

Reducing plastic pollution in Africa: the imperative of a continental rPET standard for food-contact applications



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Executive summary

Despite offering myriad societal benefits, plastics have emerged as significant contributors to the triple climate change crisis, biodiversity loss, and pollution due to current production, consumption, disposal levels, and approaches. The demand for plastics in Africa is increasing, overwhelming waste management systems. Urgent action is needed to reduce virgin plastic production and prevent plastic leakage into the environment, requiring a globally coordinated and ambitious set of measures anticipated in the Global Plastics Treaty.

The scaling up of recycled PET (rPET) is a promising solution, particularly in food-contact applications. However, the regulatory landscape for rPET in Africa is intricate and fragmented, hindering the competitiveness of African PET recyclers. Despite the global shortage of rPET, African recyclers face unique challenges in capitalizing on this demand, putting them at a disadvantage compared to counterparts in the EU, USA, and Asia. This presents an opportunity for African recyclers to increase their market share and contribute significantly to the global rPET supply chain, provided they can overcome existing barriers to entry and compete effectively in international markets.

In this context, the African Organisation for Standardisation (ARSO) is developing a pan-African rPET standard following longstanding engagements by the African Circular Economy Alliance (ACEA) on the issue. Based on dialogues hosted by ACEA and the British think tank Chatham House, this paper explores the opportunities and challenges of establishing a continental food-contact rPET standard for Africa. The focus on food-contact applications is crucial for the circularity of PET packaging, potential market opportunities, and the growth of post-consumer PET collection and recycling. Food-contact rPET quality assurance across countries is essential because of human health concerns, so a higher standard of recycling is required.

Potential benefits of such a standard include fostering economic resilience, boosting intra-continental trade, and delivering environmental advantages. However, challenges persist, including a lack of awareness, weak and fragmented regulatory framework, insufficient infrastructure capacity, and challenges in facilitating and regulating trade.

To navigate these challenges, a collective and sustained effort is required by a broad set of stakeholders, recognizing each nation's diverse challenges and aspirations. Developing a continental rPET standard should harmonize with relevant international standards and final provisions agreed by the Intergovernmental Negotiating Committee on Plastic Pollution (INC) and not detract from the overarching aim of reducing overall plastic production through greater circular approaches.

1. Introduction

One of the most important environmental issues globally is plastic pollution. Plastic is a versatile material with multiple applications, and its annual production volume increased 200-fold between 1950 and 2021, from 2 million to 390 million tonnes,¹ which translates to two-thirds of the world's population's mass.² What further complicates the issue is that roughly 86% of the plastic waste is leaked into the environment through dumping in landfills and waterbodies or incineration, which presents serious environmental, social, and economic challenges for sustainable development.^{3,4} Plastic production and disposal are also significant contributors to the climate crisis, making up 3% of global emissions. If virgin production of plastics maintains its current growth trajectory, by 2050 these greenhouse gas emissions could exceed 56 gigatonnes — or 10–13% of the remaining carbon budget.⁵ In light of the urgency of addressing these issues, a historic decision was reached by all 193 UN Member States during the fifth United Nations Environment Assembly in March 2022 to forge an international legally binding agreement by 2024 towards ending plastic pollution.⁶

Africa finds itself at a critical juncture with the mounting challenge of plastic pollution. Population growth and urbanization are driving up the use of plastic packaging, particularly single-use packaging in food-contact applications. PET (polyethylene terephthalate) bags and bottles invade urban, rural, and natural landscapes — choking waterways and creating habitat for vectors of disease. Waste management systems are often inefficient, contributing to the accumulation of plastic waste in the environment. A mere 6% of plastic waste in Africa is recycled, below the global average of 9%. Even more alarmingly, 64% of plastic waste is mis-managed or left to contaminate the environment, exceeding the global average of 22%.⁷

This has dramatic repercussions on ecosystems since, unlike organic waste, plastic can take hundreds or even thousands of years to decompose in nature and, during its decomposition, can leach toxic chemicals and additives into the environment as well as form dangerous micro- and nano-plastics, which humans and wildlife can ingest. Most of Africa's rural towns, burgeoning cities, rivers, and coastlines are becoming heavily polluted with discarded plastic packaging and other plastic waste,⁸ threatening biodiversity, disrupting ecological balances, and severely damaging marine and terrestrial ecosystems. The consequences extend to human health and food security, as soil and water contamination directly affect local populations.

On the economic front, plastic pollution generates considerable costs in terms of cleanup, public health, and losses for the tourism industry (see *Economic costs of plastic pollution*, below). Egypt, Nigeria, and South Africa are the most significant contributors to plastic leakage on the continent. Algeria and Morocco join these countries among the top 20 coastal countries in the world, contributing to marine plastic pollution.⁹

1 Annual production of plastics worldwide from 1950 to 2021, Statista Research Department, 2023

2 State Plastics World Environment Day Outlook, UNEP, 2018

3 Plastic Waste Factsheet, University of Michigan Centre for Sustainable Systems, 2022

4 International law-making process of combating plastic pollution: Status quo, debates and prospects, Marine Policy, Sen Wang, 2023

5 Plastic & Climate: The Hidden Costs of a Plastic Planet, Center for International Environmental Law (CIEL), 2019

6 Turning off the Tap – How the world can end plastic pollution and create a circular economy, UNEP, 2023

7 Plastic pollution is growing relentlessly as waste management and recycling fall short, OECD, 2022

8 Plastic pollution in Africa: identifying policy gaps and opportunities, WWF, 2022

9 Plastic waste inputs from land into the ocean, Jenna R. Jambeck *et al*, 2015

Economic costs of plastic pollution

- In 2018, the global impact of plastic pollution, including impacts on tourism, fishing, aquaculture, and cleanup, ranged from \$6 billion to \$19 billion.^{10*}
- The World Wide Fund for Nature estimates that the societal lifetime cost of the plastic produced in 2040 could reach as much as \$7.1 trillion (\pm \$2.2 trillion), which is equivalent to approximately 85% of global spending on health in 2018 and more significant than the GDPs of Germany, Canada, and Australia in 2019 combined.
- Economic costs of plastic marine pollution in West Africa are projected to be between \$10,000 and \$33,000 per tonne of plastic.¹¹
- Transitioning to a circular economy could yield global savings of \$1.27 trillion, accounting for recycling costs and revenues. Mitigating externalities (health, climate, air pollution, marine ecosystem degradation, and legal expenses) could result in \$3.25 trillion in savings.¹²

The policy context is a critical dimension shaping Africa's transition to a circular plastic economy. Global commitments to tackle plastic waste have encouraged governments and policymakers across Africa to act on plastic pollution, resulting in several promising policy initiatives that promote the circular plastics economy. A key challenge currently faced is the absence of regulatory standards or approval for using rPET in most African countries. This absence creates barriers and uncertainties in producing, trading, and using rPET.

The publication of a continental standard, specifically for PET plastic recycling in food-contact applications, could help address these challenges. The goal would be to establish a standardized approach for safe and sustainable rPET use and to prevent a potential future challenge of a fragmented and complex regulatory landscape. Adopting a continental standard would provide a unified framework, avoiding discrepancies that might arise if individual countries were to develop their own standards, which could vary significantly.

This paper explores the benefits of a continental rPET standard for food-contact applications and highlights the importance of concerted action to implement it. It also discusses the challenges in realizing such a goal at the continental level and the likely steps needed to get there.

¹⁰ Seeking an ambitious global action to curb plastic pollution, UNEP, 2022

¹¹ The economics of plastic use and cleanup priorities for west African coastal countries, World Bank, 2023

¹² Turning off the Tap – How the world can end plastic pollution and create a circular economy, UNEP, 2023

* \$ indicates US dollars throughout

2. The potential of food-contact rPET in advancing the circular economy in Africa

a. Benefits of food-contact rPET over PET

Polyethylene terephthalate, commonly known as PET, is one of the most important polymers in today's global economy, particularly in food-contact applications. Its versatile properties have propelled it to the forefront of modern packaging and consumer goods industries. With its exceptional clarity, strength, and barrier properties, PET has become the material of choice for various applications, from beverage bottles and food containers to textiles and packaging films. About 56 million tonnes are produced worldwide annually,¹³ making it the most abundantly used polymer in the world. The global rPET market size was estimated at \$10.1 billion in 2022 and is expected to grow to \$18.7 billion by 2030.¹⁴

Recycling PET is a crucial intervention against plastic pollution because PET constitutes about 7% of global plastic production.¹⁵ By retaining the strength and durability of PET while perpetuating the cycle through recycling, rPET (recycled polyethylene terephthalate) exemplifies the circular economy model, offering a sustainable solution to mitigate the environmental impact of this widely used polymer. Recycled PET can be used for various applications — the most common being packaging (bottles, trays, and sheets) and fibres (textiles), cosmetics, and pharmaceuticals.¹⁶

The scaling up of rPET production and use offers significant environmental benefits. Recycling PET packaging presents a multi-faceted ecological solution. It reduces reliance on energy-intensive virgin polymers primarily made from oil, and it is energy efficient; a 100% recycled bottle requires 75% less energy input than one from virgin plastic;¹⁷ thereby reducing greenhouse gas emissions by up to 50%.¹⁸ Additionally, rPET requires 90% less water than the production of virgin PET plastic,¹⁹ a crucial feature for many African regions facing water access challenges, given that 418 million people (32% of the population) still lack clean drinking water.²⁰

When made of 100% PET with few or no chemicals and additives, rPET is highly recyclable. However, there are limitations to the number of times PET can be recycled due to potential degradation of the polymer chain, and the accumulation of impurities and additives. Nonetheless, the inherent properties of high-quality rPET still position it as an essential material for the transition to a circular economy. This approach minimizes waste and maximizes resource efficiency (see case studies 1 and 2 below).

13 Recent advances in biological recycling of polyethylene terephthalate (PET) plastic wastes, Ya-Hue Valerie Soong *et al*, 2022

14 Recycled polyethylene terephthalate market size, Grand View Research, 2023

15 Plastics in the environment, French Academy of Sciences, 2021

16 PET Market in Europe – State of Play, Eunomia, 2022

17 rPET, explained: a more sustainable water bottle solution, ESKA, 2021

18 PET recycling: benefits, challenges and solutions, Polyvia, 2021

19 Why recycled PET is better for the planet — and business — than virgin plastic, Evergreen, 2021

20 Africa to drastically accelerate progress on water, sanitation and hygiene, UNICEF, 2022

Case study 1: Coliba in Côte d'Ivoire

One example of a PET recycling initiative in Africa is Coliba, a digital platform that collects and recycles plastic waste, particularly PET bottles, in Ivorian cities, notably Abidjan. Coliba is an essential link in the PET recycling value chain by aggregating and processing plastic waste, especially PET bottles.²¹ While it does not directly produce food-contact grade rPET, Coliba significantly contributes to the recycling ecosystem.

The platform focuses on collecting and processing plastic waste, raising awareness about recycling, and providing economic opportunities. It has created jobs for approximately 6,000 informal plastic waste collectors, who can sell their waste at Coliba collection kiosks or arrange to have it collected at home via a mobile app. Coliba has also created almost 500 direct and indirect full-time jobs, with 70% filled by women.²²

The environmental impact of Coliba's operations is substantial. It helps reduce pollution caused by plastic waste accumulating in streets, gutters, and landfills, thereby mitigating threats to biodiversity and water quality.

Furthermore, Coliba contributes to recovering plastic waste, which is subsequently transformed into granules or finished products such as bags, buckets, or cobblestones. Coliba sets an ambitious target of recycling 13,000 tonnes of plastic annually.

Coliba's current operations primarily involve PET collection, sorting, and pelletization. A significant portion of the processed PET is exported to Europe, where it undergoes further conversion into PET bottles. While Coliba is an inspiring example for other African countries seeking to initiate PET and other plastic waste recycling efforts, it underscores a critical issue. Advocating for harmonizing recycling standards across Africa becomes imperative, encouraging investment within the continent. This could facilitate the local utilization of plastic granules, leading to job creation and economic growth, especially in food-contact grade rPET production.

Case study 2: PETCO in South Africa

Another illuminating example is from South Africa — the PET Recycling Company (PETCO), a remarkable initiative highlighting the potential for transformative change through collaborative efforts.

Much like other African countries, South Africa grappled with mounting plastic pollution. Recognizing the urgency of the situation, industry stakeholders united to create, in 2004, PETCO, a then-voluntary producer responsibility organization (PRO) dedicated to promoting the sustainable recycling of PET plastic.²³ PETCO administers dedicated extended producer responsibility (EPR) schemes for PET and other packaging materials on behalf of its members, including producers, converters, brand owners, retailers, and recyclers, thereby encompassing the entire PET value chain.

Since its inception, PETCO has reached significant milestones, demonstrating the power of collective action in combatting plastic pollution.

1. Significant increase in recycling rates

PETCO's concerted efforts have propelled South Africa's PET bottle recycling rates from a mere 16% in 2005 to an impressive 66% or 79,571 tonnes of PET and other related packaging plastics in 2022 — saving about 460,000 m³ of landfill space and 112,000 tonnes of CO₂, and making available 25,000 tonnes of rPET.²⁴ This remarkable feat showcases the potential for industry-driven initiatives to effect transformative change. In 2022, fibre constituted the end-use output for 54% of PETCO's recycled materials, while food-grade rPET resin, PETCO's preferred end-use market, made up 32% of all authorized recycled production.²⁵ Other recycled outputs, accounting for a small percentage, are polyolefins (6%), geotextiles (4%), strapping (2%), and bottle-to-flake (2%).

21 Coliba develops alternative plastic waste management solutions, [Wearetech.africa](#), 2022

22 Coliba, 2023

23 PETCO helps SA brands to meet plastic collection and recycling targets, PETCO, 2023

24 PETCO annual report, 2022

25 *Ibid*

2. Job creation and socio-economic impact

The success of PETCO extends beyond environmental gains. The organization's initiatives have generated 62,000 income opportunities for individuals,²⁶ contributing to local economies and fostering social wellbeing.

3. Economic value

By embracing the principles of the circular economy, PETCO has contributed \$240 million to the South African economy by transforming plastic waste into valuable resources.²⁷ This approach aligns with the broader aspirations of the African continent to harness sustainability for economic growth.

4. Education and awareness

PETCO's engagement extends to educational campaigns, fostering awareness among consumers, communities, and businesses about responsible plastic usage, recycling, and waste management.

However, like many similar initiatives, PETCO has encountered challenges stemming from the absence of standardized recycling practices across the African continent. These challenges include potential limitations on the optimal utilization of recycled PET flakes due to varying quality standards and specifications in different regions. Such discrepancies can sometimes impact the seamless flow of recycled materials, limiting the potential for PETCO's initiatives to reach their full scope and impact. While South Africa and other countries in the region do not necessarily face material restrictions on the export of recycled PET (rPET), challenges related to capacity and pricing may still influence the dynamics of rPET trade in the region.

The PETCO model offers valuable insights for other African countries striving to combat plastic pollution and embrace the circular economy.

- Collaboration is critical — PETCO's success underscores the importance of collaboration among diverse stakeholders, ranging from industry players to government agencies and civil society. This spirit of cooperation paves the way for effective, scalable solutions.
- Shared responsibility — PETCO's shared responsibility approach shifts the onus of addressing plastic pollution from one entity to an entire industry. This holistic approach is particularly relevant for regions where plastic waste spans multiple sectors and communities.
- Economic opportunities — PETCO demonstrates that sustainability and economic growth need not be at odds. Circular economy principles can drive economic value creation, create jobs, and stimulate innovation.

b. Challenges and considerations for scaling production and use of rPET

While rPET presents an environmentally responsible alternative to virgin PET, its widespread adoption comes with challenges that must be addressed. One key consideration is the potential degradation of the polymer chain and the accumulation of impurities and additives during the recycling process, especially in the absence of closed-loop systems. Without proper sorting, super-clean recycling processes, and manufacturing techniques, the quality of rPET diminishes, restricting its use in various product categories such as trays, packaging, and fibres.

Moreover, there is a risk of contamination from non-intentionally added substances (NIAS) present in recycled materials. This highlights the importance of stringent quality control measures throughout the recycling process. Additionally, without an entirely closed-loop system, the number of times PET can be effectively recycled is

²⁶ Let's make the circle bigger, PETCO, 2023

²⁷ *Ibid*

limited, ultimately impacting its overall sustainability. One study estimated that in the absence of an entirely closed-loop system, the rPET in a 100% rPET bottle nearly disappears after the third cycle.²⁸

Another challenge is the potential risk of consumption rebound, where the availability of recycled materials may inadvertently lead to an increase in overall plastic consumption if not balanced by effective waste reduction measures and sustainable consumption habits. This emphasizes the need for a holistic approach to plastic waste management that encompasses circularity principles such as reduction, recycling, responsible consumption, and the prioritization of reusable systems.

In addition to these challenges, common issues such as poor consumer disposal behaviour and the resulting contamination of PET bottles necessitate the need for highly efficient washing systems, which can be costly and labour-intensive. This challenge is not unique to any specific region but is a global issue in food-contact rPET production.

Furthermore, issues such as the low capacity of customs and excise departments to regulate and inspect the import/export of primary, recycled, and waste plastics, coupled with an increasingly fragmented international standards landscape, pose significant hurdles for rPET markets worldwide.

By addressing these challenges and implementing best practice in recycling processes, rPET can continue to play a vital role in advancing the circular economy, contributing to reduced plastic pollution and a more sustainable future for Africa and beyond.

28 How circular is PET? Eunomia and Zero Waste Europe, 2022

3. Global developments in rPET standards and legislation

In the evolving landscape of plastic waste management across African countries, the role of a continental rPET standard for food-contact applications could serve as a crucial policy intervention. Countries such as South Africa, Kenya, Mauritius, Morocco, and Nigeria (see case study 3 below) have made significant advancements in implementing rPET standards or plastic management policies, for example market bans or EPR programmes,²⁹ as part of their broader efforts to manage plastic waste and promote sustainable plastic usage.

Case study 3: Summary of rPET developments across Africa³⁰

Country	Legislative and standards development on rPET
Ghana	The Ghana Standards Authority is developing rPET production standards 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 are at the heart of this new dynamic. The collaboration involves public and private sector actors and aims to develop national rPET standards aligned with international standards by the end of 2024. The World Bank has provided support funds to establish the standard, with the total cost of developing the standard estimated at \$100,000.
Kenya	The Kenyan Plastics and Plastic Products Technical Committee is drafting, under the guidance of the Standards Projects Committee and following the procedures of the Kenya Bureau of Standards, a standard — DKS 2987:2023 — that outlines acceptance criteria for food-grade rPET resin in food packaging, ensuring compliance with regulations on contaminants, migration levels, process traceability, and safety.
Mauritius	The Mauritian Standard (MS 250:2021) for post-consumer PET bottles (specifications for food-grade PET recyclates and preforms) was published in February 2021. The standard specifies the requirements and test methods for post-consumer PET recyclates (flakes and pellets) for PET preforms and PET bottles for packaging food and beverages. It covers the criteria for the safety evaluation of the PET recycling processes. The standard also specifies requirements for the PET preform material that characterize it as safe for direct food contact. The dimensional and mechanical properties of the PET preform and PET bottles are outside the scope of the standard.

²⁹ Making policy work for Africa's circular plastics economy, Resources, Conservation and Recycling, 2023

³⁰ Data derived from a SWITCH to Circular Economy Value Chains international dialogue on rPET workshop in Morocco, December 2023

Morocco

The Sustainable Economy Standardization Commission was created to ensure the monitoring of work undertaken at the international and regional standardization level in 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.

Using recycled plastic for food-grade contact packaging is banned, but the proposed revision of Law 28-00 Article 5 could change this. 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.

Nigeria

The country's demand for PET resin is increasing significantly due to rising plastic packaging production. Recycling pre- and post-consumer PET bottles to turn them into polyester flakes, chips, staples, fibre, and non-woven products is considered 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 strong 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 edible products. SON is now planning to incorporate EPR policy into all plastic standards.

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, and (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% for packaging (primarily bottles). South Africa has two bottle-to-bottle processing sites that can deliver 20% of the total domestic bottle market, with new investment coming in 2024/2025.

There are also many developments around the world related to rPET standards and regulations. For example, within the EU, multiple design guidelines do not facilitate the development of an EU-wide fluid recycled plastics market. Consequently, the European Commission mandated the European Committee for Standardization (CEN, French: Comité Européen de Normalisation) 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 characterization and classification of the quality of sorted plastics wastes; and 3) the characterization and classification of the quality of recycled plastic materials. The recyclability of packaging will be part of the Packaging and Packaging Waste Regulation and will be used to ban packaging that is considered non-recyclable.

As part of this, PETCORE, the European association representing the complete PET value chain, aims to develop one standard of plastic packaging recyclability throughout Europe, to avoid multiple overlapping or contradictory approaches (CEN/TC 261/SC 4/WG 10 — Design for recycling for plastic packaging products). The standard will encompass parameters such as PET colour, additives, and 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. Furthermore, the ASTM D20.95 subcommittee collaborates closely with EU working groups to ensure alignment and coherence in developing recycled plastics standards. This collaboration seeks to harmonize efforts and streamline the regulatory framework for recycled plastics, thus facilitating smoother trade and promoting global sustainability objectives.

Recycled plastics standards are, therefore, extremely relevant internationally with many different ongoing initiatives, which could risk becoming a fragmented landscape, potentially disincentivizing the growth of a global recycled plastics market.

For example, individual policies and technical standards developed unilaterally can lead to disparities and trade tensions across borders regarding recycling practices and the quality of recycled materials. These variations can hinder cross-border collaboration and exacerbate the plastic pollution crisis.

4. The case for a continental rPET standard for food-contact applications

Establishing a Pan-African rPET standard for food-contact applications (encompassing collection methods, cleaning and processing techniques, and quality control measures) could represent a pivotal policy intervention in the fight against plastic pollution in Africa and globally. Aside from acting as a bridge between best practice rPET developments globally and developments at the national level for African nations, such a standard could offer many region-specific advantages to African nations.

a. Reducing reliance on imports and fostering intra-African trade

One of the most compelling advantages of a continental rPET standard lies in its potential to address Africa's challenges in accessing post-consumer PET feedstock for food-contact rPET. The continent faces difficulties and increased costs in procuring such feedstock, mainly due to underdeveloped waste collection and management systems. This internal challenge is exacerbated by the global demand for rPET, which outstrips supply. External factors, for example measures introduced by other regions such as the EU, further complicate the procurement process. For instance, the EU is implementing measures to secure feedstock for rPET, including mandatory EPR schemes, within its Member States and stricter waste shipment rules for non-EU and non-Organisation for Economic Co-operation and Development (OECD) countries. Through large-scale food-contact rPET production, African nations can work towards overcoming their internal waste management challenges, harnessing their internal resources, and meeting local demand for recycled plastic packaging while reducing reliance on imports.

Import dependence can be further reduced via the facilitative role of the African Continental Free Trade Area (AfCFTA), which creates a conducive environment for intra-African trade in feedstock and food-contact rPET products, thereby strengthening regional economic integration.

To further facilitate the adoption of harmonized standards within AfCFTA, provisions outlining the specifications for recycled materials and their inclusion in the trade agreement can be considered, taking inspiration from similar regional standard harmonization efforts worldwide.

Additionally, harmonizing rPET standards in Africa will strategically position the continent in the global market, potentially reducing competition for rPET feedstock from other regions as demand for rPET is expected to rise worldwide. While this forward-thinking approach aims to ensure a stable and sufficient supply for local industries, it may also decrease the attractiveness of the export market for post-consumer PET collectors within Africa. However, the harmonized standard will not necessarily insulate Africa from global competition, as it does not ban the export of post-consumer PET.

Moreover, harmonized standards would simplify the process for African nations lacking the industrial capacity to recycle PET, notably smaller nations and island states. This would enable them to ship collected post-consumer PET to neighbouring African countries easily, assuming the collection method aligns with the rPET standard and suitable levels of traceability are adhered to.

The harmonized standard for Africa could also foster the creation of a much larger regional rPET market, empowering Africa's recyclers to build scale and improve global competitiveness. By facilitating regional PET recycling value chains, harmonization can stimulate collaboration, knowledge sharing, and resource optimization, driving the growth of a sustainable and competitive recycling industry across the continent.

b. Stimulating investment and innovation

Developing a continent-wide food-contact rPET standard holds the potential to catalyse investments in recycling infrastructure and spur innovations in PET recycling technologies. Integrating advanced recycling methods, waste-to-resource technologies, and sustainable business models will create a thriving ecosystem of environmental entrepreneurs and businesses to promote innovation in resource efficiency, particularly water and energy use. This, in turn, will stimulate economic growth and job creation, particularly in the recycling sector. The infusion of investments and innovations in rPET production and recycling technologies will help address PET plastic pollution and contribute to the diversification and resilience of African economies. Additionally, standardization simplifies cross-border trade (reducing Technical Barriers to Trade) by aligning technical specifications, quality requirements, and safety standards. This reduces trade barriers, making it easier for products and services to move across international boundaries, ultimately boosting global commerce and economic growth.

c. Enhancing environmental sustainability

A unified food-contact rPET standard promises to establish a consistent and cohesive approach to plastic waste management across the continent. By promoting the adoption of appropriate policies, regulations, and best practice, African nations can collectively steer toward effective plastic waste reduction and recycling. Standardizing selective collection methods, recycling processes, and related best practice introduces a common framework. This framework can potentially facilitate a significant reduction in plastic pollution, enabling coordinated efforts and consistent practices across the continent. Moreover, it will aid in minimizing plastic leakage into ecosystems, preserving biodiversity, safeguarding natural resources, and mitigating the adverse impacts of plastic waste on land, waterways, and oceans.

d. Elevating global reputation and collaboration

African nations that embrace a continent-wide food-contact rPET standard demonstrate their commitment to addressing a global challenge with a collaborative solution. Such leadership enhances their reputation worldwide, positioning them as responsible stewards of the environment. Adopting the standard can also foster collaboration and knowledge exchange with international partners, enabling African countries to benefit from global best practice, technological advancements, and funding opportunities to combat plastic pollution. Moreover, adopting a unified food-contact rPET standard will pave the way for all African nations to align seamlessly with the requirements of the Global Plastic Treaty, further reinforcing their commitment to international environmental agreements and fostering stronger global partnerships in the battle against plastic pollution.

To mitigate plastic pollution and pave the way for sustainable development, a continental food-contact rPET standard holds immense promise. The advantages would span environmental protection, economic growth, and resilience, fostering circularity and international collaboration. Moreover, as the EU and USA continue to tighten technical standards on rPET production and eco-design criteria on plastic products, it is essential for Africa to develop ambitious harmonized standards. This ensures that African products meet global quality benchmarks for circularity and enables seamless integration into international markets, further increasing economic viability and sustainability. Governments, industry, traders, waste pickers, and consumers benefit from adopting a continental food-contact rPET standard. Governments can wield it as a potent tool for environmental stewardship while fostering economic growth — the industry benefits from improved resource efficiency, cost savings, and a boost in innovation. Traders and exporters are incentivized by simplified trade processes and new opportunities for regional commerce. Informal waste pickers find stable income sources and consumers gain access to sustainable products with precise quality standards.

5. Overcoming challenges and enabling transformation

The journey toward a widely adopted and effective continental food-contact rPET standard is not without its challenges, yet these are opportunities for growth and innovation. Overcoming them will require collaborative determination and a commitment to sustainable change.

a. Infrastructure development

Many African nations lack basic plastic waste collection infrastructure (and the necessary finance to build it). Ensuring the sufficient quality and purity of post-consumer PET feedstock, especially for applications such as food-contact packaging, requires advanced and well-functioning collection systems (such as Deposit Return Schemes). The challenge of establishing a robust recycling infrastructure is met with the prospect of job creation, technological advancement, and increased economic resilience.

To address this challenge inclusively, it is crucial to design infrastructure and collection systems that actively involve and empower informal waste pickers. Often a significant part of the waste management ecosystem, these individuals can play a vital role in collecting recyclables. Collaborative efforts to secure funding, share expertise, and implement efficient waste management systems should prioritize the inclusion of informal waste pickers. This approach contributes to combatting plastic pollution, creating new economic avenues, generating employment opportunities, and fostering skill development among informal waste pickers. By making them integral to the solution, informal waste picking can be transformed into a formalized and sustainable part of the recycling infrastructure.

Case study 4: SWITCH to Circular Economy Value Chains

In Morocco, the SWITCH to Circular Economy Value Chains pilot is working with a consortium of EU and Moroccan private sector partners and the Moroccan government to establish the country's first PET bottle-to-bottle recycling process. Apart from demonstrating the technical and commercial viability, the key to the pilot's success is the development of infrastructure and processes that empower and integrate more than 900 informal waste pickers into the rPET value chain. The pilot will address critical aspects related to the integration of informal waste pickers into the formal economy, such as providing legal recognition, designated areas for collection and sorting activities, and improving traceability within the value chain.

<https://www.switchtocircular.eu/>

b. Shifting behaviour

Changing consumer behaviour demands a concerted effort in education and awareness campaigns. While the challenge may seem daunting, transforming attitudes towards plastic use can lead to sustainable practices in the long term. Partnerships between educational institutions, local media, and community leaders can be pivotal in fostering a culture of responsible consumption, recycling, and environmental stewardship.

Senegal's 'Set Setal' campaign, initiated in 2015, is a noteworthy illustration of such collaborative efforts. The title of this national cleanup initiative, translates to 'make clean' in the local Wolof language. The campaign effectively mobilizes an extensive network of volunteers, associations, businesses, and local authorities, all committed to collecting plastic waste and raising public awareness regarding effective waste management

practices. In addition to its cleanup focus, the campaign actively advocates plastic waste recycling and recovery. This inclusive approach supports innovative projects such as creating paving stones crafted from melted plastic, exemplifying how creativity and community engagement can harmoniously drive sustainable solutions.

Drawing lessons from experiences such as Rwanda's plastic bag ban, it is crucial to ensure that large-scale shifts in behaviour are accompanied by adequate preparation and affordable, available and practical alternatives. Rwanda's ban, while environmentally beneficial, initially posed challenges for the general population, who were unprepared for the sudden change. Therefore, education and gradual adaptation are essential in driving sustainable behaviour change.

c. Coordinating the supply chain

Coordinating the complex supply and value chains necessitates innovative partnerships recognizing shared responsibility. While achieving alignment among manufacturers, recyclers, retailers, and consumers presents a challenge, it also offers an opportunity to redefine business models and strengthen industry collaboration. By working together, stakeholders can streamline the flow of recycled materials, increase efficiency, and drive sustainable practices throughout the product lifecycle.

However, food-contact rPET production, being high-end recycling, requires significant technological and financial investment. Therefore, it may be more feasible for larger-scale recyclers or multinational corporations to engage in this endeavour, given their resources and capabilities. It is essential to ensure that these entities have the necessary support and infrastructure to produce food-contact rPET at a sufficient standard that ensures safety for human health and the environment.

At the same time, smaller-scale recyclers may face challenges in accessing the resources and expertise required for food-contact rPET production. Addressing these challenges is integral to ensuring that the benefits of a continental food-contact rPET standard are inclusive and accessible across the spectrum of recycling enterprises. Tailored support and capacity-building initiatives should be developed to meet the specific needs and capabilities of different types of recyclers, fostering a more sustainable and equitable recycling ecosystem.

d. Building capacity

The challenge of developing human capital aligned with circular economy principles can empower communities and foster a skilled workforce. Capacity-building initiatives, including training programmes, workshops, and knowledge-sharing platforms, can equip individuals with the expertise to drive recycling innovation and sustainable practices. By investing in education and training at technical and vocational levels, African nations can tap into the potential of their citizens to lead the transition toward a more sustainable future.

e. Crafting a regulatory framework

While crafting a harmonized regulatory framework echoes the complexity of continental diversity, the real question lies in identifying the support measures required to assist countries in compliance with standards. While adopting African Organisation for Standardisation (ARSO) standards may be a requirement under the AfCFTA agreement, addressing capacity-building needs, providing technical assistance, and offering financial support are essential for compliance. A delicate balance is imperative to ensure harmonized standards are ambitious enough to achieve mutual recognition from other global markets, such as the EU and the USA. Through constructive dialogue, African nations can ensure that regulations align with shared goals while respecting their unique circumstances.

The African Organisation for Standardization and the standard for Recycled Polyethylene Terephthalate (rPET) for Food Contact applications

The African Organisation for Standardization (ARSO) is a continental standards body in Africa with the primary objective of promoting regional harmonization and implementation of standards on the continent. Established in 1977 under the auspices of the African Union, the organization aims to facilitate intra-African trade, enhance industrial development, improve the quality of goods and services, promote consumer protection, and facilitate market access for African products. ARSO's mandate includes the following.

- Coordination for the development of harmonized standards across various sectors such as agriculture, manufacturing, healthcare, and services.
- Conformity assessment to ensure that products and services comply with relevant standards and attain quality.
- Training and capacity-building of national standards bodies and stakeholders to enhance their understanding of standards development, implementation, and conformity assessment.
- Collaboration with AU member states and regional economic communities, such as the Economic Community of West African States (ECOWAS) and the Common Market for Eastern and Southern Africa (COMESA), to align harmonized standards and regulations within their respective regions.

The African Circular Economy Alliance (ACEA) started engaging with the ARSO in 2021 for the creation of the standard for Recycled Polyethylene Terephthalate (rPET) for Food Contact Applications. This responsibility falls within the purview of the Plastics Working Group of the technical committee ARSO/TC 14, Food Packaging and Labelling, comprised of 16 member countries. The scope of the committee is for the standardization of packaging and labelling of foods, including standards on migration from plastics, metal release, paper, and board in contact with foodstuffs; reuse, recycling, and disposal of materials related to food packaging. The creation of the standard is underway and will follow a predefined process to ensure it is an inclusive and thorough process that leverages best practices and is adapted to the African reality.

Case study 5: The critical role of the African Continental Technical Regulatory Framework (ACTReF)

In contemplating the effective implementation of the continental rPET standard, the future African Continental Technical Regulatory Framework (ACTReF) can play a crucial role. The ACTReF is envisioned as a system that establishes how technical regulations are developed and enforced, ensuring that they do not create unnecessary obstacles to trade and align with the requirements of the World Trade Organization (WTO) Technical Barriers to Trade (TBT) Agreement. Recognizing the synergies, the most efficient manner of implementing the ACTReF would be through the African Continental Free Trade Area (AfCFTA). This aligns with one of the objectives of Annex 6 of the AfCFTA Agreement, aiming to 'establish mechanisms and structures to enhance transparency in the development and implementation of standards, technical regulations, metrology, accreditation and conformity assessment procedures'.³¹ Integrating the rPET standard within the framework of ACTReF through the AfCFTA can provide a robust structure for the seamless development, implementation, and enforcement of standards, fostering transparency and removing trade barriers to pursue a sustainable and harmonized circular economy across the continent.

By overcoming these challenges, African nations can create a legacy of environmental stewardship, economic prosperity, and sustainable development. Through the collective pursuit of a cleaner, healthier, and more resilient future, Africa can set a powerful example for the world — a testament to the strength of collaboration, the resilience of innovation, and the determination to ensure that plastic pollution becomes a thing of the past.

31 African Continental Technical Regulatory Framework (ACTReF) Concept paper, Pan African Quality Infrastructure (PAQI), 2024

6. Fostering regional cooperation towards a continental food-contact rPET standard

With the African rPET standard set to be published in June 2024, the focus shifts towards supporting African nations in meeting the requirements of such a standard. This endeavour will involve a dedicated consortium of stakeholders, including intergovernmental and donor agencies, global standards setters, pan-African institutions, customs authorities, national governments, and industry bodies. This collaboration aims to ensure that African nations can effectively comply with the standard, fostering a sustainable and circular economy across the continent.

In the fight against plastic pollution, regional collaboration emerges as a cornerstone of success. Plastic waste knows no borders, and its impact can traverse national boundaries, affecting multiple countries and ecosystems. By forging collaborative partnerships and shared initiatives, African nations can collectively address the transboundary nature of plastic pollution.

a. Knowledge exchange and best practice

Regional cooperation allows sharing knowledge, expertise, and best practice. African countries can learn from one another's successes and challenges, adapt proven solutions, and pool resources to tackle plastic pollution comprehensively. Moreover, many African individuals and communities already engage in daily virtuous practices.³² They demonstrate habits such as product reuse and repair, rooted in a cultural ethos that is valuable and worth reintroducing in contexts where the 'extract, make, use and throw away' consumerism has become the norm. Facilitating knowledge sharing at a continental level can accelerate the adoption of effective strategies, enabling nations to leapfrog obstacles and rapidly progress towards a cleaner environment (see case study 6).

Call to action: Establish a continental knowledge-sharing platform under the auspices of regional organizations such as the African Circular Economy Alliance (ACEA), with specific ownership assigned to educational institutions, community leaders, and local media for implementation.

Case study 6: ACEA's role in continental knowledge sharing

To further catalyse knowledge exchange, the African Circular Economy Alliance (ACEA) was established within the African Development Bank (AfDB) in 2020. The ACEA serves as a platform to facilitate dialogue and collaboration among African nations, aimed at mainstreaming circular economy principles at the national and regional levels, and equipping African countries with the means to maximize circular economy potential.

Within this framework, working groups were constituted to drive collective knowledge exchange on five priority areas – food systems, packaging, the built environment, fashion and textiles, and electronics – in a way that supports the mission of the Alliance. The working groups reflect a balance of multi-stakeholder constituencies to ensure the feasibility of interventions. These include the private sector, government, institutional, and knowledge partners.

Additionally, the ACEA has hosted circular economy-related sessions at major global and regional events such as the World Circular Economy Forum (WCEF) every year since 2020; the World Resource Forum, EU-Africa Business Forum, United Nations Environment Assembly (UNEA 5.2), etc and organizes knowledge-sharing sessions amongst countries and partners through its quarterly Technical Committee and Annual meetings.

The ACEA provides a vital space for collective learning and the exchange of experiences, enabling African countries and stakeholders to craft innovative solutions and accelerate the transition to more sustainable practices.

32 *Ibid*

b. Coordinated policies and regulations

Coordinated regional policies and regulations create a unified front against plastic pollution. Collaborative efforts to harmonize standards, implement bans on single-use plastics, and establish recycling targets can develop a common framework that transcends individual nations (see case study 7). This approach strengthens the impact of each nation's initiatives, reduces regulatory disparities, and fosters a collective commitment to sustainability. Notably, the momentum for change is already evident, with around 30 African countries out of 54 having legislation or regulations banning single-use plastic bags.³³ This growing commitment sets a promising precedent for the region's concerted efforts to combat plastic pollution and embrace environmentally responsible practices.

Call to action: Establish a regional task force comprising representatives from environmental ministries and regulatory bodies to harmonize policies and regulations, assigning ownership to relevant regional organizations and environmental agencies. A good starting point for this task force would be to consider updating and expanding mutual recognition agreements on rPET standards. These bilateral or plurilateral agreements would facilitate smoother trade and ensure that high-quality rPET materials meeting standardized criteria are recognized and accepted across participating African nations. This step will enhance the efficiency of the regional recycling ecosystem and contribute to a more sustainable and circular approach to plastic use.

Case study 7: The European Union rPET regulation framework

The European Union's regulatory framework for rPET has led to transformative changes in the European PET bottle industry. Initiated by the Plastics Strategy and Packaging Waste Directive (EU) 2018/852 and the Single Use Plastics Directive (EU) 2019/904, these regulations seek to reshape the industry's landscape.

The Single Use Plastics Directive establishes ambitious rPET targets, requiring PET beverage bottles to contain 25% rPET by 2025, rising to 30% by 2030. Stricter recycling goals demand 77% collection by 2025 and 90% by 2029 through collection schemes.³⁴ The Directive also mandates design changes, ensuring caps remain attached to single-use bottles. Additionally, Regulation (EU) 2022/1616 governs recycled plastic materials in contact with food.

Presently, PET is Europe's most recycled plastic packaging material. In 2020, some 3.6 million tonnes of PET bottles were introduced, constituting 70% of total PET usage, but only 17% of bottles contained recycled content. Demand for food-grade rPET surpasses supply, necessitating increased recycling capacity and supply of high-quality sorted bottles.³⁵ rPET products offer notable environmental benefits: they significantly reduce CO₂ equivalent emissions, potentially saving 445,000 tonnes annually by achieving a 60% recycling rate.³⁶

In alignment with the EU's sustainability goals, rPET is pivotal in achieving climate neutrality by 2050. Corresponding with the EU Green Deal's action plan, the Parliament aims for 25% recycled content in single-use PET beverage bottles by 2025 and a minimum of 30% by 2030.³⁷ The regulatory framework for rPET accelerates the industry towards a more sustainable future, underscoring the importance of these changes.

The ongoing revision of EU standards on rPET, including EU (CEN/TC 249/WG 11) and EU (CEN/TC 261/SC 4/WG 10 Design for recycling for plastic packaging products), is worth noting. These revisions signify the EU's commitment to improve continuously and adapt standards, providing valuable insights for African nations looking to establish their own tailored frameworks. By mandating rPET content, enforcing collection targets, and ensuring compliance with food safety standards, the EU showcases the power of legislative interventions to drive circular economy transitions, offering a blueprint for Africa to devise its unique framework.

33 Tackling health impacts of plastic pollution in Africa, WHO, 2023

34 Déchets : qu'est-ce que la directive sur les plastiques à usage unique? touteurope.eu, 2023

35 PET market in Europe, state of play, Eunomia report, 2022

36 The Future of PET, PET Europe Producers' Association, 2023

37 *Ibid*

c. Joint research and innovation

Pooling research efforts and resources enables African nations to develop innovative solutions jointly. Nations can accelerate progress towards a circular economy by collaboratively exploring advanced recycling technologies, sustainable packaging alternatives, and waste management strategies. Shared research initiatives can lead to breakthroughs that profoundly impact the reduction of plastic pollution and the advancement of sustainable practices.

Call to action: Form a collaborative research consortium comprising research institutions, industry players, and environmental agencies, with clear ownership assigned to the ARSO and ACEA for coordination and implementation.

d. Strengthened resource sharing

Collaborative partnerships facilitate resource sharing and the efficient allocation of funds. Joint investments in recycling infrastructure, waste management systems, and educational campaigns can amplify the impact of limited resources. This approach maximizes the reach of initiatives, reduces duplication of efforts, and ensures that progress is equitable and inclusive across the region. An example of such collaboration materialized during the 7th Africa CEO Forum in 2019, when international consumer goods companies launched the African Plastics Recycling Alliance. The aim is to transform plastics recycling infrastructures in sub-Saharan Africa by encouraging public–private partnerships, innovation, and local pilot initiatives to improve collection and recycling.³⁸ Additionally, these companies actively engage with investors and policymakers to develop and finance waste management infrastructure and systems that align with sustainability goals.

Call to action: Establish a regional fund for plastic waste management, overseen by a collaborative council involving public and private sector representatives, with clear ownership assigned to the African Development Bank and regional environmental bodies.

e. Cross-border monitoring and enforcement

Collaborative mechanisms for cross-border monitoring and enforcement can thwart the transboundary movement of unwanted plastic waste while facilitating the trade in high-quality PET feedstock for food-contact rPET production and food-contact rPET itself. African nations can collaborate to design effective systems for tracking waste flows, identifying illicit trade, and ensuring that plastic waste does not compromise the environment of neighbouring countries. By sharing intelligence and cooperating on enforcement strategies, nations can collectively safeguard their ecosystems and amplify the efficacy of their regulatory measures. In designing these collaborative mechanisms, African countries may explore innovative solutions inspired by trusted trade initiatives and resource recovery lanes.³⁹ For instance, implementing a ‘trusted circular trader’ scheme could incentivize businesses engaged in the trade of waste or secondary raw materials. Additionally, considering a ‘resource recovery lane’ could help streamline the movement of secondary raw materials across borders, reducing delays and administrative hurdles.

Call to action: Establish a regional task force on cross-border waste management, comprising representatives from environmental agencies, customs, and border control, with ownership assigned to regional economic communities and environmental bodies for implementation.

³⁸ Companies launch African plastics recycling alliance, IISD, 2019

³⁹ Going Circular, Friedrich-Ebert-Stiftung, 2023

f. Advocacy on the global stage

A united front on plastic pollution empowers African nations to advocate for global change. Collaborative regional action strengthens their collective voice, allowing them to champion international efforts to combat plastic pollution, influence global policies, and inspire other regions to follow suit. By leading the charge, African nations can become catalysts for worldwide change. In this context, collaboration between African regional negotiating blocks, such as the Economic Community of West African States (ECOWAS) and COMESA, presents a valuable opportunity to amplify the impact of advocacy efforts and foster a unified approach to influencing global policies on plastic waste management and environmental conservation.

As African nations engage in global advocacy efforts, it is essential to leverage platforms such as the Intergovernmental Negotiating Committee on Plastic Pollution (INC) to amplify their voices and influence international agreements. Active participation in the INC process allows African countries to contribute their perspectives, share best practice, and advocate policies that address the unique challenges faced by the continent regarding plastic pollution. By actively engaging in these multilateral forums, African nations can ensure that their concerns are heard and integrated into global initiatives to tackle plastic pollution and promote environmental sustainability.

Call to action: Form a continental advocacy coalition comprising government representatives, environmental agencies, and NGOs, with ownership assigned to regional bodies such as the African Union and the United Nations Environment Programme (UNEP) for coordination and global representation.

As African nations work collectively to address plastic pollution through regional collaboration, they could demonstrate the power of unity in the face of a common challenge. African countries can drive transformative change by sharing knowledge, coordinating policies, fostering innovation, and advocating globally. The commitment to collaborative regional action signifies not only a commitment to a cleaner, more sustainable Africa but also a commitment to a better world for all. Through shared efforts, Africa can set a precedent for collaborative environmental stewardship that resonates far beyond its borders.

7. Mobilizing stakeholders

The planned publication of a pan-African food-contact rPET standard is a call to action reverberating across nations, industries, and communities. It is a call to transcend borders, overcome challenges, and seize opportunities to reshape Africa's relationship with plastic. As the continent takes bold strides towards a cleaner future, every stakeholder has a role in this transformative journey.

a. Governments and policymakers

African governments, including intergovernmental bodies such as the African Union and regional trading blocks, can enact policies promoting a circular economy and sustainable plastic management. By crafting supportive regulations, investing in recycling infrastructure, and fostering regional cooperation, governments can pave the way for responsible plastic use and a cleaner environment. Increased dialogue between national standards authorities is also crucial to share knowledge on developments and best practice, and identify areas for collaboration.

Joining initiatives such as the African Circular Economy Alliance (ACEA) presents a significant opportunity for governments and policymakers to align their efforts with broader regional strategies and collaborate with other stakeholders in advancing circular economy principles and sustainable plastic management practices. By participating in ACEA, governments can access valuable resources, share experiences, and contribute to collective efforts to promote a circular economy across the continent.

b. Industries and businesses

Industries and businesses involved in food packaging are crucial in establishing a continental food-contact rPET standard. They can drive innovation by investing in and adopting recycled materials, particularly rPET, in line with the voluntary commitments made globally by significant consumer-packaged goods companies. Corporations such as Coca-Cola, Nestlé, PepsiCo, and Unilever have pledged to achieve specific rPET content ratios in their packaging by 2030 as part of their sustainability goals. This includes redesigning packaging to be more environmentally friendly and committing to responsible production practices. By embracing circular business models focused on resource efficiency, industries and businesses become instrumental in achieving environmental preservation and economic growth.

c. Consumers

Consumers wield significant influence in shaping market demand and can play a crucial role in driving the adoption of sustainable plastic packaging options such as rPET bottles. By advocating and actively choosing products packaged in rPET containers, consumers send a clear signal to businesses that they prefer environmentally friendly packaging solutions. Through informed purchasing decisions and vocal support for sustainable practices, consumers can incentivize firms to prioritize sustainability and contribute to the widespread adoption of recycled materials in packaging.

d. Intergovernmental institutions and donor agencies

Intergovernmental institutions and donor agencies are pivotal in supporting African nations as they strive to adopt the pan-African rPET standard. Several nations will require financial and technical support to build the relevant infrastructure and regulatory processes.

One exemplary initiative demonstrating the positive impact of such collaborative efforts is the SWITCH to Circular Economy Value Chains initiative. Launched in partnership with intergovernmental organizations and

donor agencies, the SWITCH programme focuses on fostering circular economies in Africa, including the establishment and promotion of rPET standards.

The World Trade Organization's (WTO) Aid for Trade initiative is another potentially valuable avenue for supporting African nations in adopting rPET standards. It aims to increase the capacity of developing countries, including those in Africa, to engage in international trade. By providing financial and technical assistance, the WTO facilitates the integration of developing nations into global value chains, thereby creating opportunities for them to establish and comply with rPET standards. African countries can also access resources and expertise to strengthen their regulatory frameworks, build institutional capacities, and foster innovation in recycling processes. This, in turn, contributes to the development of sustainable value chains for rPET products.

8. Conclusion

Plastic pollution is a crisis that demands urgent attention. Adopting a continental rPET standard focusing on food-contact applications presents a tangible path for African countries to transition towards a circular plastics economy, offering economic opportunities, resource efficiency, and environmental sustainability. While the imperative to combat plastic pollution is clear, it is important to remain pragmatic, too.

The reality is that achieving a continental rPET standard will involve several steps. Significant awareness-raising is needed for most nations to understand the merits of such a standard. Many countries will require time to develop institutional capacity, implement systems, adopt technologies, and build workforces that comply with and benefit from such a standard. Understanding the concerns and fears of nations in signing up to such a standard is essential.

The maturation of the African Continental Free Trade Area (AfCFTA) and the establishment of the African Continental Technical Regulatory Framework (ACTReF) will also play pivotal roles, and these processes will require time to evolve. The journey towards a cleaner future necessitates a collective and sustained effort to recognize each nation's diverse challenges and aspirations.

As the African continent aligns with a circular economy approach, it can achieve economic prosperity and ecological responsibility, ensuring a cleaner world for future generations. It is essential to clarify that developing a continental food-contact rPET standard should not restrict or dampen the ambition to reduce overall plastic production.

Recommendations for action

1. Create a unified awareness campaign: this would aim to educate citizens, businesses, and policymakers about the benefits and importance of a continental rPET standard.
2. Capacity-building programmes: these would enhance institutional capacity, technological capabilities, and workforce skills required to implement and comply with the rPET standard.
3. Accelerate AfCFTA integration: actively work towards the seamless integration of the rPET standard within the AfCFTA framework, ensuring its inclusion in discussions and agreements.
4. Establish regulatory frameworks: collaborate on creating a harmonized regulatory framework for food-contact rPET, considering local contexts and aligning with global standards.
5. Encourage circular practices: prioritize circular approaches such as bans on unnecessary plastic products, incentivizing reuse, and adopting packaging-free systems alongside developing the rPET standard. This aligns with the ambitious goals set by African nations in the Global Plastics Treaty.

When implemented collectively, these recommendations can propel the African continent towards a sustainable and circular plastic economy, showcasing a commitment to environmental stewardship and economic advancement.

Annex: Methodology

This paper uses a comprehensive and systematic approach to analyse the potential advantages associated with a continent-wide food-contact rPET standard and its role in tackling the multi-faceted issue of plastic pollution in Africa. The methodology involved an extensive review of existing academic and other literature and pertinent reports on plastic pollution, PET recycling, and circular economy endeavours across the African landscape.

The African Circular Economy Alliance (ACEA) Secretariat has also played a crucial role in informing this paper. Previous engagements with the African Organisation for Standardisation have provided valuable insights into the subject matter. Additionally, a side session during the 2023 World Circular Economy Forum (WCEF) in Helsinki hosted by the ACEA Secretariat, and the Dialogue on Advancing Pan-African rPET Standardization in Morocco, co-hosted by SWITCH to Circular Economy Value Chains with Chatham House, the ACEA, and the Coalition for Waste Valorisation (COVAD), featured contributions from key experts in the field, further strengthening the case for rPET standards.

Case studies, such as the Coliba project in Côte d'Ivoire, have been cited to show how Africa's fast-growing startups in the plastic waste value chain (aggregators and processors) play essential roles in supporting the growth of PET recycling. Global instances of recycling policies and practices are considered to provide insights and best practice. By synthesizing diverse sources, this study concisely addresses the challenges at hand, highlights opportunities for intervention, and presents recommendations for action by African governments to embrace a standardized approach to rPET adoption.