives are supported through the development and the enforcement of the relevant standards.

Environmental management standards are practical tools that meet the needs of business in terms of a strategic approach to environmental management.

These standards Promote good practice in environmental management.

The ISO 14000 family of standards for environmental management developed by ISO technical committee ISO/TC 207 is firmly established as the global benchmark for good practice in this area.

ISO 14001, which provides the requirements for environmental management systems (EMS), contributes to any organization's objectives to operate in an environmentally sustainable manner. Up to the end of December 2007, more than 154 000 ISO 14001 certificates of conformity had been issued to private and public sector organizations in 148 countries and economies.

The ISO 14000 family includes supporting tools for environmental management and designing environmentally friendly products and services. They include ISO 14004 (EMS guidelines); ISO 14040 (life cycle analysis), and ISO Guide 64 (environmental issues in product standards).

The management of environmental aspects and impacts has established itself as a cornerstone of effective organizational practice alongside the management of quality, security, and health and safety issues.

Ongoing concern about environmental issues and sustainable development has significantly affected global practices in recent years as organizations strive to be responsive to government regulations, shareholder concerns and interested parties' expectations all at the same time.

Said the secretary-general of the International Standards Organisation, Rob Steele: "ISO has over 500 International Standards directly related to environmental subjects and many more that can



help in reducing environmental impacts. Offering business, government and society a complete portfolio of practical tools for tackling environmental challenges, they range from standards for sampling, testing and analytical methods, through environmental management and environmental aspects of product design, to new work on ship recycling."

ISO standards directly related to climate change include ISO 14067, now under development, for measuring the carbon footprint of products. It will complement the already published standards ISO 14064 and ISO 14065, which provide an internationally agreed framework for measuring greenhouse gas (GHG) emissions, verifying claims made about them, and accrediting the bodies which carry out such activities.

The basic standard for environmental management, ISO 14001, standards for environmental auditing and performance evaluation, product labelling and declarations, lifecycle assessment, greenhouse gas emission reporting, and others - provide effective management tools for organizations to better manage and communicate about their environmental aspects and to work towards improving their environmental performance and contributing to sustainable development.

When used properly, these tools can provide



significant advantages and benefits to users in both the private and public sectors.

"KEBS will continue to provide all actors with standards information services to support the transfer of manufacturing technologies in general, and those covering energy efficient appliances and equipment in particular. KEBS will also provide standards information services to support the transfer of renewable energy technologies," said Mr Kosgey.

Kenya aims to become a middle-income economy by the year 2030 and a major part of this is the gradual industrialisation of the country's main economic activities in order to achieve the gains outlined the Vision 2030.

Maintaining a balance between industrialisation and climate change therefore needs to be an essential part of efforts to achieve the goals set out in the blueprint.

In this regard, KEBS needs to continue to provide all actors with standards information services to support the transfer of manufacturing technologies in general, and those covering energy efficient appliances and equipment in particular.

A crucial part of this is the provision of information services to support the transfer of renewable technologies given that the cost of energy has been cited as a major impediment to the competitiveness

of Kenya's manufacturing sector.

Renewable energy and energy efficient technologies offer the benefit of not only mitigating climate change but also lowering energy costs. Increasing energy efficiency of appliances and equipment in residential, commercial and industrial sectors for example, will reduce energy related Carbon dioxide (CO<sub>2</sub>) emissions.

The world's forests store an estimated 4,500 gigatons of carbon dioxide in their ecosystems, an amount larger than all carbon currently found in the atmosphere.

Recycling is seen as a crucial way through which carbon sinks can be maintained, especially by ensuring it is incorporated into Kenya's industries and made a central part of Kenyans' lives.

"The contribution of standards therefore has the potential of inducing opportunities for sustainable economic growth, employment and indeed attainment of millennium development goals," said the Industrialisation minister in his message on this annual occasion.

Standards have thus been recognised as key to the whole process as the Master Plan Study for Kenyan Industrial Development (MAPSKID) has identified environmental protection as a key dimension of sustainable development.

KEBS parent ministry encourages all actors, particularly regulators to use Kenya standards as a basis of technical regulations and subsequently ensuring good regulatory practice, increased competitiveness of enterprises and removal of barriers to trade.

KEBS and NEMA have signed an MOU in order to enhance coordination of standardization activities, ensure efficient utilization of national resources and eliminate duplication of efforts.

During 2008/9 financial year alone, a total 51 standards on air quality were published. NEMA has referenced a total of 91 Kenya Standards in the draft air quality regulation, currently under publication and subsequent enforcement by NEMA.

Environment related standards that KEBS has published include KS 1966-2 standard on tolerance limits for effluents discharged into public sewers and KS 1966-1 on tolerance limits for effluents discharged into surface waters. Others include KS ISO 14024 standard on environmental labels and declarations and several many more.

In total KEBS has published over 5400 Kenya Standards to date, covering environment, chemical, engineering, food and agriculture, and the services sectors. To support national strategies on clean fuels, KEBS shall periodically review existing Kenya standards on fuels in order to address emerging concerns.

The national TC on fuels is in this regard reviewing sulphur levels in the diesel standard and the targeted date of completion is December 2009 with the standard being gazetted in January.

"We encourage Kenyans to appreciate the effect this is bound to have on the environment since the new standard will reduce the amount of sulphur in diesel. In addition, the national TC on fuels is currently formulating a standard on Bio diesel and targeted date of completion is December 2009," said KEBS acting Managing Director Joel Kioko.

KEBS has published standards on energy saving lamps covering performance and safety aspects. This includes KS IEC 60969 Kenya standard for the performance of self-ballasted lamps for general lighting services.

Eventually, a program to phase out inefficient energy systems is a viable option open to Kenya for it has the added benefit of reducing energy cost to consumers.

The need for development cannot be wished away for the simple reason that it would cause irreversible and destructive climate change; what the world needs are measures to ensure that positive change does not bring disaster.

With well thought-out policies and standards that are adhered to, it is possible to achieve the goals set out for global and regional development without putting the environment and the lives of the future generations at risk.



**Mr. John Wepukhulu, Chief Manager Quality Assurance and Inspection at the Food Safety Workshop in September**

## Food Hygiene Workshop

A workshop on food hygiene in food establishments was a collaboration of KEBS and JohnsonDiversey East Africa Company. The workshop's agenda was to raise awareness and importance of food hygiene handling practice within food establishments. The entire food industry has to be aware of the right ways of managing food that would eventually benefit not only the food owners but the consumers as well.

To act as a guide in the manufacturing industry in the production of safe food products, ISO 22000 on Food safety is widely used within food manufacturing industries and HACCP (Hazard Analysis Critical Control Point) which is published by Codex Alimentarius Commission. Speaking during the opening of the sensitization workshop, the Director, Metrology and Testing and now KEBS acting Managing Director said that, "The concern and awareness of food safety has increased over the years and most players in the food sector have put in place codes of practice to guide them in the production of safe products."

Mr. Kioko said that the international Organization for standardization (ISO) is working on standard

for food establishments. To help put in place efficient working systems, KEBS partnered with JohnsonDiversey to help in the framework of developing standards that touch on safety issues during food production and service.

JohnsonDiversey Company deals with the supply of cleaning products to businesses on an international level, with clients comprising of various institutions like hotels and even schools. Working under the JD Consulting branch, still an arm of JohnsonDiversey, Mr. Muchoki Mwangi the Business Development Director said that its company's technical committee are working together with KEBS technical committee for the development standards initiative. "We saw the synergy in developing the standards and by so doing, we are giving a competitive advantage to the industry," said Mr. Mwangi.

Mostly addressing the hotel industry, any hotel that will show compliance to the standard will be given a permit to use or will display a specific logo as a proof of compliance. "This logo will be promoted by KEBS to the general public and therefore it is envisaged that hotels with the logo will have a competitive edge over others. It is the wish of KEBS that all restaurants or hotels strive to implement the

standard," said Mr. Kioko.

In its pilot project stage of the proposed initiative, the initiators of the workshop hoped to have a number of entities certified to the standard. Throughout the workshop, the participants were taken through the process of implementation of the thought of standard to its point of certification.

"We are excited about the project and believe it will change the industry and provide a competitive tool for the industry," said Mr. Mwangi. Participants were urged to take advantage of the pilot project as its cost would be highly subsidized. Mr. Kioko further urged the stakeholders to deliberate on the development of the standard and help in refining it and developing it. This would ensure that their concerns and interests are also considered, leading to the full implementation of the standard.

The development and implementation of standards in the food industry would spur the country's economic growth in the long run as quality services would be provided in the market and more so the players would operate in a competitive environment.

# Information Security Management Training

In collaboration with British Standards Institute (BSI), Kenya Bureau of Standards (KEBS) held training in ISO/IEC 27001:2005 on Information Security Management System (ISMS).

The training targeted organizations in the region in the management of their information security.

Washington Okoth, KEBS ICT Manager said, "any organization that has any information to protect is a target. Information is a valuable asset but people rarely look at it as an asset."

In today's age of evolving technology and its advancement, information is crucial to any organization and more so it's effective management.

Measures have to be put in place to ensure information is well guarded and that loopholes for leakage of any information are minimized.

To curb the menace, there is an upsurge on ways to manage information, hence the essence of the training, facilitated by National Quality Institute (NQI).

"The purpose of this training is to create a need in the country for organizations to develop better ISMS," said Mr. Cyrus Wambari who is in charge of NQI.

He 3 weeks training was attended by 21 participants with Mr. Okoth saying that it was a good turnout as all the people they had invited had attended. The 21 participants included people from the private sector.

The focus of the seminar was on training the first batch of people from the ICT sector, who would later train others on the same concept.

Mr. Wambari said that the team trained would be used as trainers by NQI to train others for the same session in future.

The purpose of the training was to build national capacity in training, auditing and assessment on the

ISO standard on information Management System to entrench a structured framework for managing information security in Kenya.

NQI through their trainings helps the country develop capacity in various fields and in this particular scenario, it was in the field of Information systems. NQI does not rely on its staff for the trainings but on people from outside KEBS with others in the private sector. Mr. Wambari said that the agenda of the trainings would be to utilize the trained on behalf of NQI so as to entrench a culture of quality in the services provided to its citizens.

**The training was structured into five modules:**

- 1) Basic introduction to information Security management System and participants got to know and learn the international benchmark on the ISO.
- 2) Implementation of ISO 27001:2005 and participants were taken through the intricacies of the ISO implementation in their organizations as the highlights of the requirements of the Information standards of ISO 27001 and its impact were outlined.
- 3) Internal Auditor Course was on training participants on the skills and contents of auditing an ISMS based on ISO 27001.
- 4) Lead Implementer Course which is designed for the core people in an organization who are involved in improving any system.
- 5) Lead Auditor Course that is meant to develop high skills of auditing ISMS.

After the training, Mr. Okoth said that a lot of awareness on the information system will be done in the future, with the help of the certification body and NQI. Reiterating Mr. Okoth's sentiments, Mr. Wambari said, "after the training, we will do marketing and lobby policy makers on why organizations need the training and there will be demand created and we want to be ready to satisfy that market."

With all the developments in communication, the ISO 27001 ensures that information is secure within any organization as well as continually improving the security of the information.

ISO 27001 is an international update of the world renowned British standard, BS 7799. It is an internationally recognized standard set to reduce the risks facing information.



## Mt. Kenya region news

KEBS in conjunction with Liquor Licensing Court are on a bid to end the production of substandard alcohol in the Mt. Kenya region. The acting regional manager of Mt. Kenya, Mr. Maina Wainaina said that there is a lot of counterfeit and substandard being produced and they are ending up with a fake standardization mark.

To curb the vice, measures have been put in place for the production of the local liquor by the two entities in liaison with the District Commissioners' office.

Any interested parties wanting to brew the alcohol are meant to carry out research work on that beer and come up with a sample of the alcohol. KEBS approval of the alcohol sample, having met the right specifications and standards then gives the manufacturers a license to trade their wares. Mr. Wainaina says that there are already several people in the region doing the research with an aim of acquiring the standardization mark, hence providing quality products to consumers in the region.

With the adulteration of rice, KEBS officers in this region visited Mwea Irrigation Agricultural Development (MIAD) who were shown how to carry out quality tests on rice. An awareness workshop was also held at Mwea and its purpose was to help people discern the different kinds/brands of rice in the market, hence enabling them to purchase the right type of rice brand, not the substandard quality that unscrupulous traders are selling.

During the Nyeri show held in September, KEBS scooped 2nd and 3rd prize for the best research based organization and the best statutory board respectively.

# CERTIFICATION

*tion, Research and Innovation*

JOMO KENYATTA UNIVERSITY  
OF AGRICULTURE  
AND  
TECHNOLOGY



Mary Okello, Council Member of JKUAT receives the ISO 9001 2008 Certificate on from Mrs. Eva Oduor, KEBS Director of Standards Development and International Trade on July 31

## JKUAT gets ISO Certificate

Jomo Kenyatta University of Science and Technology (JKUAT) attains ISO 9001:2008 Quality Management System (QMS) certification due to their history and reputation as center of excellence in their fields of training and research. This certification enables the institution to implement and maintain high levels of quality management, embracing best practices for business efficiency and customer satisfaction through the provision of quality service.

Quality in teaching and research is key preoccupation of any university that wishes to compete in the global market. Being the first

university to develop an academic quality and to establish a directorate to safeguard the academic standards of their programmes JKUAT has paid attention to quality assurance and enhancement by conforming to required performance criteria and the International Standard.

According to General manager, Eva Oduor, delivering a speech on behalf of the MD Kioko Mang'eli said "in world of competition ISO puts in place mechanisms and pays attention to quality assurance and maintenance and KEBS invites universities and all stakeholders to embrace quality in their processes and champion the participation

... Continued in Page 31

... Continued from Page 30

of the society in the matters of quality and the promotion of the ideas around quality. Through KEBS collaboration with the National Quality Institute (NQI) the country will construct a National quality policy, build on the existing quality infrastructure and bring in more players in the standardization arena and drive the society to knowledge based direction so that our outputs in mind and products form can fetch value in the markets..

Eva added that in world of competition ISO puts in place mechanisms and pays attention to quality assurance and maintenance and KEBS invites universities and all stakeholders to embrace quality in their processes and champion the participation of the society in the matters of quality and the promotion of the ideas around quality. Through KEBS collaboration with the National Quality Institute (NQI) the country will construct a national quality policy, build on the existing quality infrastructure and bring in more players in the standardization arena and drive the society to knowledge based direction so that our outputs in mind and products form can fetch value in the markets.

Standards and knowledge are complimentary and supplementary and truly create a room for progressive economic endeavors where societal interests are focused on better prospects for a shared future.

Prof. Mabel Ibugua, the Vice Chancellor of JKUAT Said "The idea for JKUAT to seek ISO certification was motivated by the desire to demonstrate its capability to meet and exceed customer satisfaction in training, research and innovation".

She said that the ISO certification is of great importance to sustain the achievement which grants them greater transparency in their operations and further improve service delivery to core customers notably their students and other stakeholders.

The QMS established in JKUAT utmost focus is on customer, highlight the role of leadership in the university, and aspires to reinforce the process approach in all our operations as well as integrate the entire university system for the effective and efficient delivery of services.

Standardization in products, processes and management systems leads to sustainable development and trade facilitation through the promotion safely, quality, health and environmental protection. Standards also enable markets to operate effectively, increase competitiveness and provide opportunities for transfer and trade

ISO certification is not the end the greater challenge lays ahead in maintaining and ensuring that tools are developed for corrective and preventive actions in the path of consistent continual improvement.

# Guidance Social Responsibility

On 18th September 2000, KEBS had an awareness meeting with companies, governmental, Non Governmental Organization (NGOs) and Private Sectors Chief Executives Officers (CEO) to discuss the upcoming International Standard on Social Responsibility-ISO SR 26000. The meeting sole purpose was to create an awareness of the Social Responsibility standards, discuss and share ideas with the relevant authorities and come up with Kenyan Social Responsibility standard that is relevant and applicable in our local scene through participation in the development and sensitization process.

KEBS as the National Standards Body in Kenya is charged with the responsibility of developing and ensuring implementation of standards in different fields both for products and services. KEBS is a member of International Organization Standardization- the body guiding National Standards institutions worldwide.

On behalf of the ISO standardization fraternity, KEBS appreciates the input of the National Mirror Committee (NMC) in the development of this standard – ISO 26000- "Guidance Social Responsibility." The NMC is a team of players from the Government, Labour and Consumers Organizations.

Mr. Joel Kioko giving a speech on behalf of the MD Mang'eli Kioko said, "the standard discusses current issues in the fields of SR such as social, the environment and legal diversity in the world and puts them in the perspective of globalization, climate change, organizational governance and sustainable development to name but a few. It demonstrates how to translate these issues into organizational settings. Your contributions to this process are valuable."

ISO 26000 has a voluntary nature and no binds with any type of legislation and it provides guidance and makes recommendations. The standard will work as a guide for this identification of areas of the organization where the incorporation of SR would be more significant, in the light of its particularities and, specific interest, and for the identification, of the audiences with which it interacts (its stakeholders). It will also offer guidance on how to deal with topics involving the society and the environment.

Minister, Industrialization, Henry Kosgey, said "Social Responsibility (SR) as defined by the International Organization for Standardization (ISO) is balanced voluntary approach for organizations to ethically identify and address economic, environmental and social issues in an integrated approach to enhance their engagement with stakeholders, communities and society."

**He said "social responsibility is an issue that requires concerted efforts. It is important that we develop a regional caucus to address this issue. The meeting keep will provide an opportunity to come together and tap on the diverse expertise and experience. The participation of multiple stakeholders is essential in bringing about an environment where social responsibility can thrive."**

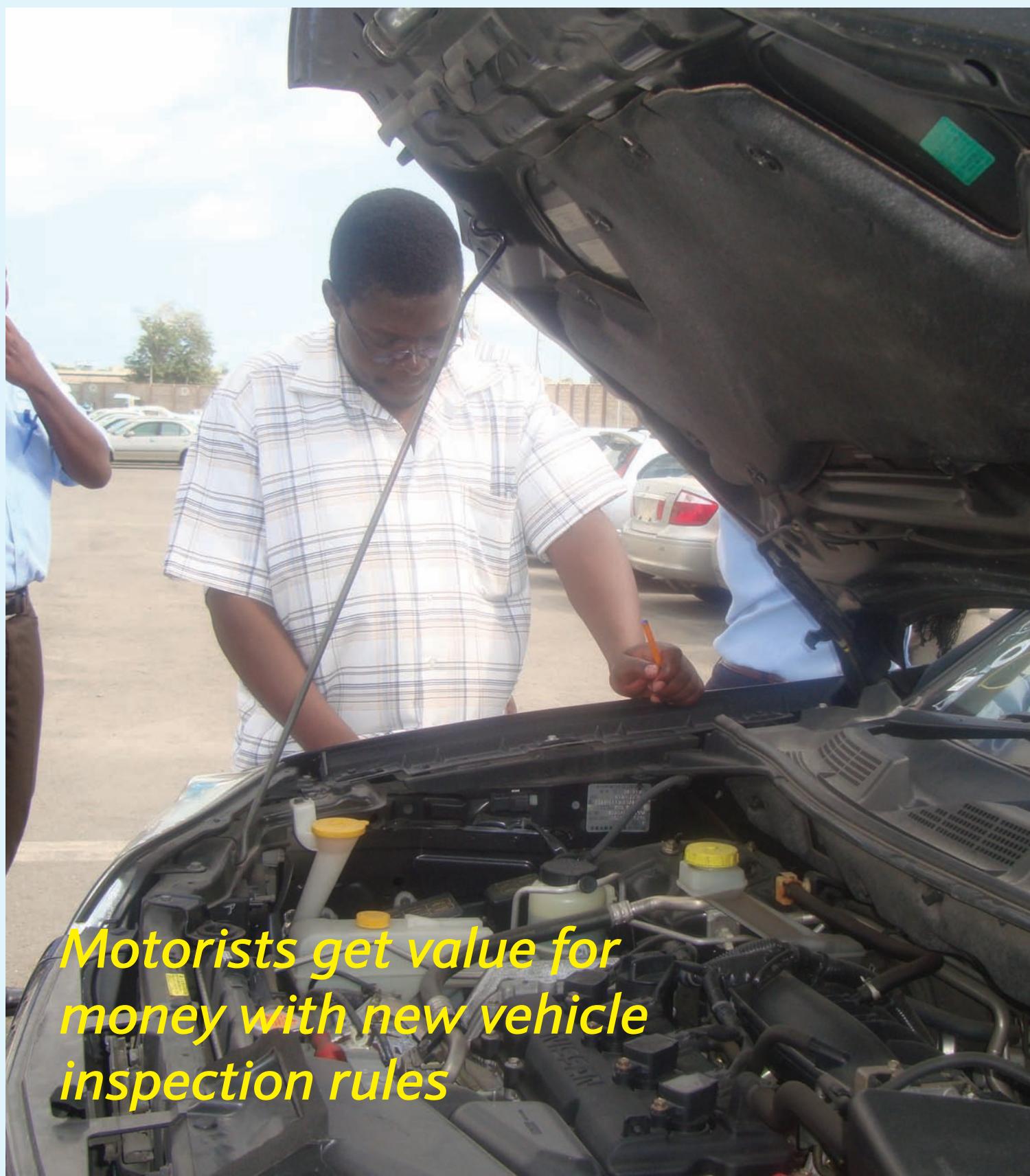
The way an organization behaves has a great impact on the society and on the environment. Business organizations, for example, mobilize large amounts of material and human resources and interact with various audiences throughout their productive chains, which in many cases spreads all over the planet, involving from raw materials suppliers to end users. They produce wealth but also cause social and environmental malpractice.

ISO 26000 is necessary in building a balance involving all interested parties and including parameters that maybe shared by all for sustainable world in the Age of Globalization which has created huge opportunities for integration between peoples of the whole planet and also for their life quality improvement, thus reduce the risk of imbalance in the use of natural resources, the easiness for abuse in the labor exploitation and the natural resources, easiness for the income are just but a few of them.

**The standard which is in preparation comes with guidance on a number of topics:**

- ▶ Integration of SR in the usual activities of all types' of organization.
- ▶ Engagement of tee organizations top management and incorporation of SR principles in its mission and vision statements.
- ▶ Establishment of the necessary structure for the implementation of SR, the definition of goals and the development of action plans.
- ▶ Ways of evaluating the SR activities and practices.

The rationale behind the standard is to assist in addressing their SR , to be consistent with and not in conflict with existing documents, international treaties and conventions and existing ISO standards.



***Motorists get value for  
money with new vehicle  
inspection rules***

*Mr. Burudi Kalo, KEBS Corporation Secretary at the Mombasa port. KEBS inspects Motor vehicles destined to Kenya.*



## Starting August, vehicle importers are a happy lot after Kenya's standards body added one more quality for the second-hand vehicles that have become common on Kenyan roads.

Kenya Bureau of Standards has since last year engaged the services of Japan Export Vehicle Inspection Company (Jevic) to undertake the inspection of vehicles bound for Kenya.

Starting August, vehicles whose odometers will have been tampered will not be allowed to enter the country, said John Wepukhulu, ...at KEBS. This means that unscrupulous individuals who would in the past tamper with odometers in a bid to improve their chances of making sales will be locked off the market.

It is also bound to be a huge boost to businesses as they can now sell vehicles using the genuine mileage.

The ultimate beneficiary of this is the Kenyan motorist as he can rest assured that the mileage indicated on the dial is the real distance the vehicle has travelled.

"There are some in the past who had improved their skills and were now tampering with the digital odometers so we had to act fast," said Mr Wepukhulu.

The Kenya Auto Bazaar Association has lauded the new move as it creates a level playing field for those in the business while improving customer satisfaction.

The new rules will be in addition to other requirements stipulated in the Kenya standard for imported motor vehicles, KS 1515/2000.

Jevic inspects vehicles for roadworthiness at the major export ports; Japan, Dubai, the United Kingdom and South Africa.

Japan and Dubai are the major export ports for used vehicles bound for Kenya, the first because of the cost and popularity of their vehicles- Toyota, Mitsubishi, Nissan- and the latter because of the cost factor, owed mostly to the free port.

"Jevic has set up inspection centres in these countries and it is made known that the exporters need to get a certificate of roadworthiness for every vehicle they bring here," said Mr Wepukhulu in an interview with Benchmark.

KEBS records indicate that an average of 4,000 vehicles are imported every month, making an average of 48,000 used cars on Kenyan roads every year.

Jevic tests these cars for their roadworthiness after passing the initial test for age i.e. they must not be more than eight years old. They must also be right-hand drive as Kenya inherited the British tradition of driving on the left hand side of the road.

### Among the testing measures are

#### **Running of the engine** - it has to be smooth

Emission levels- environmental concerns have topped the global agenda in recent times and KEBS plays its role here by ensuring, through Jevic, that the vehicles' emission levels are low. Kenya can thus not become a dumping ground for environmentally unsafe vehicles.

#### **Braking system.**

#### **Steering system.**

The brightness of the lights- head and tail lights.

General condition of the body. Some dents are superficial and can be corrected while some might have penetrated the bodywork and would necessitate replacement of the faulty part.

#### **Tyre treads.**

#### **Condition of the upholstery.**

Kenyan motorists have an added advantage as they can now trace their vehicles right to the factory and the previous owners they have had by entering the chassis number on the Jevic's website.

"This way, one can verify the vehicle's age, know who their previous owners are...all by just entering the chassis number and the vehicle's make on the Jevic website," said Mr Wepukhulu.

This is aided by the fact that more than 90 per cent of vehicles imported in Kenya are originally from Japan.

The successful launch of the new inspection regime for vehicles at their ports of origin has spurred other countries to adopt the system. Jevic now has a presence in Zambia and will from November start doing it for Uganda. Tanzania has also begun the implementation of the new testing regime to ensure only quality vehicles enter the country. Kebs is however the pioneer of the project in Africa.



## Workshop



Participants at the Plastic Pipes Conference in September

## Plastic Pipes Conference

The plastic pipes, fittings and valves conference was held on September 17, with its theme being addressing the challenges in plastic pipes, fittings and valves: the Kenyan perspective. The conference brought together organizations in plastic pipes industry, contractors and other stakeholders who discussed issues on plastic pipes, fittings and valves used for the transportation of fluids; water and fuel. The agenda for the one-day conference was also to develop policies to guide the plastic pipes sector.

Officially opening the conference, Joel Kioko, KEBS Ag. Managing Director said that plastic piping is popular in the industry as it is used to transport fluids and that it is the responsibility of the piping engineers to make sure that the fluid transported is safe by using suitable piping materials.

Issues discussed at the conference were; standards, quality of pipes and fittings, quality of materials, inspection and testing of plastic pipes materials. Mr. Kioko said that standards benefit various sectors such as the business sector, and when adopted suppliers can develop and offer products or services meeting the specifications in their particular sector and those standards also ease the checking of

quality services provided. "It is my belief that the development of Kenya Standards and adoption of International Organization for Standardization (ISO) standards is necessary and plays a key role in promoting trade between our country and the African region as a whole for sustainable development," said Mr.Kioko. Globalization of the world economy is at the forefront hence Kenya, which is a growing economy, ought to appreciate the importance of national and international standards. "Standards facilitate trade through the removal of non-tariff barriers to trade and achieving worldwide acceptability to facilitate trade across borders," said Mr. Kioko.

In regards to the standards, Clement Miheso, KEBS Manager Engineering SDD said that 40 standards have been set for plastic pipes far from the 267 standards of international levels. "The present economy has become liberalized and is more open and competitive and only organizations that adhere strictly to quality standards and produce high quality products competitively will have an opportunity to survive," said Mr.Kioko. Standards are of importance because they result in promoting health, consumers are protected, and there is

reduction of unnecessary variety of products, creation of saving in government purchasing and protection of life, property and the environment.

Mr. Miheso said that people have been using the wrong kind of pipes; like using the common black pipes meant for electricity in place of water. Mr.Miheso said that it is important to use the right kind of pipes and more so those that have been produced using the right kind of standards. This is in an effort to encourage sustainable development especially in developing countries like Kenya by informing people about plastic pipes. Mr. Miheso further said that in developed countries, 85% of the pipes used are plastic and 15% are metallic, while in the developing countries the scenario is vice versa; majority of the pipes used are metallic with a small percentage using the plastic pipes. Mr. Kioko also reiterated Miheso's sentiments that there is need to promote the use of plastic pipes in developing countries such as Kenya to attain the level achieved by developed countries.

While metal pipes last for only 50 years, plastic pipes are believed to last up to 100 years and can be recycled unlike the metal counterparts, hence there durability aspect. The durability aspect results to its cost effective measure, as they are not replaced as often as the metal pipes and hence there maintenance cost reduced as well. Plastic pipes are also not susceptible to corrosion since their smooth surface maintains its condition for many years while metal pipes are bound to corrode with time. Mr.Miheso added that plastic pipes are chemical resistant and hence are better for petrol transportation and the likes since they do not react with plastic pipes.

Through the conference, the participating companies were expected to form a kind of stakeholders association to articulate their issues on the problems they are facing in regards to plastic pipes. They were also meant to participate fully in the standardization process; more so enabling the manufacturers understand what standards are. In light of this, they are meant to partner with Kenya Bureau of Standards (KEBS) for quality of products distributed to the market. Manufacturers are required to carry out research, explore and make new technologies in their line of work.

The plastic pipes conference coincided with Kenya Association of Manufacturers (KAM) exhibition which was to encourage competition from the manufacturers in the industry hence quality production from them which would trickle down to sustainable development. Mr.Kioko said that the government has created various initiatives and strategies for export development, private sector development and industrialization that are aimed at assuring the participation of all stakeholders in the production, value addition, final packaging and placement in the market for all products aimed at improving the quality of Kenyan products for various destination markets.



**Vehicles powered by ultra low -sulphur diesel**

## Ultra low-sulphur diesel; the newest standard

Emissions from diesel-powered vehicles account for a large proportion of pollutants daily. This is however set to change from January as the Kenya Bureau of Standards in conjunction with other stakeholders sets a lower standard for the amount of sulphur in diesel.

Sulphur, which is contained in crude oil and is usually found in larger proportion in diesel opposed to other fuels, is converted into sulphur dioxide which then mixes with water to form sulphuric acid and acid rain.

Albert Nyagechi, assistant manager in chemical development standards at Kebs, told Benchmark what the process entails and what stands to be achieved from the imminent changes.

"The current standard – KS 1309 - sets the level of sulphur in diesel at 0.5 per cent sulphur, which is 5,000 parts per million. We want this to reduce to 500 parts per million," said Mr Nyagechi.

The drive to revise downwards the permitted levels of sulphur in diesel was started by the Petroleum Institute of East Africa in the interests of public health and environmental concerns.

A regional meeting of ministers set the timeframe for the new standards to be put in place by December 2010 and it was then left to the Technical Committee to discuss the specifics of the process.

A May 21 meeting of the TC agreed to be ahead of the December timeframe by 11 months, pushing it back to January 2010, by which the standard is expected to have been approved by the National Standards Council.

The standard was scheduled to have been complete by the end of September.

Mr Nyagechi said this time round, the relevant stakeholders will be educated on the need for the new standards in a bid to avoid the resistance earlier moves have often encountered.

"We noticed there was some resistance the last time we phased out lead from petrol so this time we expect to inform people better about the idea," said Mr Nyagechi.

Kebs, the United Nations, National Environment Management Authority and the Motor Vehicle Inspection Unit will be organizing seminars for stakeholders on the benefits of low-sulphur fuels.

These have already started and were held successfully in Mombasa and Kisumu on Sept 9th, said Mr Nyagechi.

The benefits of low-sulphur fuels include; longer engine life due to less corrosion of parts occurring

due to the production of sulphuric acid during the fuel combustion process; low emission levels and therefore less pollution.

The new standard will also contain categories of low-sulphur diesel, meaning motorists can then choose to pay slightly more for the ultra-low sulphur category.

"Currently, people are sometimes misled since there are some companies that are selling fuel that would scientifically not qualify as low-sulphur," said Mr Nyagechi.

Levels of between 16 to 500 parts of sulphur per million would qualify as low-sulphur while those below 15 parts per million would fall in the category of ultra-low sulphur.

Some marketers now categorise their diesel as low-sulphur because it has less than the 5,000 parts per million set out in the current Kenya standard under revision.

These levels are found in most of the finished imports, currently being imported on a 50:50 basis with crude oil as set out under the new rules on fuel importation.

Mr Nyagechi said motorists could be asked to pay a little more for fuel as the refinery adjusts itself to enable the production of the diesel that would meet the new standard.

"This cannot match the cost of treating ailments that occur due to pollution or what motorists pay for wear and tear due to the level of sulphur in diesel," said Mr Nyagechi.

All standards are set for review every five years, said Mr Nyagechi, and are in some cases reviewed earlier if and when the need arises, as it did for low-sulphur diesel.

### Below are the steps involved in the development/review of a standard.

1. The identification of the need to have a new standard or to revise the current one- in this case the move by PIEA to ask for a review of the low-sulphur fuel standard.
2. KEBS internal Standard Project Committee prepares the justification for the new standard. In this case the economic, environmental and industrial benefits to be gained from a new standard.
3. The standard is set out for public review and a public review draft is prepared within 60 days.
4. The Technical Committee meets to deliberate on the results of the public review.
5. Balloting/voting on the standard is done. (a 21-day period is given for this)
6. Ballots are reviewed.
7. The final draft standard is submitted to the Standards Approval Committee of the National Standards Council before it is gazetted.

# HIV, Cancer and why you need to monitor your health

When was the last time you went for a HIV test? Chances are you have not. If you have not, you are among 80 per cent of Kenyans who do not know their status, 10 years after the government through then President Daniel arap Moi declared Aids a national disaster.

Rita Chitwa, clinical officer at the Kenya Bureau of Standards, thinks you should, even if it will take all the courage you have never had in your life, because it is at the very least an exhilarating moment when you do.

She looked at the faces of some of the 249 people who turned up for the last Voluntary Counseling and Testing (VCT) session at Kebs held between August 26 and 28.

"It was like they have been given a new lease of life. On top of that, VCT is a window to behavior change and I know many of those who were tested that day made some resolutions they are bound to keep," said Ms Chitwa in an interview with Benchmark.

Although the department had a target of 600, Ms Chitwa said the gains were still huge given that the highest number recorded at previous VCT days was 20.

Ms Chitwa said the low numbers in the previous VCT sessions can mainly be attributed to the approach used to inform and encourage Kebs staff to accept to know their status.

This time round, Kebs approached Liverpool VCT, who are more experienced and have a large staff of volunteers who would know the right way to approach related matters.

"Liverpool told us sensitization should precede the actual testing. They also had a good counselor, Stanley Ngara - "Sweet Stan" and I think his approach worked wonders because a lot of those who came were happy," said Ms Chitwa.

The reactions of staff to Sweet Stan's approach were interesting, she adds, as some eyes nearly popped out in the initial stages due to Sweet Stan's approach to discussing sexuality.

More than 90 per cent if HIV infections are now attributed to sexual intercourse and talking about HIV without addressing sexuality is very much like approaching armed robbers with a balloon rather than a gun.

So good was the attendance on the final day of the testing, held at the then vacant rooms at the

Kenya Accreditation Service that the afternoon and morning sessions had to be held together as those who had missed out on the first two days made the most of the last opportunity.

Despite the constraints of space- all got tested in the same room but each collected their result alone- Ms Chitwa was confident that this portends a new, healthier outlook for Kebs staff.

She hopes that with the huge improvement in numbers recorded last time, the target will obviously be higher next time, and the approach similar, if not better and more people-oriented.

"The management is actually keen to have all the staff tested, so that management can become easy and those who are living positively can at least be catered for. It would not help much if we started assisting someone once the symptoms manifest themselves," she says.

Kebs staff have this year began working based on the Balanced Score Card, a measure of one's expectations by which their performance will be gauged at the end of the financial year.

In the BSC, as it is popularly known, each member is required to do something related to VCT by the end of the year, the import of which is the improvement in HIV and Aids awareness throughout the organization.

For the various regions, Ms Chitwa says peer educators will be trained in each branch to educate their colleagues about HIV and Aids.

The medical services department has also established themes for each month. July was earmarked for Abstinence and August for behaviour change. The eAugust theme combined various approaches to behaviour change such as; faithfulness and proper and consistent use of condoms and attitude.

The department also came up with write-ups that were given to peer educators to give out at departmental meetings. The peer educators were also encouraged to lobby their heads for the inclusion of an Aids-related topic at each meeting of the department.

This is important to ensure that there is sharing and in instances where a colleague may be infected, to remove the stigma that has for long been an impediment in the fight against the killer scourge.



**KEBS staff during the HIV AIDS training**

Ms Chitwa has been emboldened by the reactions to the VCT session and she is promising more action. In March 2010, she says, the department will organize a special session for married couples.

"A lot of those who filled the evaluation forms said they'd also like their spouses to be involved in a joint meeting. Some wanted a special session for their children so we felt it would be important to cater for them as well," says Ms Chitwa.

Ms Chitwa says that there are plans for a session for singles, with Sweet Stan in attendance to get the bachelors and 'bachelorettes' talking and learning more about how to avoid or deal with the big scourge .



In the medical world, there are concerns that governments could focus too much on communicable diseases like HIV and Aids, malaria and tuberculosis at the expense of emerging illnesses such as diabetes, various forms of cancer and lifestyle illnesses.

October is cancer awareness month- it was originally breast cancer awareness month but this has since been expanded- and Kebs staff will not miss out on the opportunity to learn more about their health.

Last month, the medical services department organized a talk on cervical cancer, a variety of

cancer caused by the Human Papilloma Virus (HPV). HPV is also the cause of genital warts in men and so even they also need to be part of such discussions.

The department has also organized for vaccination to prevent against flu, hepatitis B and meningitis by administration of the pneumococcal vaccine.

Cervivex and Gadicil are the vaccines for cervical cancer, which is the number one cause of cancer-related deaths in Kenya. Gadicil is said to be a better vaccine compared to Cervivex because it is quadrivalent and therefore has a stronger effect on HPV.

Payments will be easy since Kebs will use the pay slip check off system to recover the costs of the vaccine. One requires three doses of the vaccine, each costing Sh3,400.

"A simple pap smear could make the difference for the women. A holistic approach to cancer and other non-communicable diseases is what we intend to pursue," concludes Ms Chitwa.

# New Board and Review of Standards Act

The standards Act is undergoing a review known as the Public Sector Development Strategy (PSDS). It was an initiative of KEBS but underpinned by the Ministry; the programme is coordinated at the Ministry level. The programme initiated at the beginning of this year is meant to run till year 2012 with intentions of getting a whole new quality infrastructure. "The government realized that Kenya has a plethora of regulatory urgencies whose role was not always coordinated and this impacted negatively in the business environment in the country," said Mr. Burudi Kalo, KEBS Corporation Secretary.

There was need for products in the market to be approved, but the issue at hand was who had the mandate for their approval. An agreement reached saw fit that KEBS becomes the apex body in standardization and conformity assessment. KEBS will have the responsibility of developing standards that will be enforced by other bodies such as National Environmental Management Authority (NEMA) whose sole work would be to impose the environmental standards in the country. Communication Commission of Kenya (CCK) will steer the telecommunication standards, as KEBS also works with the department of Public Health in regards to food and food quality.

Mr. Kalo said that PSDS outcome would be:

1. To have a National Quality Policy, this is currently not in place.
2. A revised Standards Act.
3. Metrology Act which will create national Metrology Institute. Mr. Kalo said that after its enactment, the Metrology division at KEBS will be run as a different entity and will be an independent body. Plans are underway to realize this vision by 2012 as the internal technical committee, Legislative Reform Committee, facilitates the progress of the act. "There is already a Director of Metrology who chairs the committee as well as the legal department which acts as the secretary and consultant," said Mr. Kalo. The current director is Mr. Joel Kioko.
4. The KENAS Act, which will be converted from the presidential order to an act of parliament, with Mr. Kalo saying that this move will take into cognizance the developments taking place worldwide in the field of accreditation. The move

is also to be realized by the year 2012. The Kenya Accreditation Service (KENAS) is the sole national accreditation body for the country. KENAS is already an independent body from KEBS and is only housed within its premises.

### 5. The technical Regulations Act.

Further under East Africa Community (EAC), the enforcement of the SQMT Act-Standardization, Quality Assessment, Metrology and Testing Act is ongoing and it is a law within the EAC and its National standards Body (NSBs). These include Uganda National Bureau of Standards (UNBS), Tanzania Bureau of Standards (TBS), Rwanda and Burundi.

Mutual recognition of standardization marks is also an underlying factor in the SQMT act. This means that a product from Uganda that bears a standardization mark does not have to go through the testing process if it is being imported to Kenya. KEBS in this case does not have to carry out quality tests of the products again since the standardization mark is well recognized in the region.

Cross border trade within the EAC regions is also being facilitated under the act as well as the harmonization of East African standards. Mr. Kalo said that the various technical committees from the NSBs deliberated on the standards that were later gazetted as the East African standards. So far, 1100 standards have been harmonized in regards to agriculture, processed food and engineering industries.

Under gazette notice 4555 published on April 30 2009, new members joined the KEBS board. The minister of Industrialization, currently Mr. Henry Kosgey has the mandate to appoint board members, who serve a three year term. The new members are:

1. Mr. Abdi Duale
2. Mr. Mark Bor
3. Mr. Julius Koring'ura
4. Mj. (Rtd) Gabriel Wakasyaka

The board members are currently nine, with the chair being Eng. Aggrey Chabeda, who is appointed by the president under the State Corporations Act.

## Appointment to the Council

Mr. Peter Mutua of Standards Development and International Trade was appointed to the council of Kenya Nutritionists and Dieticians Institute (KNDI). The council was established under the Nutritionist and Dieticians Act 2007 of the laws of Kenya, which was assented by the president in October 2009 and gazetted by the Minister of Public Health and Sanitation in October 2008. Mr. Mutua is among the first council members to be elected in accordance to first schedule of the act.

The institute is mandated in law to provide for training, registration and licensing of Nutritionists and Dieticians, to provide for the regulation of standards and practice of the profession and ensure effective participation in matters related to nutrition and dietetics and for connected purposes.

The act is to protect the profession for the benefit of persons who would seek their services. More importantly, the Act outlaws any person practicing under any name, title and style containing the words 'nutritionists' and 'dieticians' unless that person is registered under the act. It further bars any one from practicing either on his/her behalf or on behalf of a registered nutritionist or dietician unless when he or she is registered and licensed by the institute to do so.

In emphasizing the important role played by nutritionist and dieticians in general health of the population and programs during the AGM, the minister for public health and sanitation directed the establishment of nutrition department under the ministry of public health and sanitation to the same levels as colleagues in medicine who are under the department of medical services.

Mr. Mutua on behalf of the council encourages qualified nutritionists or dieticians to apply for registration and familiarize themselves as well as the general populations with the Act.



# KEBS Ready for the Digital TV and Audio Transformation

Initiatives in this area started early and is an ongoing process with stakeholder engagements. The first four standards are already operational as Kenya Standards. The next 17 will be adopted for use as Kenya Standards through the established technical and legal structures within the shortest period possible. We expect the standards will be available for public use before the end of the year.

1. **KS 1671-1:2005, Domestic and similar electronic equipment interconnection requirements — Audiovisual link - Specification - Part 1: General requirements**  
Provides the general requirements for the AV link and their standardization structure

2. **KS 1671-2.1: 2005, Domestic and similar electronic equipment interconnection requirements - Audiovisual link - Specification - Part 2-1: Signal quality matching and automatic selection of source devices**

Specifies an extension, with the possibility to start with only two devices as a point-to-point interconnection (only a display unit combined with a low end VTR) and then building it up, towards a chain configuration

3. **KS 1671-2.2: 2005, Domestic and similar electronic equipment interconnection requirements - Audiovisual link - Specification - Part 2-2: Basic system oriented commands**

Specifies the AV link communication protocols and the basic AV link commands within mode 2

4. **KS 1671-2.3:2005, Domestic and similar electronic equipment interconnection requirements - Audiovisual link - Specification - Part 2-3: System oriented application**

Specifies the AV link mode 3 communication protocols

5. **BS EN 50049-1:1998, Domestic and similar electronic equipment interconnection requirements: Peritelevision connector**

## 1.1 Object

This standard defines the interconnection characteristics of peritelevision devices, both between themselves and with television receivers (monochrome or colour).

The interconnections covered by this standard are at baseband (video and audio) or digital signals. For the purpose of defining conformance, this standard specifies the types and related groups of signals, composite video, audio, primary colour and control that shall be present on the connectors. The levels and impedances together with the tolerances on these values are also specified.

The manner in which the signals on the connector are processed within the products incorporating the connectors and the presentation of the results of such processing to the user is outside the scope of this standard. These details depend upon the system involved, e.g. PAL or SECAM and the specification of the product.

This standard lays down collectively the electrical matching characteristics (type of signals, voltage and impedance values), dimensional, mechanical and electrical characteristics of the connectors, type and wiring of interconnection cords.

Attention is drawn to the fact that the interconnection covered by this standard shall in any circumstances meet the safety requirements specified in KS IEC 60065 and the electromagnetic compatibility requirements specified in the appropriate publications.

## 1.2 Field of application

This standard applies to the connector socket mounted on various devices that are components of domestic audio-visual systems,

and includes the designation of contacts, the type of interchanged signals and the matching values of voltage and impedance. This standard does not apply to equipment so small that its size is not compatible with the dimensions of the socket.

It applies also to the plug fitted to the end of interconnection cords. It covers the interconnection cords themselves (type of conductors, wiring). Permanent connection of several pieces of equipment which may be used simultaneously or otherwise is ensured:

- ▶ either by fitting each piece of equipment with a suitable number of connectors;
- ▶ or by a single connector on each piece of equipment linked to a central interconnection and switching device.

The user shall be informed about the possible applications that are provided by a device.

6. **IEC 62216-1:2001, Digital terrestrial television receivers for the DVB-T system - Part 1: Baseline receiver specification**

Specifies the baseline receiver for the DVB-T (Digital video broadcasting) system. Concerns broadcasters and receiver manufacturers. Ensures that broadcasts are correctly interpreted by receivers and indicates the features that need to be implemented on receivers.

7. **IEC 62104: Characteristics of DAB receivers**

Describes the DAB (Digital Audio Broadcast) receiver characteristics for consumer equipment intended for terrestrial and cable reception operating in band III and L-band and for satellite reception in L-band.

8. **IEC 61606-1:2003, Audio and audiovisual equipment - Digital audio parts - Basic measurement methods of audio characteristics - Part 1: General**

The common measuring conditions and methods, described in this standard, are used for the measurement of the performance characteristics of equipment having an audio bandwidth equal to approximately one-half of the sampling frequency of a system, where the audio information is processed in the form of digital data. CD players, DAT recorders, digital amplifiers, digital sound broadcast receivers and television broadcast receivers with digital sound are examples. Methods specified in this standard are not applicable to systems incorporating bit-rate reduced digital audio signals that have data loss.

9. **IEC 61606-2:2003, Audio and audiovisual equipment — Digital audio parts — Basic measurement methods of audio characteristics — Part 2: Consumer use**

Deals with the basic measurement methods of the audio characteristics of the digital audio part of audio and audiovisual equipment for consumer use. The common measuring conditions and methods are described in IEC 61606-1. Specific conditions and methods of measurement for consumer equipment are given in this standard

10. **IEC 60958-1:2004, Digital audio interface — Part 1: General**

Describes a serial, uni-directional, self-clocking interface for the interconnection of digital audio equipment for consumer and professional applications. It specifies the basic structure of the interface.

11. **IEC 60958-3:2006, Digital audio interface — Part 3: Consumer applications**

Specifies the consumer application of the interface for the interconnection of digital audio equipment defined in IEC 60958-1.

12. **IEC 60958-4:2003, Digital audio interface - Part 4: Professional applications (TA4)**

The interface specified in this standard is primarily intended to carry monophonic or stereophonic programmes at a 48 kHz sampling frequency and with a resolution of up to 24 bits per sample. It may alternatively be used to carry signals sampled at other rates such as 32 kHz, 44.1 kHz, or 96 kHz.

13. **IEC 61883-1:2008, Consumer audio/video equipment — Digital interface — Part 1: General**

It specifies the packet format and the transmission timing for HD-DVCR data. It describes the specifications for the IEEE 1394 packet, the CIP header for 1125-60 and 1250-50 television systems, and the transmission timing. The significant technical changes with respect to the second edition are as follows:  
- Allocation of a new FMT code for the 1394 Trade Association specification '601 over 1394';  
- Clarification of the meaning of FMT code;  
- Harmonization of IEC 61883-1 with IEEE 1394.1 for speeds over S400.

14. **IEC 62028:2002, General methods of measurement for digital television receivers**

Deals with the determination of performance and allows the comparison of equipment, by listing the characteristics useful for specifications and laying down uniform measuring methods.

15. **IEC 62104: Characteristics of DAB receivers**

Describes the DAB (Digital Audio Broadcast) receiver characteristics for consumer equipment intended for terrestrial and cable reception operating in band III and L-band and for satellite reception in L-band.

16. **IEC 62105:1999, Digital audio broadcast system — Specification of the receiver data interface (RDI)**

Applies to the direct connection of one or more data application decoders to DAB (digital audio broadcast) receivers. Dedicated decoders for data, but also devices for audio post-processing and recording can be connected through the receiver data interface (RDI).

17. **IEC 62122:2002, Methods of measurement for consumer-use digital VTRs - Electronic and mechanical performances**

Specifies the basic methods of measurement for evaluating the electronic and mechanical performance of consumer-use digital VTRs. Enables checks of the interchangeability and characteristics of the equipment under test and enables evaluation of the quality of image and sound.

18. **IEC 62379-1:2007, Common control interface for networked digital audio and video products - Part 1: General**

Specifies a control interface for products which convey audio and/or video across digital networks.

19. **IEC 62273-1:2007, Methods of measurement for radio transmitters - Part 1: Performance characteristics of terrestrial digital television transmitters**

Gives the conditions for measuring the performance parameters of terrestrial digital transmitters and for facilitating the comparison of measurements which are carried out by different personnel. It contains details of specially selected methods for determining the most important performance parameters of digital transmitters. The measurement methods described apply to a limited number of performance parameters, i.e. those which can give rise to ambiguous interpretation due to the use of different methods and conditions. They are neither restrictive nor mandatory: measurements can be chosen for each particular case. If necessary, additional tests can be carried out but they shall comply with those standards which have been established by other study groups, subcommittees of the IEC or other international or suitably accredited organizations.

20. **IEC 62300:2004, Consumer audio/video equipment digital interface with plastic optical fibre**

Specifies the principal electrical and optical parameters for a consumer audio/video equipment digital interface that uses plastic optical fibre (POF).

21. **IEC 62315-1:2003, DTV profiles for uncompressed digital video interfaces — Part 1: General**

Specifies requirements for digital television (DTV) monitors that use an uncompressed, baseband, digital video interface. These requirements apply to baseband, digital, video interfaces that use the VESA E-EDID® Standard for the discovery of supported video formats. It also specifies the video formats to be supported by a DTV monitor. The timing requirements for 14 video formats are specified along with requirements for video format discovery. A mechanism allowing a video source to discover the preferred format of a DTV monitor is also described.



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