

## DIALOGUE ON ADVANCING PAN-AFRICAN STANDARDIZATION OF rPET

On the 17<sup>th</sup> of January 2024 was organized in the Ministry of Trade and Industry in Rabat a **dialogue on the progress of pan-African rPET standardization**. This session brought together key policy and normative decision-makers from relevant African countries, as well as representatives from Europe and the United States. In partnership with the Ministry of Trade and Industry and the Ministry of Energy Transition and Sustainable Development, this workshop was organized by the Switch to Circular Economy Value Chains (SWITCH2CE) project, the African Circular Economy Alliance (ACEA) and COVAD.

**Despite the many societal benefits of plastic, its production, consumption, and disposal contribute significantly to the climate, biodiversity, and pollution crises in Africa.** This plastic pollution leads to huge costs in terms of cleanup, public health, and losses for the tourism industry. Some estimate that the economic costs of marine plastic pollution in West Africa are between USD 10,000 and USD 33,000 per ton of plastic. Faced with this reality, it becomes imperative to reduce the production of virgin plastics and prevent the leakage of plastics into the environment.

**One promising solution is to increase the production and use of recycled plastics, including recycled packaging plastics such as PET (rPET).** However, the regulatory landscape for rPET in contact with food in Africa is currently limited, with few countries having approved standards or allowed its use for food packaging, except for South Africa.

In this context, the objective of this dialogue was to:

1. Contribute to the ongoing series of discussions on pan-African rPET standardization led by ACEA
2. Clarify global best practices and developments in rPET legislation and standards (such as Morocco, Ghana, Nigeria and South Africa, the European Union, and the USA)
3. And explore the feasibility and rationale of a pan-African standard for rPET and its benefits/limitations.

### Ongoing rPET standards developments in Africa, EU, and Globally

Below is a summary of the key rPET standards developments identified during the dialogue:

#### Ghana

The Ghana Standards Authority is currently developing rPET Standards for production to accelerate the circular transition. The increasing awareness of the environmental impact of plastic pollution and the emergence of new technologies and innovations for recycling PET is at the heart of this new dynamic. This collaboration involves both public and private sector actors and aims to develop nation rPET standards by the end of 2024, aligned with international standards. The World Bank has provided support funds to develop the standard with the total cost of developing the standard estimated at USD \$100k.

#### Nigeria

The country's demand for PET resin is increasing significantly due to rising plastic packaging production. Recycling of pre- and post-consumer PET bottles to turn it into polyester flakes, chips, staples fibre and non-woven product is considered as a real economic opportunity. To that end, in 2019 the Standards Organization of Nigeria (SON) published a new standard for rPET for food contact application (Recycled polyethylene terephthalate for packaging of edible products (NIS 1125: 2019)), with serious guidelines concerning the composition, hygiene process, traceability and marking of plastic material. The standard specifies requirements, methods of sampling and testing for Recycled

PET flakes and pellets for making Recycled PET bottles used for packaging of edible products. SON is now planning to incorporate EPR policy into all plastic standards.

One of the main challenges in conforming to the standard in Nigeria has been found to be poor consumer disposal behaviour resulting in the contamination of PET bottles, which has necessitated the need for a very efficient washing system that is cost- and labour-intensive.

### **South Africa**

The South African Bureau of Standards (SABS) published a voluntary standard (SANS 1728) specifying minimum requirements for recycled PET intended for food contact related to: (i) Characteristics of feedstock material; (ii) Sorting Efficiency; (iii) Decontamination effectiveness of process. Approximately 75% of feedstock comes from post-consumer waste. Around 57% of rPET is used for apparel fibres and 38% used for packaging (primarily bottles). South Africa has two bottle to bottle processing sites which can deliver 20% of total domestic bottle market with new investment coming online in 2024/25.

Key issues for rPET market in South Africa include low capacity of customs and excise departments to regulate and inspect the import/export of primary, recycled and waste plastics as well as an increasingly fragmented international landscape of standards.

### **Morocco**

The Sustainable Economy Standardization Commission was created to ensure monitoring of work undertaken at the level of international and regional standardization in the areas of circular economy and sharing economy. The NM 05.5.424 standard in Morocco currently defines classes of PET recyclates by their impurity content and describes the control methods associated with the different characteristics of these PET recyclates.

As of today, the use of recycled plastic for food grade contact packaging is banned, but the current revision of the Law 28-00 Article 5 could change this dynamic. The challenges identified by Moroccan authorities are the need to develop national specific measures to secure the use of rPET for food contact and the alignment of the norms with international standards and regional initiatives.

### **Europe**

It has been identified that there are multiple design guidelines not facilitating the development of an EU-wide fluid recycled plastics market. As such, the European Commission mandated CEN to draft 'new European standards and revise the relevant European standards in support of the policy objectives to improve the quality and economics of plastics recycling and increase the uptake of recycled plastics in new products - 1) recyclability and design-for-recycling of plastic products; 2) the characterisation and classification of the quality of sorted plastics wastes; and 3) the characterisation and classification of the quality of recycled plastic materials'. The recyclability of packaging will be part of the Packaging and Packaging Waste Regulation and used to ban packaging that are considered non-recyclable.

As part of this - PETCORE, the European association representing the complete PET value chain, has the objective to develop one standard of plastic packaging recyclability throughout Europe to avoid multiple overlapping or contradictory approaches (See CEN/TC 261/SC 4/WG 10 - Design for recycling for plastic packaging products). The standard will encompass different parameters such as PET color, used additives and the unit operations. It will seek to "grade" the recyclability of each piece of packaging from A to E. By grading the recyclability, a score can be assigned to each piece of packaging to 'push' the value chain in the right direction towards 'A', it can also be used for the eco-modulation

of EPR fees as well as banning the worst (Graded E) solutions from the market. The standard is due to be completed in late 2026.

### **ASTM**

The American Society for Testing and Materials (ASTM) is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. ASTM currently have a number of standards committees, including D20 Plastics, to ensure standards are designed transparently and collectively and are usable for industry. ASTM have test methods, specifications, practices, and guides that focus on the gamut of the plastic product from material testing. Committee D20 have, over the past two years, undergone a process to rethink the standardization system that they are engaged in, how to create standards that will activate and support a circular economy, and what that value chain might look like. ASTM are working very closely with CEN in the EU – in particular CEN/TC 261/SC 4/WG 11.

ASTM reiterated the point that recycled plastics standards is currently a very busy space international with many different ongoing initiatives. It is critical that the global community come together and ensure standards are harmonised.

### **TOMRA**

A Norwegian company providing solutions that enable the circular economy with advances collection and sorting systems also gave a view based on its field experience of the best practices and policy opportunities in advancing the rPET challenge. TOMRA have recently established Africa's most advanced bottle-to-bottle processing plants in Egypt. The need for avoiding a complex web of fragmented international standards was raised as a key requirement to boost global plastics recycling.

## **Development of a pan-African rPET standard**

In recognition of the growing fragmentation on rPET standards on the African continent, the African Organization for Standardization (ARSO) is currently developing a standard for rPET which is due to be published in June 2024 (under - ARSO/TC 14, Food packaging and labelling WG1 - Plastics).

It is hoped such a standard would help to:

- Develop a regional value chain for plastics recycling, enabling Africa's recycler to build economies of scale and global competitiveness.
- Accelerate the reduction of virgin plastic consumption and waste generation while enabling plastic circularity.
- Create economic opportunities with the creation of job and development of innovations that could also limit the importation of plastics.
- Empower informal waste pickers and bring social benefits with the formalization of waste pickers in a recycling infrastructure.
- Boost intra-Africa plastics trade.

Ensuring successful adoption of such standard also come with many challenges such as:

- Aligning all stakeholder to craft a regulatory framework that can meets divers interests to create an effective standard.
- Finding solutions to establish robust waste collection systems to optimize plastics recovery and feedstock availability.
- Addressing plastic trade policies and logistical barriers for efficient transboundary plastic trade
- Aligning manufacturers, recyclers, retails, and consumers in a coherent value chain

- Building capacity
- Shifting behavior to foster a culture of responsible consumption and green procurement.

To ensure the launch of the pan-African rPET standard is successful, a regional cooperation is therefore needed and should focus on:

- Knowledge exchange and best practices, using the African Circular Economy Alliance
- Coordinated policies and regulations to harmonize standards, bans and setting recycling targets.
- Joint research and innovation, to collaboratively explore recycling technologies and waste management strategies.
- Strengthened resource sharing to ensure efficient allocation of funds.
- Cross-border monitoring and enforcement to track waste flows and protect our ecosystems.
- Advocacy on the global stage to present a united front to champion international efforts against plastic pollution.

ARSO requested to all Member States to expedite comments at all the stages of the African Standard development given the remaining narrow window for input.

#### **List of speakers:**

- Oliver Boachie, Senior Advisor to Ghana Minister, Environment, Science, Technology & Innovation
- Dr. Ganiyat Adebayo, Assistant Director/Group Head, Environmental Standards, Standards Organisation of Nigeria
- Annabe Pretorius, Executive Technical Operations at South Africa Standards Authority
- Mekki KABBAJ, Chef du Département Normalisation IMANOR (Morocco)
- Alessia Gaetani (Project Manager CEN and CENELEC)
- Frank Stammer, convenor of CEN/TC 249/WG 11 'Plastics Recycling
- Raphael Jaumotte, Technical Manager from Petcore Europe
- Fátima Sani, Business Manager, Business Development Africa TOMRA Collection
- Alyson Fick, Manager, Standards Development at ASTM)
- Clem Ugorji Lead Advisor, Circularium Africa
- Nadine Umutoni, Project Coordinator, African Standards Organisation