



Workshop | Policies and standards for plastic reduction and management in East and West Africa

Day 2 - 1 October 2024

Presentations from the NSBs

KEBS (10 minutes)

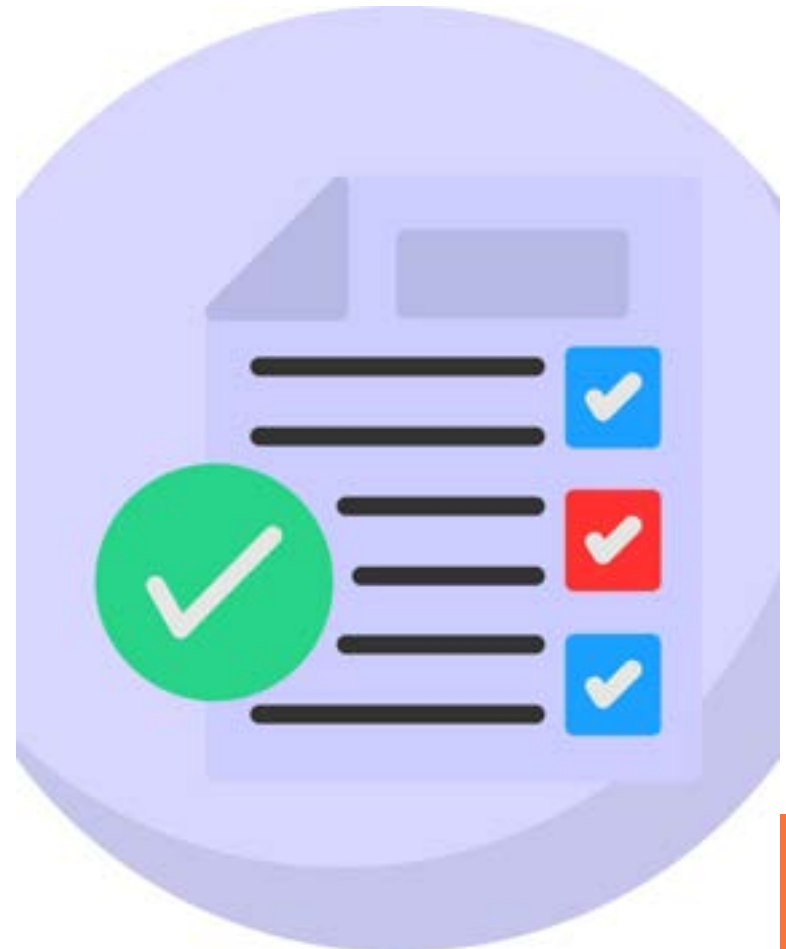
- The Kenyan approach to standards on plastics

GSA (10 minutes)

- The Ghana Standards Authority

SON (10 minutes)

- The Standards Organisation of Nigeria





THE ROLE OF KEBS IN THE NATIONAL FRAMEWORK ON PLASTICS MANAGEMENT & KENYA'S APPROACH IN DOMESTICATING INTERNATIONAL STANDARDS

PRESENTATION BY ALBERT NYAGECHI

MANAGER – CHEMICAL AND ENVIRONMENT DIVISION

1ST OCTOBER 2024

ALN HOUSE



**Kenya Bureau of
Standards**

Standards for Quality life

KEBS Vision

To be a global leader in
standards-based solutions for
trade and sustainable
development





**Kenya Bureau of
Standards**

Standards for Quality life

KEBS Mission

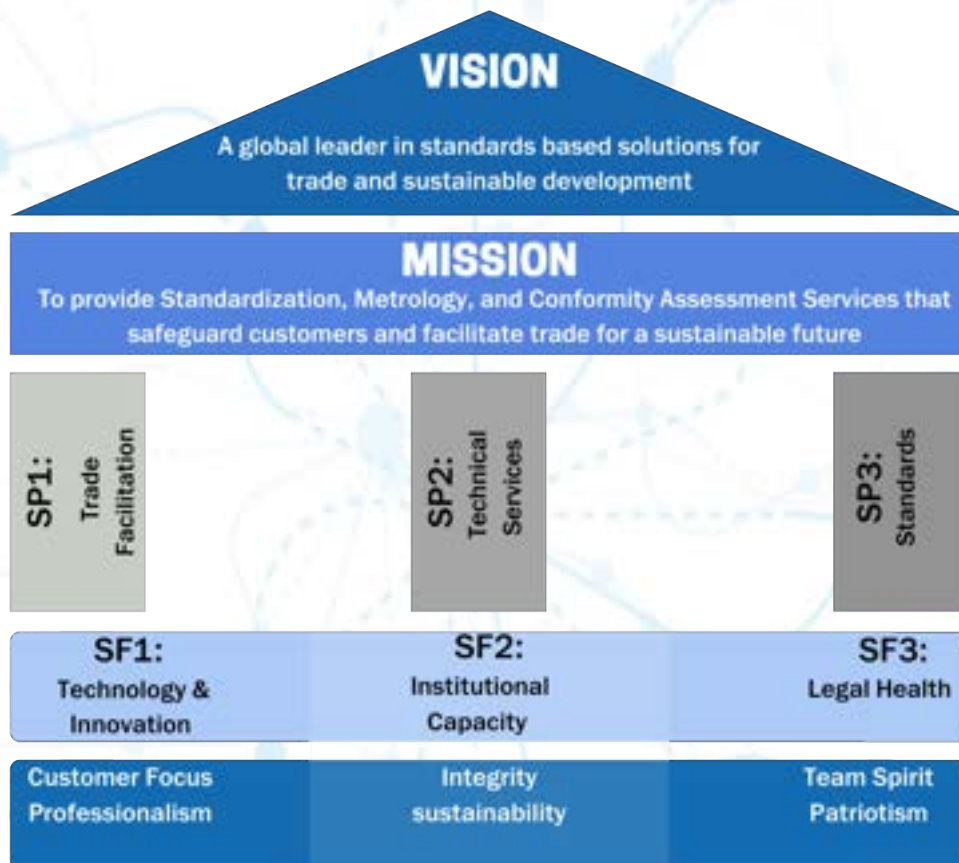
To provide Standardization,
Metrology, and Conformity
Assessment Services that safeguard
consumers and facilitate trade for a
sustainable future

KEBS Motto

Standards for Quality life



KEBS Strategic Direction 2022 - 2027



KEBS - The National Standards Body in Kenya

- KEBS leadership is headed by the National Standards Council for its strategic direction.

1 Established through "The Standards Act" Cap. 496 of the Laws of Kenya;

2 KEBS started its operations on 12th July 1974

3 Operations are guided by a 5 year Strategic Plan and Performance Contract with GOK

4 Operates a performance management system based on Balanced Score Card



Kenya Bureau of
Standards
Standards for Quality life

Our Mandate



Standardization Services



Conformity Assessment Services



Facilitation of trade through standards



Information Services (Standards and WTO)



Training and Education



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Standards
Standards for Quality

Standards Development

What are Standards?

A standard is document established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for products and services and related processes or production methods, aimed at the achievement of the optimum degree of order in a given context..

Standards are used to achieve three objectives;

- Facilitate trade
- Protect consumer from harmful and poor-quality goods
- Protect environment



**STANDARDS
AS AN ENGINE FOR
ECONOMIC GROWTH**

• **TRADE**

Standards reduces trade barriers,
facilitates Export, Import, and
New Markets.
Ensures free and fair trade

• **COST REDUCTION**

Standardized products, economies of
scale, Less errors and wastage, few
trials and increased profits

• **EDUCATION**

Providing up-to-date standards for
institutional use e.g. Codes of
practice and product standards.

• **COMPETITIVENESS**

Standards provide standardization,
facilitates Quality Products and
Services, and Innovation for product
differentiation

• **CLUSTER DEVELOPMENT**

Conformity and Specialization enables
Clusters/Sectorial Industrial growth

• **RESEARCH AND DEVELOPMENT**

Research Methods and Approaches,
Dissemination of Research Output,
Technology Transfer

Standards Development



❖ How are standards developed?

- Standards are developed by units called Technical Committees which comprise of experts and stakeholders in the given industry, KEBS being the secretariat.
- Every technical Committee has expert representation from Consumers, academia, industry, professionals, government, relevant associations and any other interested party.



Working with Various Stakeholders





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Standards Development

❖ How does one become a TC member?

- Any expert in a field can apply to be a member of a relevant TC.
- The application involves filling the individual details online and upload of CV for consideration by a KEBS committee(SPC).
- To apply visit the KEBS website on <https://www.kebs.org>
- Link for TC membership application:
- <https://kims.kebs.org/submitApplication>

Standards Development



❖ Who initiates standards development?

- Any stakeholder can propose an item for standardization, either through:

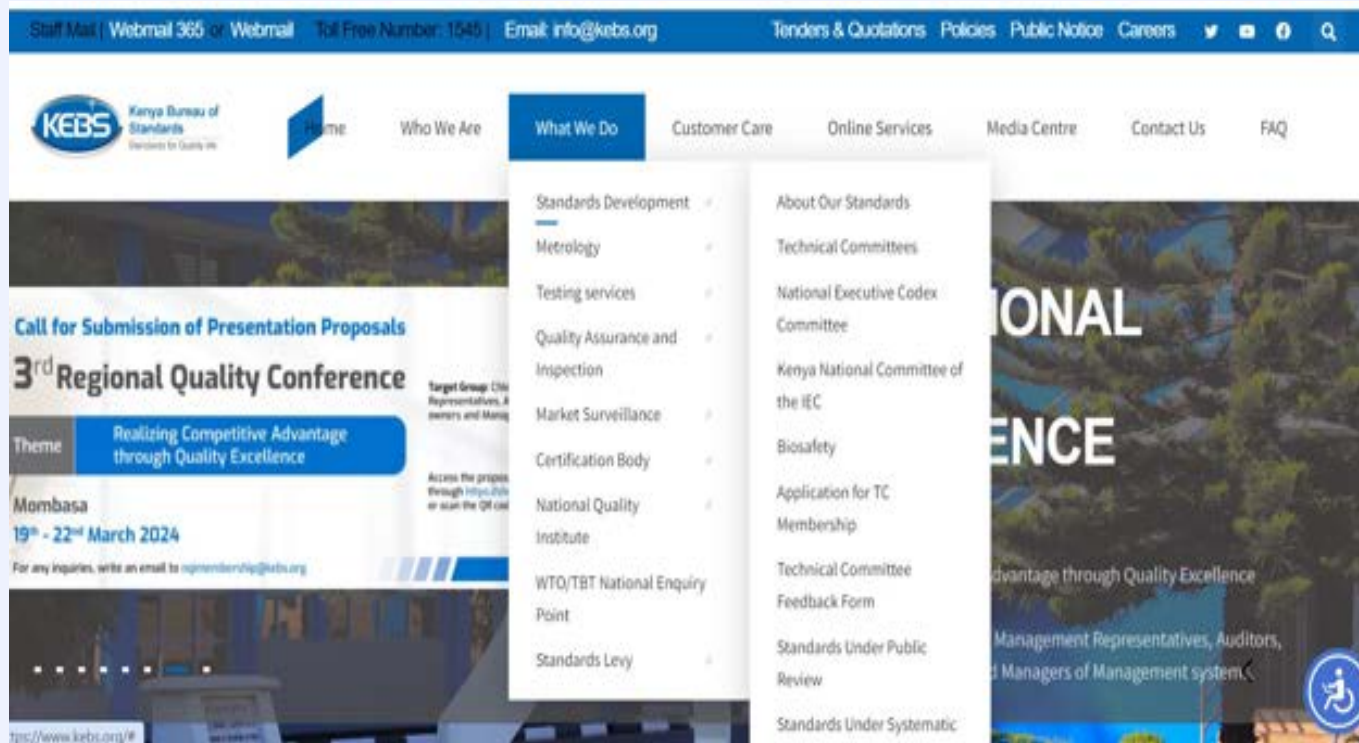
- ❖ Writing to the MD-KEBS

- ❖ Online through

<https://kims.kebs.org/request-standards>



Applying for TC membership



Staff Mail | Webmail 365 or Webmail | Toll Free Number: 1545 | Email: info@kebs.org | Tenders & Quotations | Policies | Public Notice | Careers | [Twitter](#) | [YouTube](#) | [Facebook](#) | [Search](#)

KEBS Kenya Bureau of Standards
Standards for Quality Life

Home | Who We Are | **What We Do** | Customer Care | Online Services | Media Centre | Contact Us | FAQ

Standards Development

- [Metrology](#)
- [Testing services](#)
- [Quality Assurance and Inspection](#)
- [Market Surveillance](#)
- [Certification Body](#)
- [National Quality Institute](#)
- [WTO/TBT National Enquiry Point](#)
- [Standards Levy](#)

About Our Standards

- [Technical Committees](#)
- [National Executive Codex Committee](#)
- [Kenya National Committee of the IEC](#)
- [Biosafety](#)
- [Application for TC Membership](#)
- [Technical Committee Feedback Form](#)
- [Standards Under Public Review](#)
- [Standards Under Systematic](#)

Call for Submission of Presentation Proposals

3rd Regional Quality Conference

Theme Realizing Competitive Advantage through Quality Excellence

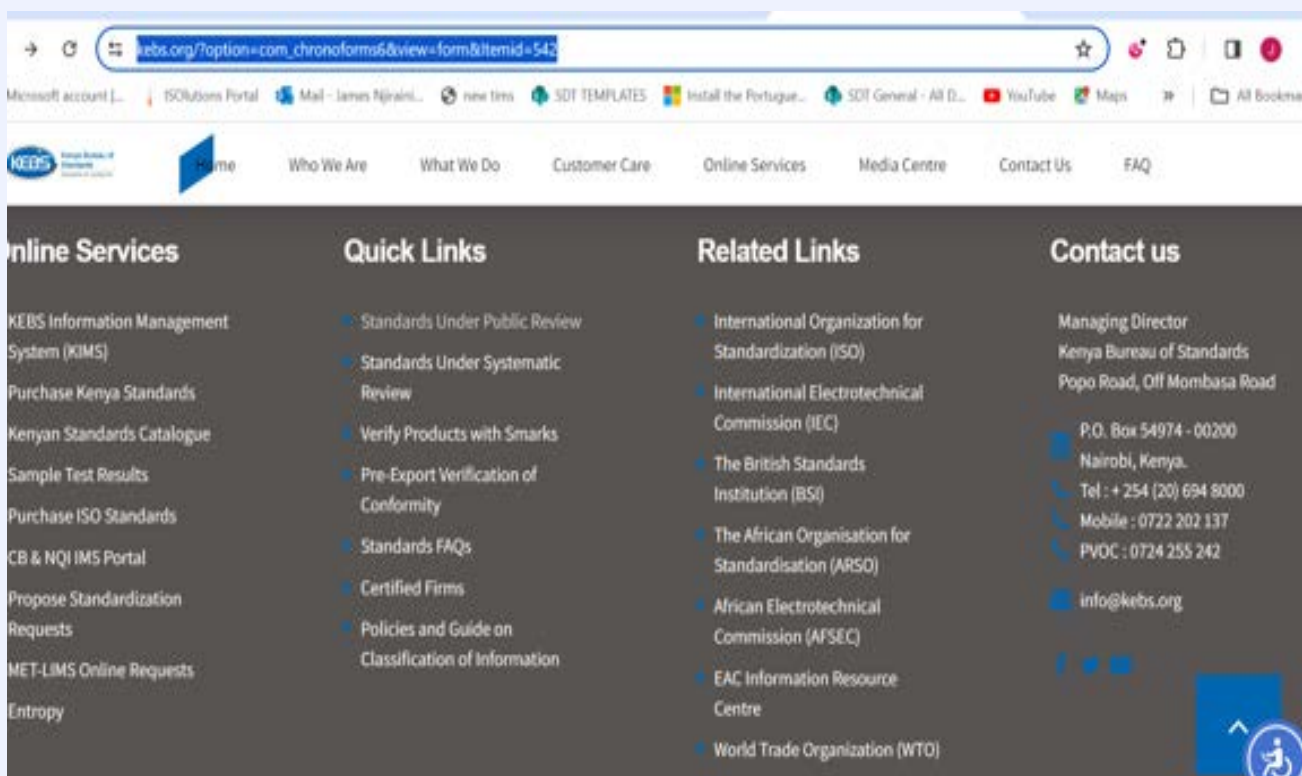
Mombasa

19th - 22nd March 2024

For any inquiries, write an email to regmembership@kebs.org

<https://www.kebs.org/#>

Submitting a Request for a Standard



The screenshot shows the KEBS website with the URL https://kebs.org/7option=com_chronoforms&view=form&Itemid=542 in the browser address bar. The website has a navigation menu with links: Home, Who We Are, What We Do, Customer Care, Online Services, Media Centre, Contact Us, and FAQ. The main content area is divided into four columns: Online Services, Quick Links, Related Links, and Contact us.

Online Services	Quick Links	Related Links	Contact us
KEBS Information Management System (KIMS)	Standards Under Public Review	International Organization for Standardization (ISO)	Managing Director Kenya Bureau of Standards Pogo Road, Off Mombasa Road
Purchase Kenya Standards	Standards Under Systematic Review	International Electrotechnical Commission (IEC)	P.O. Box 54974 - 00200 Nairobi, Kenya.
Kenyan Standards Catalogue	Verify Products with Smarts	The British Standards Institution (BSI)	Tel : + 254 (20) 694 8000
Sample Test Results	Pre-Export Verification of Conformity	The African Organisation for Standardisation (ARSO)	Mobile : 0722 202 137
Purchase ISO Standards	Standards FAQs	African Electrotechnical Commission (AFSEC)	PVOC : 0724 255 242
CB & NQI IMS Portal	Certified Firms	EAC Information Resource Centre	info@kebs.org
Propose Standardization Requests	Policies and Guide on Classification of Information	World Trade Organization (WTO)	
MET-LIMS Online Requests			
Entropy			

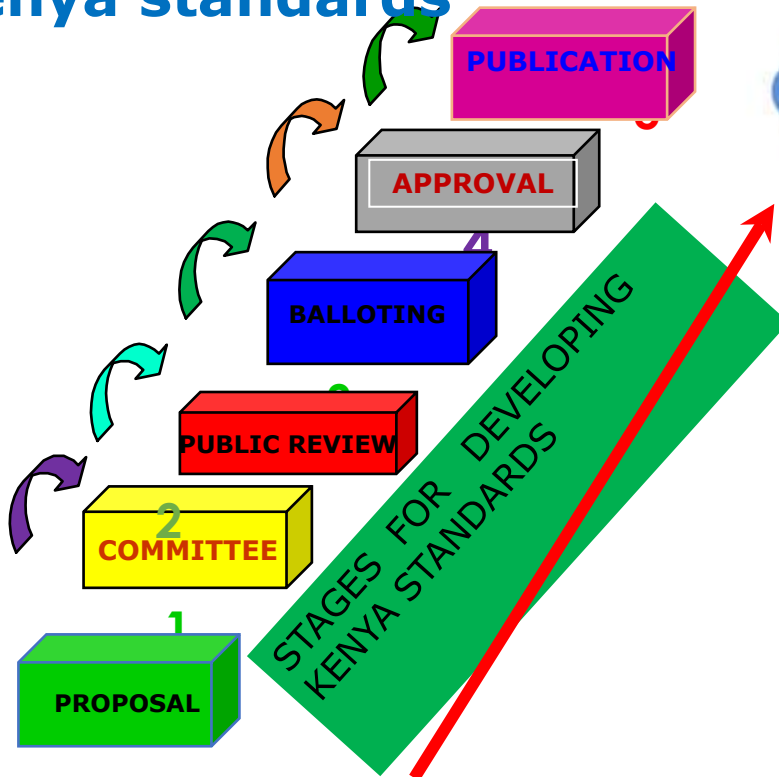


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Stages of the development of Kenya standards

6



KEBS involvement in the harmonization of standards at the international and regional level



- Regional – EASC/TCs, ARSO/TCs
- International - ISO/TC or SCs,
- Codex Contact Point and National Codex committee as well responses to Codex Circular letters through national TCs
- National Enquiry Point and WTO Notification Office – Link to other countries and channel for their involvement in Standard development process
- KEBS is the secretariat for various EASC, ARSO and even ISO technical committees

KEBS SERVICES AVAILABILITY ONLINE;

Sale of Standards: EAC & International Standards

<https://webstore.kebs.org/>

<https://kebs.isolutions.iso.org/sites/kebs-nws/home.html>

EAC/ Kenyan Standards Catalogue

<https://www.kebs.org>

<https://onlinecatalogue.kebs.org>



Quality Assurance and Inspection

- The department offers technical advice on production of quality goods to industry.
- For imported products; KEBS through its PVoC and Destination Inspection program, ensures products are compliant to applicable standards



Quality Assurance and Inspection

Product Certification

KEBS certifies product to the various marks.



Standardization
Mark



Diamond
Mark of
Excellence



Import
Standardization
Mark



Fortification
Mark

In partnership
with Ministry
of Health

- KEBS Quality Marks can be verified through SMS to 20023 - SM#(Permit Number)
- KEBS Toll free number can also be used - 1545

Metrology and Testing



- The National Measurement Standards maintained at the Kenya Bureau of Standards are traceable to International Systems of Units (SI).
- KEBS has state of art laboratories certified to provide accurate and traceable findings including calibration to industry such as;
 - Manufacturers
 - Construction industry
 - Hospitals
 - Research, universities and training institutes



Metrology and Testing





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Market Surveillance

KEBS Market Surveillance Directorate is tasked with the role of monitoring of product compliance in the Kenyan market to relevant technical regulations, Kenya Standards or Approved Specifications with a focus on health, safety and environmental requirements; and promotion of fair-trade practices.





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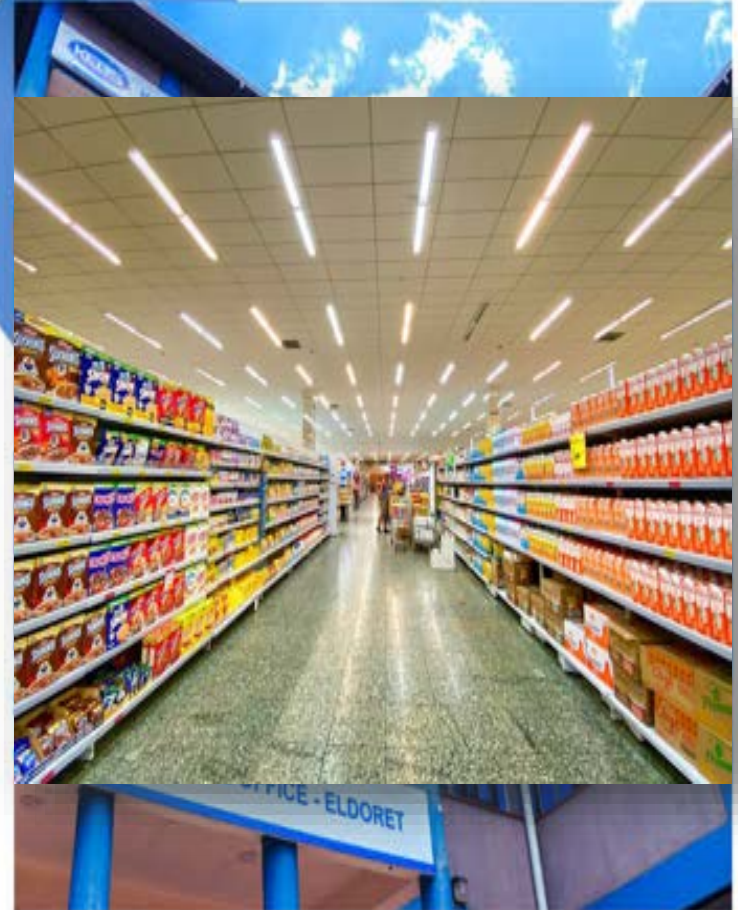
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Market Surveillance (MS)

The MS Directorate undertakes product conformity assessment.

This is done through compliance assessment, complaints handling, initiation of corrective and preventive actions, collection and evaluation of market intelligence.

The Directorate also partners with other government and private sector agencies involved in product and service performance monitoring.



KEBS Management Systems Training and Certification



National Quality Institute

The Institute NQI offers both in-house programs as well as planned open course trainings in various fields, including;

Quality Management

Information Security
Management

Environmental
Management

Food Safety
Management

Energy Management

Business Continuity
Management

Inspection

Testing and
Metrology

Risk Management

Security
Management

Occupation Health &
Safety Management

Knowledge
Management

Assessor/
Lead Assessor

Training of Trainers
(TOT)

Six Sigma

Tailor Made
Programs

Download the detailed annual training program at www.kebs.org

Application and correspondences done online

KEBS Management Systems Training and Certification



The Certification Body is accredited to ISO 17021 and offers various Systems Certifications including;



**ISO 9001:2015
Quality
Management
Systems**



**ISO 22000:2018
Food Safety
Management
System**



**ISO/IEC 27001
Information
Security
Management
System**



**OHSAS
45001
OHS
Management
Systems**



**ISO 22301
Business
Continuity
Management
Systems**



**ISO
14001:2015
Quality
Environmental
Management
Systems**

The Role of KEBS in the National Framework on Plastics Management



- Plastic pollution has become a global crisis. Every year, millions of tons of plastic infiltrate natural ecosystems, causing untold harm to wildlife, clogging waterways, and even entering the food chain, consequently impacting human health. This issue is not only a global concern but also greatly impacts Kenya, where our rivers, streets, and even remote areas are severely affected by plastic waste.
- Kenya has taken bold steps to address this challenge including the development of a comprehensive national framework for plastics management. At the heart of this framework is the Kenya Bureau of Standards (**KEBS**). KEBS plays a critical role in shaping how Kenya manages plastics, ensuring that our approach is both effective and sustainable.

KEBS and the 2017 Plastic Ban



- As the national standards body, KEBS is responsible for **developing, promoting, and enforcing standards** across a wide range of sectors, including plastics. The standards developed by KEBS are designed to ensure quality, safety, and environmental sustainability in all products and processes within Kenya.
- In the context of plastics, KEBS' mandate goes beyond simply ensuring the quality of plastic products. It includes shaping policies, promoting innovation, and ensuring compliance with both national regulations and international best practices. This role is crucial to Kenya's efforts in reducing plastic waste and advancing towards more sustainable practices



Developing Standards for Sustainable Plastics

- KEBS spearheads the development of sustainable plastic standards. These standards focus on promoting the use of biodegradable plastics, compostable plastics, eco-friendly packaging materials, and recycling initiatives.
- For example, KEBS has developed standards that govern the **recycling of plastic waste**, KS 2988:2024 Mechanical recycling of PET code of practice, aligning with international frameworks such as the ISO 18604 standard on material recycling. By setting clear guidelines for how plastics should be recycled, KEBS is helping to create a circular economy where plastics are reused rather than discarded.



KEBS and the Circular Economy



- One of the most critical aspects of Kenya's national framework on plastics management is the shift toward a circular economy. A circular economy seeks to reduce, reuse, and recycle materials, rather than relying on the linear model of producing, using, and discarding. KEBS plays a pivotal role in this transition by developing standards that encourage plastic recycling, extended producer responsibility, and eco-friendly design.
- Plastic products should be designed in such a way that they can be easily recycled or reused, instead of being discarded in landfills. Through Kenya Standards, KEBS ensures that the public adheres to practices that promote this cycle of reuse, aiding in reduction of plastic waste at the source.





- The development of standards is only one aspect of the solution, enforcement is equally important. KEBS works closely with other national bodies such as the National Environment Management Authority (**NEMA**) to ensure that standards are not only developed but also referenced in regulations and enforced effectively.
- Through market surveillance and product certification, KEBS ensures that industries comply with plastic management regulations. Products that meet KEBS standards are awarded marks of quality like the Standardization Mark, Diamond Mark of Quality, which give consumers confidence that the products they are purchasing are safe and environmentally friendly.
- Moreover, KEBS collaborates with industry stakeholders to ensure that businesses have the support they need to meet these standards. This includes offering dissemination workshops and programs that help businesses adapt to new standards and comply with regulations

Public Awareness and Education



- Another key component of KEBS' role in plastics management is public awareness. It's not enough to have policies and standards in place; the public must also be aware of their importance and be willing to adopt more sustainable practices. KEBS runs public education campaigns to raise awareness about the dangers of plastic pollution and the benefits of adhering to plastic management standards.
- These campaigns are essential in encouraging consumers to choose products that meet environmental standards, thus creating demand for sustainable alternatives to plastics.
- While Kenya has made significant progress in plastics management, there remains considerable work to be done.
- KEBS continues to play a critical role in ensuring that our national framework for plastics management evolves to align with the best global practices and emerging technologies.

Standards for Sustainable Plastics



- In the coming years, KEBS anticipates the development of new standards that address emerging issues, such as **microplastics** and **plastic pollution in water bodies**. KEBS will also continue to promote innovation in **biodegradable alternatives** and **plastic recycling technologies**.
- KEBS, as the custodian of these standards in Kenya, has proven to be a critical player in our national framework on plastics management.
- Through the development of sustainable standards, collaboration with stakeholders, and enforcement of regulations, KEBS is ensuring that Kenya is not only managing plastics effectively but also leading the way in creating a future where plastic waste is a thing of the past.



The Kenyan approach in domesticating international standards



- The domestication process begins with the identification of relevant global standards, such as those developed by the International Organization for Standardization (**ISO**) or the **International** Electrotechnical Commission (**IEC**). These global standards serve as a foundation. However, KEBS works to modify and adapt these standards to reflect local realities—whether it's the conditions in our manufacturing sector, our environmental needs, or the capabilities of our small and medium-sized enterprises.
- This tailored approach allows Kenya to remain competitive on the global stage while addressing local challenges and fostering inclusive growth.



Key Sectors Where International Standards Have Been Domesticated



Kenya has successfully domesticated international standards across various sectors, with significant results. The following are a few examples of the sectors:

1. **Agriculture and Food Safety:** Agricultural sector is the largest contributors to Kenya's GDP. By adopting international standards on food safety, such as those for Good Agricultural Practices (**GAP**), KEBS has helped ensure that Kenyan products meet the requirements of global markets, such as the European Union. This has opened new opportunities for our farmers while safeguarding consumer health at home.
1. **Plastic Management:** With the global push to reduce plastic pollution, KEBS has domesticated ISO standards on recycling and environmental management. In line with Kenya **plastic bag ban in 2017**, KEBS introduced standards for biodegradable plastics, and compostable plastic to promote sustainable packaging solutions. This is a prime example of how Kenya is using global best practices to tackle a pressing local environmental challenge.
2. **Energy and Sustainability:** Kenya has aligned itself with global energy efficiency standards, supporting the country drive toward a **green economy**. Through the adoption of international standards, KEBS has helped promote renewable energy technologies, such as solar and wind power, ensuring that they meet both global and local performance standards.



The Process of Domesticating International Standards



1. **Adoption:** KEBS selects international standards that are aligned with Kenya's national priorities, such as industrial growth, environmental protection, or consumer safety.
2. **Adaptation:** These standards are then reviewed and modified, considering the unique context of Kenya—be it the infrastructural limitations, market conditions, or cultural factors.
3. **Validation and Stakeholder Engagement:** KEBS ensures that stakeholders, government agencies, and the private sector, are involved in the validation process. This collaborative approach ensures that standards are not only technically sound but also feasible and beneficial for all segments of society.
4. **Enforcement and Compliance:** KEBS, in partnership with regulatory bodies and industry associations, ensures compliance with these standards. Through certification programs, market surveillance, and education campaigns, KEBS guarantees that the standards are implemented effectively and consistently across industries.



- 1.KS ISO 14855-1:2021** Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions — Method by analysis of evolved carbon dioxide —Part 1: General method.
- 2.KS ISO 14855-2:2018** Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions — Method by analysis of evolved carbon dioxide Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test
- 3.KS ISO 17088 :2021** Plastics — Organic recycling — Specifications for compostable plastics
- 4.KS ISO 20200:2023** Plastics — Determination of the degree of disintegration of plastic materials under composting conditions in a laboratory-scale test.
- 5.KS ISO 5424:2022** Plastics — Industrial compostable plastic drinking straws
- 6.KS ISO 5412 :2022** Plastics — Industrial compostable plastic shopping bags
- 7.KS ISO 16929:2021** Plastics — Determination of the degree of disintegration of plastic materials under defined composting conditions in a pilot-scale test.
- 8.KS ISO 15270: 2008** Plastics — Guidelines for the recovery and recycling of plastics waste



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Conclusion

KEBS is committed to its **partnerships** aimed to encourage innovation, promote safe products in the market and to facilitate trade.

At KEBS we operate an open-door policy, and are ready to guide and advise all players on standards and conformity





Thank you!

THE ROLE OF STANDARDS ORGANISATION OF NIGERIA (SON) IN THE MANAGEMENT OF PLASTICS IN NIGERIA

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Standards Organisation of Nigeria*

(adebayoganiyat44@gmail.com, ganiyat.adebayo@son.gov.ng)

AT

AN ENGAGEMENT WORKSHOP ON PLASTICS REDUCTION AND MANAGEMENT
IN EAST & WEST AFRICA

Nairobi, Kenya

Date: 1st October, 2024



.....*Improving life through standards*

Contents

- SON in brief
- Nigerian Industrial Standard (NIS)
- Standards development in Nigeria
- NIS for Plastic products
- Plastic waste management standards



.....*Improving life through standards*

SON IN BRIEF

- The Standards Organisation of Nigeria (SON) is a statutory Government Agency under FMITI
- Established by an Enabling Act No. 56 of 1971 (4 Amendments– Act No. 20 of 1976, Act No. 32 of 1984, Act No. 18 of 1990 and Act No. 14 of 2015).
- SON is a member of ISO (International Organisation for Standardisation), SON has access to over three thousand (3,000) international Standards and over two thousand, five hundred (2,500) Nigerian Industrial Standards.



.....*Improving life through standards*

SON'S MANDATES

- Preparation of STANDARDS relating to products, measurements, materials, and processes among others, and their promotion at the national, regional, and International levels.
- Establishment of QA systems (including Certification of products, processes, systems and services; testing and calibration) to ensure compliance with approved Standards.
- Capacity building and technical assistance in the production of quality products and services.
- Advise government at all levels on matters relating to standardisation, quality assurance and metrology.
- System Certification/Training: ISO 9001, ISO 14001, ISO 45001, ISO 22001, ISO 27001 etc.



.....*Improving life through standards*

What is a Nigerian Industrial Standard?

- A Nigerian Industrial Standard (NIS) is the result of an agreement between the stakeholders of SON which is usually approved by the Governing Council of SON as a National Standard.
- NIS may be used as such or may be implemented through incorporation in national regulations of different areas in Nigeria.
- NIS elaboration process mirrors the ISO mode of Standards Development.
- Nigerian Industrial Standards are developed by SON technical committees (TC) and subcommittees (SC) based on the principles of standardisation using the internationally accepted directives issued by ISO as ISO /IEC directives Part 1 via a six-step process (stages of standards development).



STANDARDS DEVELOPMENT IN NIGERIA

- **Stages of Standards development:** Proposal, Preparatory, Committee, Enquiry, Approval, Publication.
- **Categories of the Nigerian Industrial Standards (NIS):** Terminology, Dimensional, Performance, Testing, Product, Codes of practice, Process, Service and Measurement Standards.
- **Technical Groups:** CB/Mining, CT, EE, Environment, FT, Halal, Healthcare, IT, ME, Metrology, Service Textile/Leather.



.....*Improving life through standards*

Nigerian Industrial Standards (NIS) for Plastic Products

S/N	NIS NUMBER	TITLE OF STANDARD
1	NIS 954:2020	Standard for plastic crates for glass bottles
2	NIS 799:2020	Standard for multipurpose adult & child plastic chairs & chaise lounge
3	NIS 1143:2020	Standard for plastic drawer set
4	NIS 1149:2020	Plastic crates for fruits & vegetables - Specification
5	NIS 1153:2020	Standard for plastic wheel bin
6	NIS 1156:2020	Standard for seamless plastic tube packaging
7	NIS 611:2019	Standard for PET preforms for food contact applications
8	NIS 1037:2018	Standard for PET resin
9	NIS 607:2017	Standard for PET bottles for food contact applications
10	NIS 608: 2010	General Guideline for manufacture of plastic materials for food contact applications

11	NIS 800:2017	Standard for plastic bowls for domestic use
12	NIS 801:2017	Standard for plastic buckets for domestic use
13	NIS 770:2017	Standard for LLDPE films for water packaging
14	NIS 835:2017	Standard for polyethylene shopping bags
15	NIS 970:2017	Standard for plastic table
16	NIS 535:2006	Standard for water storage tank
17	NIS 540:2006	Standard for plastic drinking straw
18	NIS 540:2006	Standard for plastic tableware
19	NIS 494:2004	Standard for plastic jerry cans
20	NIS 216: 1989	Specification for woven bags (Polypropylene)
21	NIS ISO 472	Plastic vocabulary

Plastic waste management standards

- NIS 1125: 2019 - Nigerian Industrial Standard for Recycled Polyethylene Terephthalate for Packaging of Edible Products
- DNIS XXX:2024 - Standard for plastic recycling
- ISO/TR 23891:2020 - Plastics — Recycling and recovery — Necessity of standards.
- ISO/TR 21960:2020 - Plastics — Environmental aspects — State of knowledge and methodologies.
- ISO 17422:2018 - Plastics — Environmental aspects — General guidelines for their inclusion in standards.
- ISO 16620-2:2019 - Plastics — Biobased content — Part 2: Determination of biobased carbon content.
- ISO 16620-1:2015 - Plastics — Biobased content — Part 1: General principles.
- ISO 5677:2023 - Testing and characterization of mechanically recycled polypropylene (PP) and polyethylene (PE) for intended use in different plastics processing techniques.
- ISO 5424:2022 - Plastics — Industrial compostable plastic drinking straws.
- ISO 5412:2022 - Plastics — Industrial compostable plastic shopping bags.

PET bottles in bales (with
the use of baling
machines)



Recycling of Pre/Post Consumer PET bottles and converting them into Polyester flakes/Chips, Staple fibre and non-woven products (e.g. rug underlay, gum-stay).

SON supports this type of company with product standards.



SON's collaboration

- Federal ministry of environment (Nigerian circular economy roadmap, involving plastic wastes management in Nigeria).
- National Environmental Standards and Regulations Enforcement Agency (NESREA) – EPR policy.
- Food and Beverage Recycling Alliance (FBRA), an Organisation that promotes and execute organised waste collection and recycling of used food and beverage plastics in Nigeria.
- Consumer protection Council
- Academia
- Research institutions
- Manufacturers
- End users



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Standards Organisation of Nigeria

...improving life through standards

CORPORATE HEADQUARTERS:
52 Lome Crescent, Wuse
Zone 7, Abuja, Nigeria

Lagos Ops. Headquarters:
13/14, Victoria Arobieke street, Off
Amiralty Way, Lekki Phase 1, Lagos, Nigeria.

 www.son.gov.ng

Contact
s

SON

OFFICIAL HANDLES

- Facebook: Standards Organisation of Nigeria
- Twitter: @officialSONNIGERIA
- Instagram: @standardsorganisationofnigeria
- LinkedIn: @SONNigeria
- YouTube: Standards Organisation of Nigeria

TOLL FREE LINES:

+234 705 6990 099, +234 701 6553 290



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***Thank you for your
attention***



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Break | 10:30 – 11:00



1 October 2024

COMPOSTABLE PLASTICS - A SOUTH AFRICAN PERSPECTIVE



COMPOSTABLE PLASTICS COUNCIL - SOUTH AFRICA



It is the mandate of COPCO to:

- Provide representation to importers, distributors, converters, manufacturers, and retailers of compostable plastics;
- Promote the recognition of compostable plastics; and
- Grow the market for compostable plastics in South Africa.

COPCO is a registered PRO.

COPCO promotes composting as an EPR solution.



COMPOSTABLE PLASTICS

CAREFUL REPLACEMENT

Replacing plastics with compostable plastics

- COMPOSTING as the end-of-life pathway for compostable packaging
 - No micro-plastics
 - Non-toxic
- Mixed compostable polymers can be composted together.

Environmentally sound management through EPR

- Specific material stream through composting
- Removing organic waste from landfills
- Clear labelling to reduce contamination of recycling and compost streams

NOT Biodegradable and NOT Oxo-degradable plastics



COPCO ADVOCACY

PLASTIC BAG LEVY

The plastic bag levy has promoted the sale of alternative packaging solutions:

- Bags that are recyclable but *not reusable* (no requirement on quality) or *practical* (no requirement on packaging capacity).
- Non-woven bags still plastic (PP)
- If used for organic/kitchen waste - contaminating compost.
- Recyclable bags are not preferred in the final treatment situation.

Need a much better understanding of the environmental impacts (energy, water, raw materials, end-of-life management) of all types of bags (paper, plastic, compostable, reusable).

BAN ON OXO DEGRADABLES

Oxo-degradable plastics are conventional plastics such as HDPE/LDPE mixed with an additive designed to promote the oxidation of the material to the point where it embrittles and fragments. Oxo-degradable plastics quickly fragment into smaller pieces of microplastics but don't break down to the molecular or polymer level like compostable plastics.

- No **independent** proof/research to verify the process is safe and that it does not result in microplastics.
- No internationally acknowledged standards or certification processes that prove the success of oxo-degradation or timeframes for degradation.
- Do not conform with core principles of the EPR Regulations and the doctrine of the circular economy as oxo-degradable plastics are neither suitable for effective long-term reuse or recycling at scale.
- Not suitable for composting as they contaminate the soil.
- Banned in many countries.
- Calls from scientists, testing laboratories, NGO's and trade organisations to ban oxo-degradable plastics from the market. (Oxo-degradable plastic packaging is not a solution to plastic pollution, and does not fit in a circular economy, by New Plastics Economy).
- SA Plastics Pact included oxo-degradable plastics as one of 12 plastic items that ought to be phased out by the end of 2021.

COPCO EPR SOLUTIONS



BRANDING



Product identification to ensure adequate separation of all types of plastics: recyclable, non-recyclable, and compostable.

Brand products as either HOME- or INDUSTRIALLY compostable.

COLLECTION



Collected together with organic waste, through integrated waste management.

- BAG-TO-EARTH
- Collection schemes and drop-off sites
- Case studies on closed systems
- Reducing organic waste to landfill
- No problem of food contaminants.

COMPOSTING



Composting at home or at ORASA-registered composting sites:

- Infinite recycling of organic waste.
- Zero waste to landfill
- Zero micro plastics or toxins.

LABELLING COMPOSTABLE PACKAGING



INTERNATIONAL



SANS 1728:2019



Use of internationally acceptable polymer identification marking.

Must conform to claims made on compostability ISO 17088, EN13432, ASTM D6400, ASTM D686

SANS 2066/2023

HOME COMPOSTABILITY

- CO2 biodegradation (mineralization)
- Disintegration during composting
- Eco-toxicity effects on the quality of the resulting compost
- Presence of high levels of regulated metals – and other harmful effects.

COPCO VERIFICATION

COPCO is the official body to verify products certified as compostable by the CSIR. COPCO also verifies international certification for compostability. The COPCO logo identifies HOME and INDUSTRIALLY compostable packaging.

VERIFICATION REQUIREMENTS

Proven compliance with ISO 17088, EN13432, ASTM D6400, ASTM D686 (SANS 17088; 2020, SANS/CD 2066:2023)

- Verification by Integrated ISO of international certification
- Verification by Integrated ISO of CSIR testing



National field test certificate from ORASA approved testing facility (to be implemented)

Proven compliance with SANS 1728:2019 (labelling)

COPCO membership and signed COPCO membership declaration (avoid green washing)



ORASA - INDUSTRIAL COMPOSTING

Composting compostable plastics with organic waste:

- The best way for compostable plastics to be diverted from landfill
- The industrial scale ensures a variety of materials can be composted together

Current scale of composting of compostable plastics

- Combination of home and industrial-scale composting
- Two large industrial composters in Western Cape, 1-5 MT per day
- Quantities sporadic (includes shortened shelflife products)

Stumbling blocks

- PLA difficult in large volumes (industrial certified)
- Potential fire risk
- Scale is difficult

Possible future combined composting

- Regulatory body, certification, and labeling critical
- Zoning by-laws, infrastructure
- EDUCATION



Organics Recycling
Association of South Africa



CSIR BIODEGRADABILITY TESTING FACILITY

Unique and only testing facility in Africa for measuring Biodegradation and Compostability of materials as per international OECD, ASTM, EN, and ISO standards.

CSIR can assist with:

- Industry to validate biodegradability claims on imported /local products.
- In the design of products with specific biodegradation rates in specific environments (soil, compost (home and industrial) and aqueous media)
- The industry with a technical biodegradability test report for marketing, and later, certification (COPCO)



CITY OF CAPE TOWN - ORGANIC WASTE COLLECTION

Western Cape Provincial Directive

- Reduce 50% of organic waste in 2022
- No organic waste on landfill in 2027 (reached 30%)
- Condition on landfill license by 2027

Organic waste

- Garden waste
- Kitchen waste

Pilot in low-income areas

- 1500 households x 2
- 10l buckets once/week
- 10MT/week

Pilot informal settlement

- 20,000 residents
- 250 MT/week

Bucket system

- Hygiene/odour
- Difficult/costly to clean

Collection

- Skip (leakage)
- Need to build out infrastructure

Pilot compostable bags

- Improve hygiene/odour
- Improve collection rates

Future collection

- Include compostable packaging



POCKETS OF EXCELLENCE

RETAIL AREA

Shopping area that offers customers certified compostable bags and packaging as combined with organic waste collection.

Compostable packaging and consumer goods

Food film, bags and trays.

Compostable carry bags

Single-use catering

Opportunity to improve shelf life and reducing food waste

Opportunity to redistribute food waste

Food waste

Food returns

BAG-TO-EARTH compostable bags

Packaging returns

Collected and composted into regenerative agriculture

Organic waste

Compost in compostable bags

Organic waste and compostable packaging collected at house holds

Opportunity for community garden

COPCO AFRICA

COPCO will be able to provide:

- National representation for the compostable plastics industry
- Advice on national standards for compostable plastics. Most importantly, differentiation must be made between biodegradable and compostable plastics, and a ban imposed on oxo-degradable plastics.
- Testing (CSIR) and certification (COPCO) in line with national and international standards.
- Labelling to differentiate and facilitate adequate waste separation.
- Introduction of collection points to remove compostable plastics together with organic waste.
- Supportive work to introduce quality organics waste recycling that includes compostable plastics.



THANK YOU!

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LinkedIn: [compostable-plastic-council](https://www.linkedin.com/company/compostable-plastic-council)



Case studies from the ECOS report

1. Ghana - FRESHPPACT
2. South Africa - COPCO
3. European Union –
Biodegradable mulch films



Goals for this session

Share practical examples of useful biodegradable or compostable alternatives to plastics.

- Identify transferable lessons for implementation.
- Discuss potential for scale-up in other locations.

Case study in Ghana

Fresh Produce Impact Hub



Goal: Testing alternative solutions to plastics in farming and food sectors.

Focus in ECOS report: Coconut coir as a natural alternative to agricultural plastic mulch.

Ghana – FRESHPPACT

Replacing conventional plastic mulch film:

- Non-recyclable, non-biodegradable.
- Risk of microplastic pollution in soil.
- Can lead to loss of plant productivity.
- Risk of food contamination.



Ghana – FRESHPPACT

Coconut coir:

- Ghana produces 500,000 tonnes of coconut /year.
- Coir discarded as waste.

Opportunity:

- Substitute plastic mulch.
- Create value from waste.
- Benefits for crop productivity.



Pineapple farm with coconut coir mulch (on the right).
Photo courtesy of Dr Ebenezer Laryea.

Ghana – FRESHPPACT

Transferable lessons:

1. **From waste to resource:** agri/horti, food processing, forestry provide abundant source of valuable material.
2. **Creating affordable solutions.**
3. **Research:** test adequacy for each use (e.g. soil impacts).
4. **Educating users:** support transition and proper use.
5. **Providing policy support:** financial incentives for use, phase-out conventional plastics.

Case study from South Africa

Compostable Plastics Council (COPCO)

PRO for the management of compostable plastics.



Key successes:

1. Established compostability standards in South Africa based on existing international standards.
2. Supports testing and certification of compostable plastics according to recognised standards.
3. Facilitates trade of imported certified compostable plastics.
4. Provides clear labelling for consumers.
5. Helps redirect bio-waste away from landfill.

South Africa - COPCO

Transferable lessons:

1. **Public-private partnership:** coordinating policy implementation with businesses to adopt effective environmental solutions.
2. **Facilitating standardisation work:** adopt/adapt existing and highest ambition standards.

Europe – Biodegradable mulch films

- EN 17033:2018
 1. control of constituents (metals, hazardous substances)
 2. aerobic biodegradation in soil (i.e. $20-28^{\circ}\text{C} \pm 2^{\circ}\text{C}$, ideally 25°C) of “the whole material or for each organic constituent”
 3. no toxicity towards terrestrial organisms
- ISO 23517:2021: biodegradation tested separately **for both the final product and organic constituents** (when in a concentration of 1% to 15)
- Certification needed and clear labelling, linked to EPR schemes
- Leakage risks in other environments not tested (e.g. water)

Discussion

- Do the challenges and lessons from these case studies resonate with other experiences in your country?
- To what extent do you think the legal and technical approaches used are transferable? How could it work?

Breakout session | Cracking the case

Focus on key actions for plastics reduction and management

- Goal: Participants choose a policy tool or standard and discuss how it could be effectively implemented, considering challenges and solutions.
- Outcome: A short presentation about each policy tool/standard by each group.
- Setting: Grouping according to participants' roles in either policy or standardisation.
- Time: 25 minutes.



Lunch break | 13:00 – 14:00



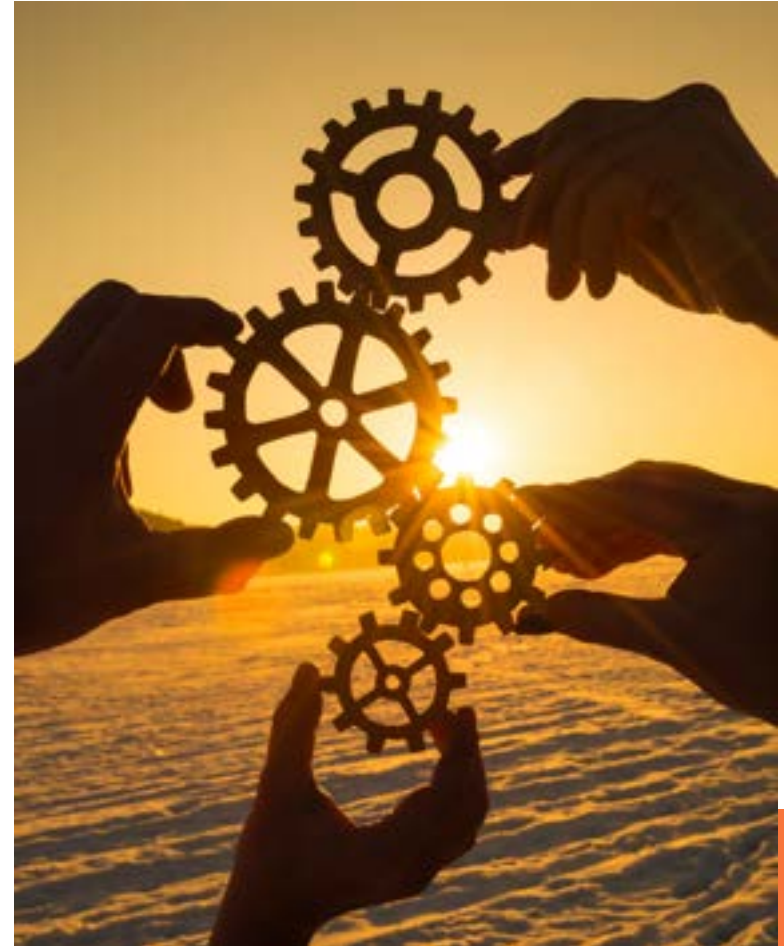
Energiser



Breakout session | Mapping the road ahead

Towards effective plastics reduction and management in Africa

- Goal: Elaborate a roadmap of actions to achieve plastics reduction and management in Africa at national, regional, continental and international level.
- Outcome: A short presentation of roadmaps by each group.
- Setting: Grouping according to region (East/West Africa).
- Time: 30 minutes.



Break | 15:30 – 16:00



Concluding remarks and closing

Thank you
Asante
Merci
Meda ase
O ̣eun



Thank you

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ECOS is co-funded by the European Commission & EFTA