AFRICA

The AR Initiative

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AFRICA SUSTAINABILITY MAGAZINE

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LETTER FROM THE EDITOR

Across the continent, the pressures of climate change are meeting the promise of innovation, and the decisions we make in this decade will shape Africa's economic and social future for generations.

The green rebuild is not simply about adopting cleaner technologies. It is about rethinking how our economies grow, how our cities function, how our businesses compete, and how our people thrive. It calls for practical solutions that create jobs, strengthen communities, and open new markets. It also demands that Africa's natural advantages — our young workforce, renewable energy potential, rich biodiversity, and growing innovation ecosystem — are recognised as foundations for prosperity, not obstacles to it.

This edition brings together stories of entrepreneurs building new industries, cities testing climate-smart ideas, farmers reshaping production systems, and policymakers grappling with how to finance a fairer, more resilient transition. What emerges is the assertion: Africa is not waiting for permission to lead. We are experimenting, adapting and building.

We extend our sincere thanks to Sterling Bank, the sponsor of this edition, for their continued support and for recognising the importance of informed, evidence-driven storytelling in shaping Africa's sustainability journey. Partnerships like this help strengthen public understanding and bring more people into the conversation about what a just and prosperous transition should look like.

As you read this issue, I encourage you to think about where you sit in the green rebuild — as an investor, policymaker, entrepreneur, researcher, or citizen. The transition will not be driven by one sector alone. It requires a participatory approach built by many hands, each shaping part of a future where economic growth and environmental responsibility are not competing goals, but shared ambitions.

Thank you for joining us once again.

Labake Ajiboye-Richard

Editor-in-Chief, Africa Sustainability Magazine

Quarterly Brief

LAGOS STATE STRENGTHENS CLIMATE ACTION THROUGH CIOD AND SUSTAINABLE INVESTMENTS

► **FAITH OSAMAYE**
Research Associate, AR Initiative

Lagos State is increasing efforts to build climate resilience and advance its blue economy through targeted initiatives. Central to this is the Climate Investment Opportunities Diagnostic (CIOD), developed with the International Finance Corporation (IFC) to guide investors toward opportunities in clean energy, sustainable transport, and resilient infrastructure.

The CIOD report identifies key sectors with the greatest potential for impact, built environment and energy, transport, solid waste, and water management, and outlines an investment need of about ₦25 trillion (US$15.6 billion) to achieve the state's climate goals.

Beyond planning, Lagos is taking visible steps to implement change through projects like the Omi Èkó low-carbon water transport system. This initiative is expected to increase the share of water transport from 1% to 5% of daily commuting, potentially saving residents up to two hours per day on key routes. Once fully operational, the system aims to move 25 million passengers annually, reducing travel time and alleviating congestion on Lagos roads. According to the Lagos State Waterways Authority (LASWA), between 70,000 and 100,000 commuters use water transport daily, translating to about 1.7–2.0 million passengers per month.

Lagos is also participating in the E1 Electric Boat Series, reflecting the state's growing focus on clean mobility and technology-led innovation. The Lagos government has projected that the E1 Lagos GP could generate approximately US $100 million in revenue through tourism, hospitality, sponsorship, advertising, media rights, and indirect economic activity.

The state is also investing in nature-based solutions to tackle erosion and flooding while supporting eco-innovation startups that create green jobs and promote sustainable fisheries. As part of these efforts, the government has proposed a ₦3-trillion public-private plan to protect its 180 km coastline using measures such as groynes, beach sand replenishment, and other shoreline-protection projects.

A standout initiative is the biogas facility at Ikosi Isheri Fruit Market, which converts 500 kilograms of daily fruit waste into clean energy. The energy produced powers streetlights, provides cooking gas for vendors, and generates fertiliser, demonstrating how circular economy models can work for local communities.

The urgency is apparent. In 2018, flooding, erosion, and water pollution cost Lagos and two other coastal states US$9.7 billion, around 2.4% of Nigeria's GDP, with Lagos accounting for the bulk at US$8.4 billion. Flooding alone is estimated to cause losses of US$4 billion annually, highlighting the high economic cost of inaction.

Through the CIOD and these practical interventions, Lagos is positioning itself for increased economic activity in sustainable investment and climate-smart urban development, demonstrating that resilience and growth can advance side by side.

G20 Compact with Africa 2025: Communiqué and Plans for Growth and Jobs

The G20 Compact with Africa, an initiative driven by African governments to help create direct connections between African businesses and investors, held an event in Nasrec, South Africa, alongside the G20 Summit, where G20 partners, African governments, and private-sector actors reaffirmed the mandate of the Compact to increase investment, support reforms, and mobilise capital for sustainable development across Africa.

Since its launch in 2017, the Compact has supported more than 1,600 firms and reached over 13.5 million people, improving access to real-sector services and laying the foundation for inclusive growth and job creation.

The transition to Compact with Africa 2.0, the next phase of THE G20 initiative, emphasises structural reform, investment-friendly governance, and industrial transformation. The G20 declaration accompanying the event emphasises the need to channel resources through a newly established Multi-Donor Trust Fund, initially backed by €10 million from Germany. This fund is designed to de-risk investments and support projects that create sustainable jobs, particularly in infrastructure, agribusiness, and manufacturing. The declaration also calls on international partners, development banks, bilateral donors, and the private sector to align behind African-led reforms that improve the business environment, strengthen public-private partnerships, and promote regional integration.

Deputy President Paul Mashatile highlighted that the Compact's next phase aims to transform how investment is planned and delivered, fostering long-term, inclusive, and low-carbon economic growth. By linking investment to job creation, industrialisation, and

value-chain development, the Compact seeks to boost both economic prosperity and social resilience across the continent.

Zambia and Angola were welcomed as new members, signalling growing continental engagement and a commitment to translating the communiqué and declaration into real, measurable outcomes for Africa's economies and workforce.

Brazil-Nigeria Strategic Partnership on Climate Action and Emissions Reduction

Brazil and Nigeria strengthened their collaboration to tackle climate change, focusing on energy, agriculture, and emissions reduction, under the Green Imperative Project (GIP) and the Brazil-Nigeria Strategic Dialogue Mechanism. This South-South cooperation seeks to accelerate the renewable energy transition, promote sustainable agriculture, protect forests and biodiversity, and support low-carbon urban and technological development, in line with shared commitments under the Paris Agreement.

Through these initiatives, both countries aim to:

- Cut fossil-fuel dependence and scale up renewables: reduce energy-sector emissions in Nigeria and prevent further deforestation-related emissions in Brazil.
- Promote sustainable and regenerative agriculture: decrease emissions from agriculture and land use while protecting biodiversity and soil health.
- Strengthen forest conservation and biodiversity protection: preserve vital carbon sinks, especially in Brazil's Amazon and other ecologically rich regions, and curb deforestation and forest degradation.
- Advance low-carbon urban infrastructure, green cities, and eco-technology deployment, improve air quality, reduce black-carbon emissions, and enhance climate resilience through innovation.

Nigeria's updated Nationally Determined Contributions (NDC) projects that emissions could reach approximately 452.7 Mt CO_2e by 2030, highlighting the urgency of collaborative efforts like the Brazil–Nigeria partnership. The partnership, therefore, arrives at a critical point: if successful, it could significantly bend the emissions curve while delivering sustainable development, green-growth opportunities, and social and environmental resilience.

The collaboration also engages Chinese institutions through the Legal Amazon Consortium (CAL), focusing on joint solutions in energy, agriculture, infrastructure, and ecological transition. As a legacy, the partnership will produce a bilateral technical document summarising best practices, recommendations, and successful experiences, consolidating sustainability, innovation, and shared prosperity between Brazil and Nigeria■

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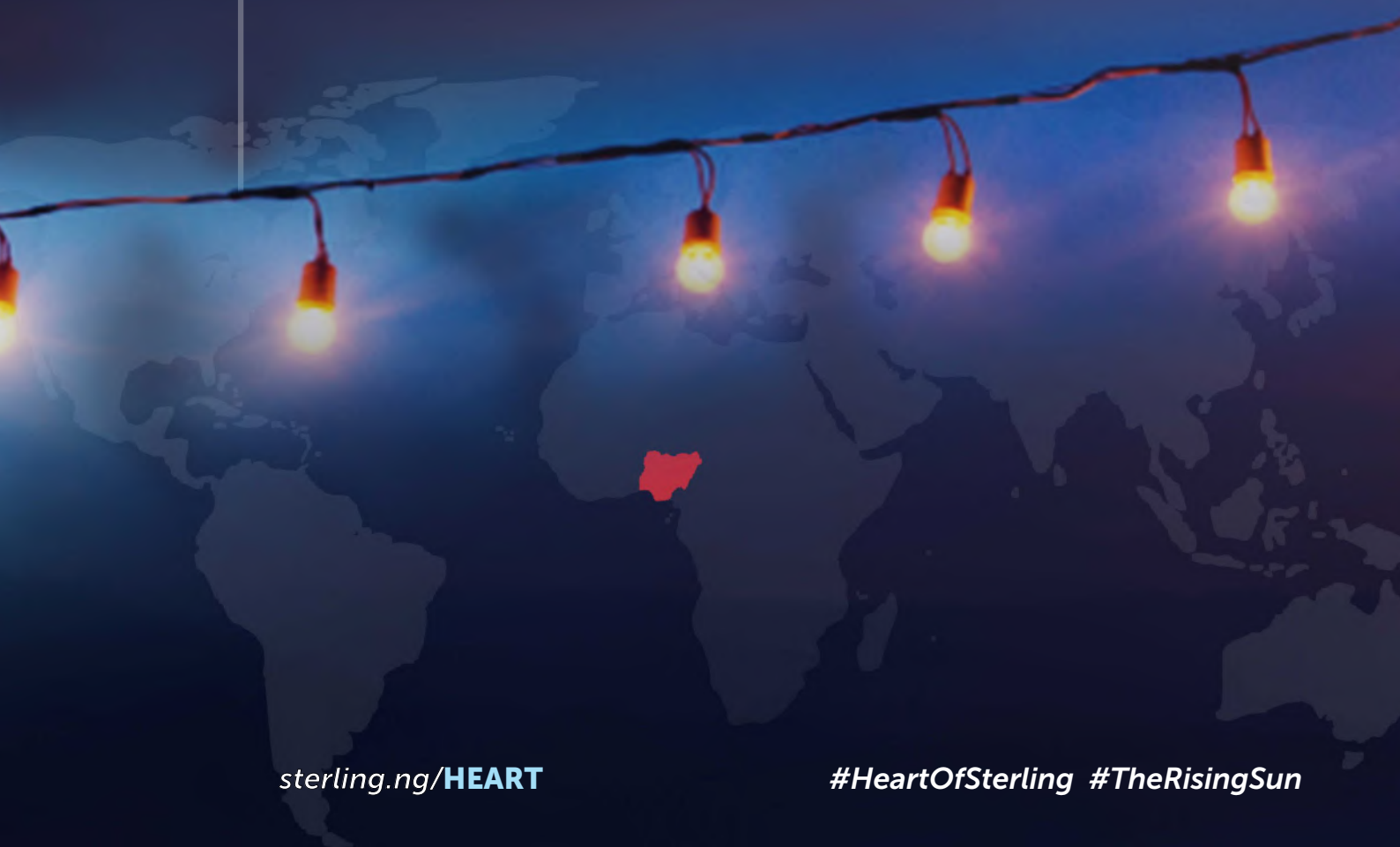

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FEATURE INTERVIEW

Sponsoring the Green Rebuild: James Mwangi on Africa's Next Industrial Frontier

James Mwangi is the Chief Executive Officer of Africa Climate Ventures (ACV), a climate investment vehicle based in Kenya. He sits at the centre of one of Africa's most consequential conversations: how climate action can become the engine of the continent's next industrial era.

Mwangi describes himself as an "accidental climate person," yet his work has placed him among the most influential voices shaping Africa's green industrial future. His argument is clear: climate action is not a burden for Africa; it is the biggest economic opportunity of the century, rooted in competitive advantage rather than obligation.

In this conversation, he lays out how Africa can leverage its structural strengths, its young workforce, abundant natural resources, renewable energy potential and lack of legacy infrastructure, to build globally competitive industries, mobilise new forms of climate-aligned investment, and position itself as a leader in the world's green transition.

What follows is a discussion on Africa's climate advantage, the restructuring of climate finance, and the Green Rebuild, the blueprint for a new economic era emerging across the continent.

Africa's Climate Advantage

Our conversation starts with a question on what led him to start and lead

LABAKE AJIBOYE-RICHARD
Principal Consultant at the AR Initiative

Africa Climate Ventures, and he takes us on an educative journey of Africa's climate advantage and ACV's strategic positioning to leverage it.

For Mwangi, the insight that climate action could unlock Africa's competitiveness was less about environmental advocacy and more about economics. The challenge that had preoccupied him for two decades, how to generate enough employment to match Africa's demographic boom, revealed something fundamental: traditional development models were not delivering at scale. "I had to confront the fact that none of what we were doing — SME finance, digital jobs, creative industries — was producing employment fast enough," he explains. The truth was that Africa just wasn't structurally competitive as a destination for global capital.

That realisation triggered a deliberate search for a structural breakthrough. What emerged was a new understanding of Africa's place in a rapidly changing global economy. "The world is moving toward renewables, toward sensitivity to emissions in every process, and toward technologies that leapfrog the old industrial systems," Mwangi says. "That's a world in which Africa's disadvantages as a capital destination are reduced, and its advantages are increased." He calls this combination Africa's unfair edge - a set of natural and structural strengths that position the continent uniquely for the coming decades. "Our thesis at Africa Climate Ventures is that Africa brings four assets to the green transition," he explains.

"First, our labour force — our population and consumption base. Second, our natural resources, both above ground, in biodiversity and land, and below ground, in our geological gifts. Third, our renewable energy potential; we have the majority of the world's terrestrial solar generation potential because we sit on the best tropical real estate on Earth. And finally, we don't have a bunch of twentieth-century infrastructure and industry to write off. We've got a lot of blue ocean, where new technologies in other places have to be deployed into red ocean."

This combination, he argues, flips the narrative about Africa's constraints. "When the cheapest way to generate productive electrons is solar, whoever has the most abundant high-quality solar will have the cheapest energy, whether they realise it or not," Mwangi says. "That's Africa's long-term advantage."

That conviction sits at the core of Africa

Climate Ventures' investment thesis. "At ACV, we ask where we should be building world-beating, globally competitive new businesses, the kind that take advantage of Africa's unfair edge but are underappreciated in their ability to exploit these advantages." He explains.

How Africa Climate Ventures Invests

If Africa's "unfair advantages" form the foundation of Africa Climate Ventures' thesis, its investment strategy is about turning those advantages into industries that work for both the continent and the planet.

Mwangi explains that ACV focuses on three broad categories of ventures. "We're looking for areas of climate advantage," he says, "and we look at three categories. One is where we can deliver low-carbon solutions for Africa's own domestic consumption, ideally partially funded by accessing global climate or carbon payments. This isn't finance; it's actual credit payments. In that instance, we're essentially exporting climate benefit."

He offers a simple example: reducing household emissions through clean cooking should generate payments for the avoided emissions "If I reduce the emissions from a household by giving them clean cooking, someone should pay me for the free avoided emissions I'm providing the world, over and above what I'm charging consumers."

The second area, Mwangi continues, focuses on Africa's direct export competitiveness, where the continent can produce and trade goods more efficiently because of its resource base and renewable energy potential. The third pillar, he says, centres on the emerging industry of carbon removals. "One way or the other, that's going to be a multi-billion-dollar industry, and Africa needs to be positioned within it," he notes.

Household Energy and Clean Cooking

ACV's first investments reflect this logic. "If I think about the clusters we're in," Mwangi says, "there's household energy, where we're doing a fair bit in clean cooking. KOKO Networks Rwanda is an example of that." He describes clean cooking as one of the most effective ways to translate carbon credits into tangible benefits for communities. "The most efficient way to translate carbon credits into real grassroots impact," he explains, "is to subsidise the transition from firewood and charcoal, which are huge drivers of indoor air pollution, bad health outcomes, and bad time outcomes, particularly hitting young people and women." For Mwangi, it's a massive untapped market. "It's just a huge opportunity," he says, "where you can get to massive scale from transitioning households to ethanol or super-efficient biomass.

Soil Health and Regenerative Agriculture

The second major investment cluster is soils and the future of agriculture. Here, Mwangi argues, the problem is structural. "Africa's agricultural yields massively lag the rest of the world," he says. "Partly it's because when we add more fertiliser to our soils, they just become more acidic. And even where fertilisers work, we can't afford to buy massive amounts." That has pushed ACV to explore alternatives. "We're really looking at organic fertilisers, because the future globally is moving in that direction; fertilisers that recycle existing nutrients within a biome instead of just force-feeding the soil." He highlights biochar as a promising solution. Biochar holds more water in the soil, even if you have less rain than expected. Whatever falls stays available to crops for longer. And even if you go back to chemical fertiliser, biochar acts as an amazing sponge, holding nutrients in the soil. The broader goal, he adds, is to create closed-loop, circular systems that reduce dependency on imports. "We're thinking about how 80–90% of what goes into the soil can be processed and value-added domestically," Mwangi says. "Maybe you add a little from elsewhere, but most of what you're doing is creating circularity, boosting yields in a much more sustainable way."

Green Industrialisation and Competitiveness

The third pillar, green industrialisation, addresses one of Mwangi's deepest concerns: the export of Africa's raw materials and labour potential without corresponding industrial benefit. "Any industry that has material inputs and energy as its key cost drivers, that's every industry, should be doing a lot more of its value addition in Africa," he says.

He illustrates the paradox: "Right now, we take rocks from Africa and move energy from Africa to other places that have less of both, and then wonder why our labour wants to migrate there. It's simple. Let's just do the things that are easier to do here, at a cost point that will be superior to anything anyone else can manage." ACV's green industrialisation pillar is built on this principle. "It's about unlocking areas like the Rift Valley of Kenya as a major global energy and carbon storage hub," Mwangi says. "The Rift has hundreds of untapped gigawatts of renewable energy and underground formations that can store billions of tonnes of CO_2. Those are natural advantages."

Beyond energy and storage, ACV is also exploring electric mobility, alternative proteins, and other sectors that combine profitability with climate impact. "In each of these spaces," he says, "there are new ways of doing things that aren't just better for the planet, they're better for everyone. They cost less and work better." He argues that Africa's opportunity lies precisely in its ability to adopt new technologies without being constrained by legacy systems. "The reason these innovations don't take off everywhere at once," he notes, "is that there are vested interests and a lot of inertia elsewhere. We in Africa shouldn't feel beholden to that."

Rethinking Climate Finance

When asked whether there was a defining moment that convinced him finance was the most powerful lever for Africa's climate transition, James Mwangi pauses, then pushes back gently. "I'm not sure I buy the premise of the question," he says. "I don't believe finance alone will do it."

For Mwangi, the overemphasis on capital has become a distortion. "Because capital is scarce in Africa," he explains, "we've tended to create a cult of the capital allocator as king or queen. This idea that if only we had money, all else would follow." That mindset, he argues, has led Africa to underinvest in other forms of capability. "If you think about where our excellent professionals

are," he says, "we are not investing enough in outstanding engineering, biological and material sciences, the real, technical frontiers of innovation. I'm as interested in those as I am in finance."

This thinking shapes how he operates as an investor. "The goal is to help ventures grow into world-class businesses with staying power. "I usually say to folks: if you're working with us because we're the biggest cheque available to you, you're making a mistake, or we are. You're working with us because we're going to help you unlock a whole bunch of other capabilities you need to build a business that actually performs at scale."

Mwangi sees this hands-on, patient approach as a corrective to a growing imbalance in Africa's investment ecosystem. "Africa has too little capital," he says, "but we also have too much, in the sense that the few deals that meet the narrow definitions for traditional funds get bid up to unrealistic valuations and end up disappointing everyone. Meanwhile, very few vehicles are set up to do the early-stage work, yes, spending some money, but mostly spending time and energy figuring out the right way to build things together. That's the discipline we need at this stage of our evolution as a continent."

Beyond the Cult of Capital

In a follow-up question, Mwangi is asked whether Africa needs more funds focused on new kinds of ventures beyond the familiar fintech or consumer-driven models that dominate investment. His answer is characteristically direct.

"It's this bizarre thing that we have all this crowding," he says, "because we've all embraced this notion, fair in some ways, that Africa is risky. Then you end up saying, the way I'll get investors comfortable is to do the same things they've seen succeed elsewhere. So everyone wants fintech exposure now." The result, he argues, is predictable: overvaluation and underperformance. "If everyone invests in the same space, by definition, capital becomes abundant and returns have to come down; you're all bidding against each other for the same limited supply of customers or quality firms. Either you're paying too much for the firms, or the firms are spending too much acquiring customers. We don't deliberately diversify enough."

That lack of diversification reflects a reluctance to engage with harder, more tangible sectors, what he calls "the business of atoms. Once you're in the business of atoms — energy, manufacturing, food systems — it's harder work. But it's the hard work that actually has to underpin a growing economy. You have to get comfortable funding innovation in these hands-on sectors."

He argues that too much capital has been invested in consumption rather than production. "If I look at where the bulk of African fund investments go, it's to serving the African consumer," Mwangi says. "That's fine, but a growing economy with lots of unemployed young people should be backing the African producer first. Production should come before consumption." The danger is a pattern of shallow growth. "If you're just helping people consume more while they're still poor, you're setting them up for debt," he says. "We're building too many shopping malls and too few factories."

Rethinking Foreign and Domestic Capital

The discussion turns to the dominance of external funding in Africa's climate finance flows, accounting for roughly 87–90% of total flows and being donor-driven. Here again, Mwangi draws a sharp distinction.

"I distinguish between foreign funding and foreign investment," he says. "Funding is, you know, 'Labake, here's a little bit of money because we, the Swiss, feel bad for you in Nigeria. Go do what you can.' That's not sustainable. Free money is not really free."

By contrast, he welcomes investment that aligns with market principles. "If a Swiss investor wants to buy a share of a Nigerian venture that delivers value, or a Swiss buyer wants to purchase the climate services of that venture, both of those are fine. We should be doing more of that. Because we have less capital per capita, and the bulk of the world's consumption is outside our continent. If we're serious about being exporters, we have to attract global capital on reasonable terms, and match that with domestic earnings."

The real problem, he notes, is the mismatch between currencies, capital, and markets. "You can invest in a magnificent business that grows five or six times over, but if the naira drops four times, your brilliant business now looks like a pedestrian return to your dollar investors," he says. "The only way you guard against that is to do what every emerging economy that has taken off has done, invest in export industries."

Mwangi also believes that governments have a crucial role to play in making climate finance work, not by creating new funds, but by creating predictability. "We just need more consistency and trans-

parency," he says. "Invest in common data, predictable regulation, and clear market signals. Right now, if I'm trying to do something that requires climate finance, I don't know that there's a consistent set of rules that, if I follow them, I'll get the things I need from the government." That uncertainty, he says, acts as a "huge tax on the cost of innovation." It discourages small developers, communities, and entrepreneurs who might otherwise lead. "Without transparency, the only people who can take the risk are those with lots of capital to put out there. That's disempowering to local innovation." For Mwangi, the fix is straightforward - predictability and transparency are key.

The Green Rebuild

The conversation turns to the broader question: what would it take for Africa to build a new economic era grounded in sustainability, innovation, and competitiveness?

James Mwangi considers the question carefully and starts with the speed of technological adoption — one of Africa's historical strengths. The shift, he argues, will be driven by economics rather than ideology. "The price points are suddenly coming into range for it to be a real solution for Africa." In sectors where the continent has not yet built legacy infrastructure, the opportunity is to leapfrog entirely, rather than retrofit old systems.

Green Industrial Competitiveness

Mwangi believes these shifts will change Africa's industrial position.

"Because of that rise in renewable energy installation, we are going to see increasing competitiveness in energy-intensive industrial sectors," he explains. "Anything where the biggest factor input is going to be your cost of energy will increasingly be an area where Africa becomes more competitive." He points to examples already emerging. "Go to a number of African countries, and you'll see Chinese manufacturers deploying captive solar and moving industrial capacity already. If I have 100 solar panels to run my factory, I can do more with that factory if I put those panels in that factory in Africa than if I keep them in China, because there's less seasonal variation in Africa."

In this context, global carbon trade instruments, including the EU's Carbon Border Adjustment Mechanism (CBAM), take on new meaning. Rather than simply threatening African exports, they may accelerate industrial relocation to geographies where clean energy is cheaper and more reliable. In Mwangi's industrial framing, compliance becomes competitiveness.

Biomass, Soil and Agricultural Transition

Renewable energy is only one example. Mwangi also highlights biomass-based industries as a significant frontier. "Anything that requires biomass and the conversion of biomass in various ways, whether it's the production of biofuels, it's biomass to carbon as a removals pathway, or it's biomass into circular, kind of soil plays, like organic fertilizer and regenerative agriculture, Africa is the place where those companies and those startups have the best chance to

become big, fast," he says.

Part of the reason is economic: many African countries spend huge sums importing fuel and fertiliser. "The biggest import item in almost every African country is fuel products," he notes. "The second biggest, or third biggest, is fertiliser." Solving those problems internally shifts the balance of trade and strengthens domestic resilience.

Building the Green Economy, Not Waiting for It

For Mwangi, the "green rebuild" is not about symbolic commitments. It is about redesigning Africa's economic engine around sectors where the continent holds structural advantages and can compete globally. That vision shapes how ACV invests. Rather than waiting for markets to mature, Mwangi wants to build companies that demonstrate what is possible. One example is Safi Organics, a regenerative fertiliser company built on years of research and indigenous knowledge. "They were a 7-year-old homegrown company making an organic fertiliser that had biochar as its core component," he explains. "The exciting thing about this business is the organic nutrients that they're mixing with their biochar, which leads to a fertiliser that outperforms imported chemical fertiliser in the field. They're managing to make this fertiliser and sell it at a price point that's competitive with subsidised imported fertiliser." The impact goes beyond climate benefits. "It reduces our reliance on imports," he explains. "It's creating domestic jobs, and all of this in a way that's good for the climate, and just better for the soil in general."

Another example is the Great Carbon Valley, a long-term industrial and science-based venture built on the unique geological conditions of the East African Rift. "You're talking about hundreds of untapped gigawatts of generation capacity," Mwangi says, and underground formations "that can store hundreds of billions of tons of carbon dioxide if we could ever build the technologies to capture it." The goal is to attract global innovators and build a homegrown ecosystem capable of competing at scale over time. "It's a harder play, it's a longer-term play," he says, but one that could eventually anchor a new global industry on African soil.

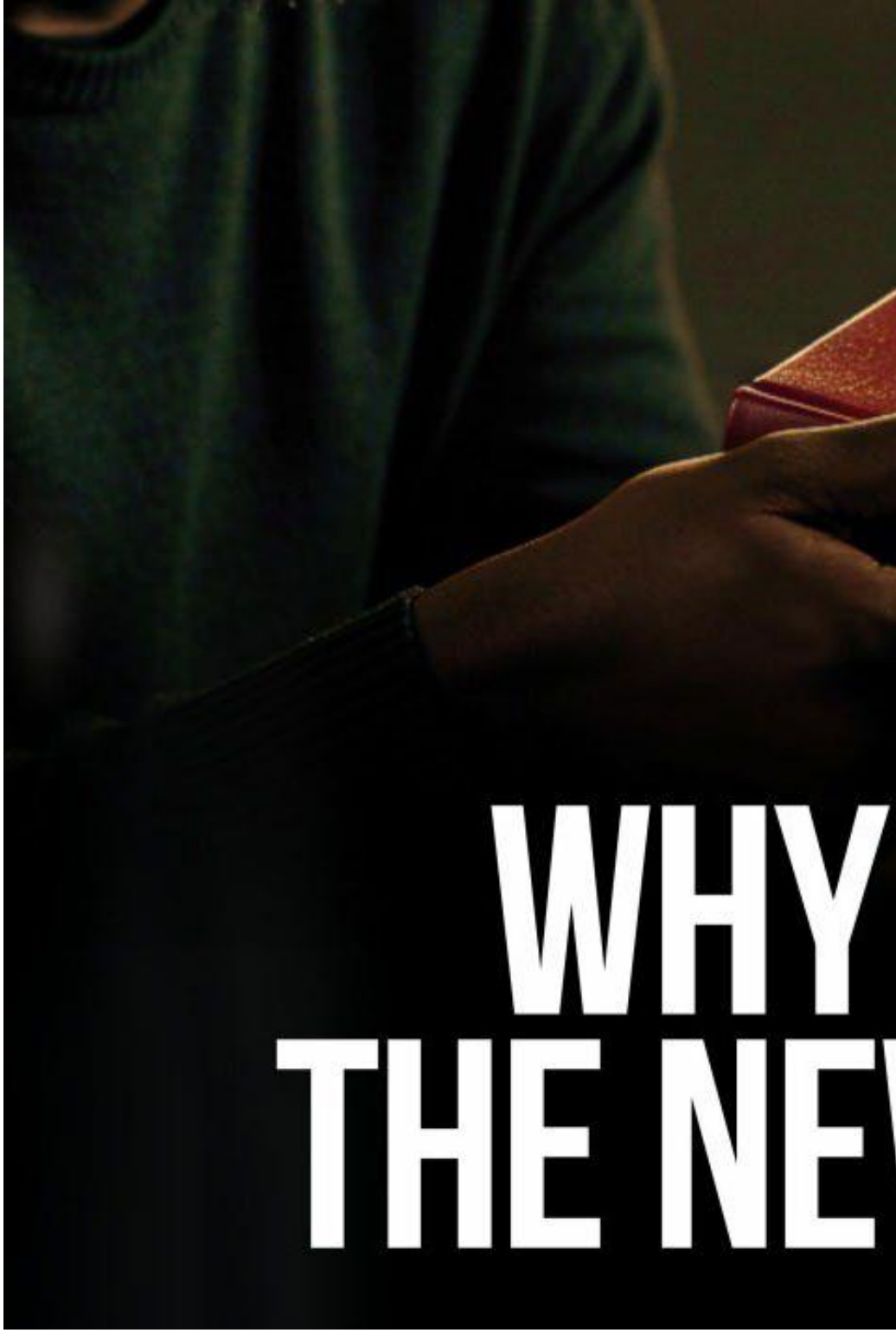
The Opportunity Ahead

The core of Mwangi's thesis is simple: Africa's competitive edge lies not in marginal participation in someone else's economy, but in leading the new one being born.

When he describes ventures like Safi Organics and Great Carbon Valley, he outlines a strategic blueprint: an Africa that exports value-added products, regenerative solutions, clean energy, carbon services, and industrial output, not raw materials.

In his framing, the green transition is not philanthropy or compliance. It is an opportunity Africa can leverage if it embraces its advantages, invests in production rather than consumption, and builds industries aligned to the future rather than the past ■

OP-ED



For the longest time, metrics for measuring results within the banking ecosystem have typically oscillated between bottom-line numbers, deposits, interest rates, balance sheets, and shareholder returns; however, in recent times, a new metric has emerged as perhaps the most meaningful measure of results: 'impact beyond numbers'. In today's world, customers, investors, and even employees are asking a deeper question:

What more does a bank stand for? Today, IMPACT, not profit, is becoming the new currency of relevance.

The Shift from Profit to Impact

The measure of a bank's success has evolved far beyond its balance sheet. A modern financial institution is now judged by its capacity for transformation, with its very survival and reputation tied to its ability to contribute meaningfully to societal progress. Stakeholders want to see a clear, actionable commitment to tackling some of the world's most pressing challenges, from climate change, education gaps, healthcare inequities, and the financing of small businesses that form the backbone of local economies. This shift signals the new standard for trust and relevance, where a bank's true value is now measured by the positive impact it creates in the world, moving from being transactions-focused to a much more inclusive and holistic focus that prioritises people and planet.

A company's impact is now an intrinsic part of its core business model. This commitment to purpose has become a powerful driver of performance, attracting and retaining customers and talent while building resilience in a fast-paced market. A 2022 finding from the Harvard Business Review found that companies with strong purpose-driven strategies outperform peers by 42% in shareholder returns. Purpose builds trust, and trust builds loyalty, a resource far more valuable than any quarterly report.

Sterling's Impact Playbook

At Sterling Bank, our entire strategy is built upon the central pillar of impact. This profound commitment is what guides our focused investments in the HEART sectors—Health, Education, Agriculture, Renewable Energy, and Transportation.

At Sterling Bank, we've chosen to make impact a central pillar of our strategy. This commitment is what drives our investment to the HEART sectors (Health, Education, Agriculture, Renewable Energy, and Transportation), which is reflective of our foundational belief that sustained value creation for both our business and society are deeply interconnected.

In healthcare, we're supporting innovators building affordable clinics and telemedicine solutions.

We're powering education by financing tools and partnerships that give young Nigerians access to world-class learning opportunities.

In agriculture, we've built financial products that mirror the realities of farmers' seasonal incomes, ensuring they not only survive but scale.

On the topic of renewable energy, we're investing in clean solutions that power homes and businesses sustainably.

In transportation, we're working on financing models that make movement safer and more efficient in congested cities.

That is what true impact looks like.

Each of these choices reflects our deliberate commitment to being a partner that empowers progress and builds a prosperous future for all.

Why Impact Wins

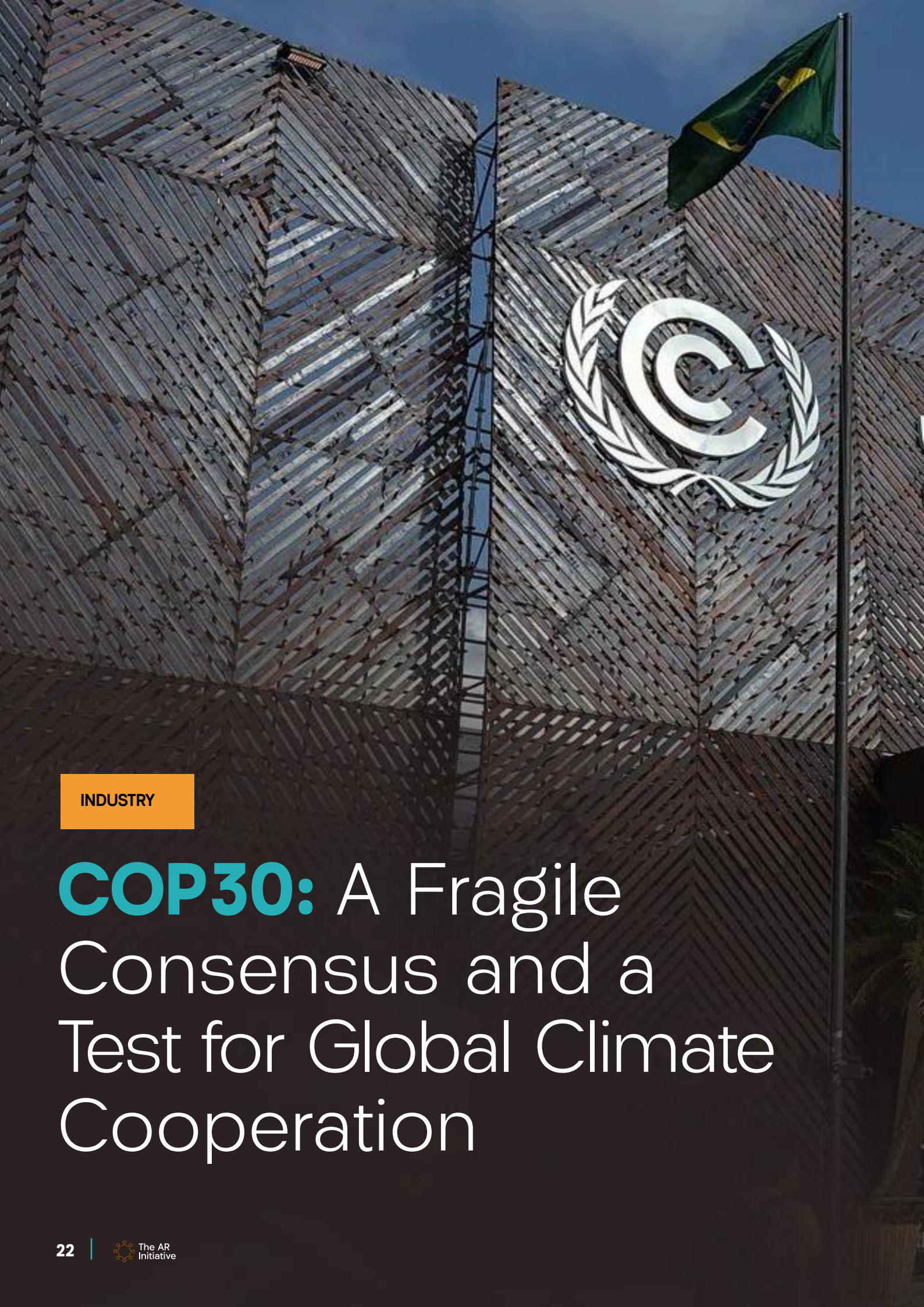
Impact-driven banking is a powerful driver of long-term commercial success. A bank's purpose has become a critical factor for appealing to modern consumers and talented employees. According to Deloitte's 2023 Global Consumer Pulse Survey, 68% of consumers were more likely to choose a brand aligned with their values. Customers increasingly select institutions that reflect their priorities, and employees demonstrate greater commitment when their work is tied to a higher cause. Communities flourish when banks invest in shared prosperity, and in a volatile world, it is a clear purpose that gives organisations resilience.
A bank's lasting effect on people and communities is its most powerful and irreplaceable asset, a unique advantage that ensures success.

The Future is Purpose-Led

Banking is fundamentally built on trust, a resource now earned through relevance, empathy, and impact.

At Sterling, we believe the future belongs to institutions that recognise this truth: impact is the foundation of profit, a principle that guides our business model. It's the very source of our long-term value and sustainability.

Because when banks serve humanity's deepest needs, profits will follow. Where profits follow purpose, prosperity is shared by all ■



INDUSTRY

COP30: A Fragile Consensus and a Test for Global Climate Cooperation

The 30th UN Climate Change Conference (COP30), hosted in Belém, Brazil, was billed as the "COP of Truth", a make-or-break moment for global climate cooperation. Instead, it revealed deep fractures in international consensus. While the summit produced a package of commitments, it also highlighted just how divided the world remains on the pace and fairness of climate action.

A Complex Deal

After two tense weeks of negotiations, delegates adopted a compromise text that calls for mobilising at least $1.3 trillion per year by 2035 to fund global climate action. Adaptation finance is set to double by 2025 and triple by 2035, signalling a long-awaited boost for countries most affected by climate impacts. The Loss and Damage Fund, first established at COP28, was operationalised with replenishment cycles confirmed, a key win for developing nations seeking compensation for climate-related destruction.

Two major initiatives were also launched: the Global Implementation Accelerator, A collaborative and voluntary initiative launched under the leadership of the COP30 and COP31 Presidencies to support countries in implementing their NDCs and National Adaptation Plans (NAPs) and the Belém Mission to 1.5°C, An action-oriented platform under the COP29-COP31 troika to foster enhanced ambition and international cooperation across mitigation, adaptation, and investment, designed to help countries turn climate pledges into tangible results. For the first time, COP30's final decision explicitly acknowledged the threat of climate disinformation, committing countries to promote information integrity and counter false or misleading narratives that undermine climate science.

However, the most contentious issue, phasing out fossil fuels, once again fell short of decisive action. More than 80 countries backed Brazil's proposal for a formal "roadmap" to phase out fossil fuels, but this language was dropped from the final text. The adopted agreement merely reiterates the COP28 "UAE Consensus" phrase: a call to "transition away from fossil fuels," a formulation arguably too weak to drive change.

Global Trade and Climate Politics Collide

For the first time, global trade became a central theme at a COP. The European Union's planned Carbon Border Adjustment Mechanism (CBAM), a tariff on carbon-intensive imports such as steel, fertilisers, and aluminium, sparked heated debate. Developing countries, including China, India, and Saudi Arabia, argued the policy unfairly penalises their exports, while the EU defended it as a measure to protect its industries and accelerate global decarbonisation.

What This Means for Africa

For African countries, COP30's finance pledges and adaptation commitments offer cautious optimism. The continent, which contributes less than 4% of global emissions yet bears disproportionate climate impacts, stands to benefit from the promised scale-up of adaptation and resilience funding. However, the fine print matters: the timeline to 2035 and the reliance on "mobilised" finance mean much depends on whether wealthy nations deliver on past pledges.

Africa's leaders have repeatedly stressed the need for climate finance that supports productive, job-creating growth, not just emissions reduction. If implemented effectively, the Global Implementation Accelerator and the Belém Mission could channel support into green industries, energy access, and nature-based solutions across Africa. Yet without a clear global framework to phase out fossil fuels, the continent risks being caught between development imperatives and evolving trade barriers, like the EU's CBAM.

COP30's outcomes mark incremental progress but no breakthrough. The world's climate architecture remains intact but fragile. The pledges on finance and adaptation represent important steps, yet they fall short of the systemic transformation required to meet the 1.5°C goal.

As UN Climate Chief Simon Stiell remarked, "A new economy is rising, while the old polluting one is running out of road." The question now is whether Africa, and the developing world, will have the resources, autonomy, and partnerships to build that new economy on their own terms ■

"As we leave Belém, this moment must not be remembered as the end of a conference, but as the beginning of a decade of turning the game. The spirit we built here does not end with the gavel; it continues in every government meeting, every boardroom and trade union, every classroom, laboratory, forest community, large city, and coastal town."

COP30 President, André Corrêa do Lago

M-KOPA
POWER TO OWN

OP-ED

Kenya's Ecosytem Blueprint for **Africa's E-mobility** Transition

Brian Njao
M-KOPA,
Mobility GM

The continent's move towards e-mobility has gone beyond a marginal concept to a practical, greener and scalable solution for the future of transport, especially in the motorcycle sector. And no country illustrates this transformation more than Kenya. Today, Kenya stands as a leading example in the e-mobility sector, due to a collaborative ecosystem where government, manufacturers and technology innovators work together to lower barriers and scale adoption.

Motorcycles as a source of livelihood

Over 30 million motorcycles are in operation across Sub-Saharan Africa, sustaining millions of livelihoods, fueling economies. In Kenya alone, more than three million boda bodas navigate urban and rural roads daily, powering essential transport, on-demand services, and critical logistics, generating KES 660 billion annually, 4.4% of national GDP, while informally employing over 2.5 million people.

The sector, although one of the largest in the country, faces significant challenges, including a 25% surge in fuel prices over two years, rising maintenance costs, and the precarious nature of daily earnings. The environmental toll of internal combustion motorcycles raises the stakes even higher. Air pollution and public health risks linked to these vehicles underline the importance of transitioning to sustainable transportation.

Kenya's e-mobility ecosystem is a promising model not just for the country but for the continent in reducing emissions and increasing the financial resilience of its riders.

Environmental and Health Impact

Internal combustion motorcycles currently dominate Kenya's streets and contribute significantly to transport-sector CO_2 emissions and deteriorating urban air quality. Studies reveal that motorcycles are responsible for over 40% of emissions in Nairobi-like cities in Africa, linking them directly to more than 21,000 premature deaths annually in Kenya. Boda boda riders, who are on the road from sunup to sundown for an honest income, bear the brunt of this exposure.

Kenya's Ecosystem Blueprint

Kenya has made significant strides in climate action. The country is generating over 90% of its electricity from renewable energy, one of Africa's cleanest grids, directly fueling its e-mobility transition: cutting operation costs by up to 75% and reducing emissions by 90% compared to petrol bikes. Although electric bikes currently make up around 4% of new motorcycle sales, the demand continues to outpace supply, signalling robust market growth rooted in a comprehensive ecosystem approach.

This ecosystem approach combines visionary policy, technology tailored to local conditions, innovative financing, and strategic partnerships. The National E-Mobility Policy enacted in 2024 sets ambitious goals, including the deployment of 10,000 EV charging stations by 2030 and incentives for local Original Equipment Manufacturers (OEMs). OEMs have responded with electric motorcycles equipped with durable frames and swappable high-capacity batteries designed to endure Kenya's challenging terrain and commercial use patterns.

Yet, the high upfront cost of electric motorcycles remains a critical barrier. However, inclusive finance models such as M-KOPA's are making ground to address this issue. As Kenya's leading e-bike financier, M-KOPA is leveraging its pioneering, proven pay-as-you-go platform to expand access by aligning payments with riders' daily incomes. An innovation that has enabled over 5,000 riders to switch to electric

vehicles, saving them an average of KES 730 per day, in fuel savings, lower maintenance, and efficient battery swapping.

Strategic Partnerships

The early success of e-mobility can be attributed to a stringent approach in partnering with the best-in-class operators. These strategic collaborations have been instrumental in accelerating adoption. Collaborations with ride-hailing platforms like Bolt channel electric motorcycles to thousands of riders via M-KOPA's subsidised pay-as-you-go financing, while alliances with Roam unlock fleet-scale deals for businesses and expand local manufacturing.

Kenya's growing battery-swapping network, nearing 100 stations and poised for rapid expansion, minimises downtime by allowing riders to rapidly exchange batteries. Home charging-capable electric motorcycles are also increasingly available to peri-urban and rural riders, ensuring they can maintain consistent incomes even in areas without dense swapping infrastructure.

Crucially, the sustainable growth of this sector depends on protecting rider welfare. A financial safety net should be available when the unexpected happens, whether that is due to an injury or a damaged bike. This is why packages like M-KOPA Cares, which offers insurance that covers motorcycles, batteries, and riders themselves from injury or death, complemented by GPS tracking, remote locking, and multi-year warranties, collectively bolster rider confidence and promote long-term adoption.

The rider protections form the vital human core of Kenya's multifaceted e-mobility ecosystem, which exemplifies how visionary policy, inclusive finance, locally adapted manufacturing, strategic partnerships, and rider protections can drive a just and sustainable mobility revolution. This integrated model offers a blueprint for African nations seeking to harmonise economic growth with environmental stewardship and public health priorities.

The iconic and viral image by photographer Osman Siddiqi, of Mount Kenya visible from Nairobi's clear skies during the 2020 lockdown, is our north star to a restored urban environment fueled by the rapid adoption of electric motorcycles. The urgent call now is to accelerate progress by mobilising stakeholders across the continent, industry, finance, and communities to scale impact and ensure cleaner cities, safer roads, and enhanced livelihoods ■

PEOPLE & COMMUNITIES

Agritech Innovations for Climate Resilience in Kaduna: How Sustainable Bell Pepper Farming is Empowering Smallholders for Africa's Green Rebuild

As Africa advances toward a just transition, the urgency to scale agricultural climate adaptation remains central to our survival, prosperity, and equitable future. In The Green Rebuild in Africa, agriculture is both an anchor for resilience and a frontier for clean innovation. In November, this intersection emerged clearly in the recent capacity-building intervention implemented in Kaduna State, training 30 smallholder farmers in sustainable, climate-smart bell pepper cultivation.

Bell peppers hold remarkable potential for income growth across Nigeria. Yet, farmers continue to operate below production capacity due to outdated techniques, limited access to modern tools, and climate-linked uncertainties. Average national yields remain at 2–9 tonnes per hectare, far below the achievable 15 tonnes per hectare with improved management practices.

Post-harvest losses worsen this

JESSE GUDAH
Regenerative Impact Foundation

productivity gap, with up to 20–30% of vegetables lost after harvest, thereby shrinking rural incomes and food supplies. But through technology-driven farm training, we are witnessing a shift, one that blends innovation, soil regeneration, market access and human equity into a scalable adaptation pathway.

The Regenerative Impact Foundation designed a three-day programme to move farmers beyond traditional practices and into climate-smart production, introducing regenerative soil management, bio-pest control, and efficient irrigation models to address erratic rainfall, degraded soil fertility, and pest-induced losses. Practical demonstrations formed the backbone of delivery: nursery establishment, transplanting techniques, compost-based fertilisation, integrated pest management, drip irrigation for water savings, and post-harvest packaging to reduce rot and shrinkage. However, what marks this intervention as transformational is the integration of agritech pathways to resilience, with farmers introduced to affordable digital tools for:

- weather prediction to guide irrigation cycles
- market-information apps to track price fluctuations
- agro-input advisory channels for disease response
- WhatsApp/Telegram extension networks for ongoing technical support

Technology thus becomes a resilience shield, enabling farmers to anticipate climate stress, reduce guesswork, and maximise returns using data-supported decisions.

Innovation Rooted in Human Equity

Climate transition must be just, participatory and economically enabling. Kaduna's training embodied this principle by intentionally prioritising 60% youth and 40% women, recognising them as the agricultural drivers of tomorrow and the most structurally excluded from formal agribusiness knowledge.

- **Youth** face high unemployment yet hold untapped capacity for agri-enterprise. Introducing them to tech-enabled horticulture reframes agriculture as modern, profitable and future-forward.
- **Women**, already central in production and household nutrition, gain structured control of value chains through training in packaging, direct marketing and yield optimisation.

By placing skills directly in the hands of these underserved groups, the programme contributes to gender equity, livelihood enhancement, and rural retention, meaning fewer young people forced into cities and more women stepping confidently into commercial frontiers.

The training delivered tools for immediate application: seedlings, organic fertilisers, bio-pesticides, nursery trays, gloves, and hand sprayers were distributed to all 30 participants, ensuring that knowledge translated into soil-level implementation. They all established their own bell pepper nurseries and demonstrated competence in seed selection, soil regeneration, organic pest control, irrigation efficiency and post-harvest handling. Every participant left with a complete starter kit, including 100–150 seedlings, organic bio-inputs, and basic tools, positioning them for immediate implementation on their farms. As a result, farmers reported increased confidence in managing climate stresses, improved knowledge of profitable market segments, and a clearer pathway to raising yields from the national average of 2–9 tonnes per hectare towards improved productivity benchmarks. The training has begun shifting mindsets from subsistence to commercially oriented, climate-smart production—laying the foundation for higher income potential and long-term resilience in Kaduna's vegetable value chain.

Over 72 hours, farmers developed competence across key phases of the horticultural cycles:

Day 1	Nursery management, soil regeneration	Farmers established their own mini nurseries
Day 2	Transplanting, irrigation efficiency, pest management	Participants practised drip & bio-pesticide methods
Day 3	Harvest optimisation, market linkage, financial literacy	Farmers calculated profit margins and post-harvest value

Each component reflects a pillar of sustainable intensification: grow more food on less land, with less ecological burden, for greater economic return.

Agriculture, when empowered through technology, becomes Africa's most accessible climate-adaptation tool. Nigeria's rural belt holds millions of smallholder farmers capable of doubling productivity through low-cost, regenerative innovation. Kaduna demonstrates that when agritech capacity-building is coupled with follow-up support through WhatsApp advisory groups, feedback tracking, and monitored adoption, systemic change becomes replicable at state and national levels. If scaled across the North and eventually the country, such interventions could lift thousands of households out of poverty, secure vegetable supply chains, strengthen local food sovereignty, reduce rural unemployment, and build climate-resilient communities.

The Green Rebuild demands precisely this, financing climate solutions that are affordable, technology-enabled and equity-driven. Kaduna's bell pepper initiative serves as a model for how regenerative agriculture can drive inclusive growth, empower vulnerable groups, and anchor Nigeria's adaptation pathway in community-level transformation ■

LEADERSHIP

TOP 5 - Brands leading the green rebuild in Africa.

01

MTN
Group Chief Sustainability & Corporate Affairs Officer - Nompilo Morafo
Headquarters: Johannesburg, South Africa
Founded: **1994**
Employees: **17,684**

MTN is a pan-African telecommunications group providing mobile and digital services across multiple African and Middle Eastern markets. They have a group-wide pathway to reduce operational emissions and improve network energy efficiency, including a multi-year programme to cut diesel use at base stations by expanding hybrid and solar sites. MTN publishes a sustainability report that links targets to operational changes, such as energy management in network operations and greener power for facilities, while embedding supplier standards and social impact programmes in priority markets. These efforts are designed to reduce the connectivity footprint as data demand grows and to strengthen resilience during grid instability.

MTN targets net-zero by 2040 and has formalised a decarbonisation pathway ("Project Zero"), alongside network-resilience investments that reduce diesel dependence ■

Sustainability Report

02

Safaricom
Director of Sustainable Business & Social Impact - Karen Basiye
Headquarters: Nairobi, Kenya
Founded: **1997**
Employees: **6,462**

Safaricom is Kenya's leading integrated communications company and the creator of M-Pesa, the mobile money platform used across East Africa. Safaricom has steadily replaced diesel-only sites with solar and hybrid solutions and has expanded energy-saving upgrades in its data and switching centres. The business ties climate objectives to customer and community outcomes, using connectivity to support inclusive services such as digital finance and health while disclosing progress through annual sustainability reports. Its approach combines emissions reduction with community investment and supplier engagement so that growth in data traffic is matched by more efficient power use and broader social value.

Safaricom follows a comprehensive net-zero-aligned strategy by 2050, seeking to achieve 20% annual emission reductions in its network, grow 5 million trees, and purchase or generate 50% of its energy needs from renewable sources ■

Sustainability Report

Standard Bank
Head of Sustainability - Boitumelo Sethlatswe
Headquarters: Johannesburg, South Africa
Founded: **1862**
Employees: **50,488**

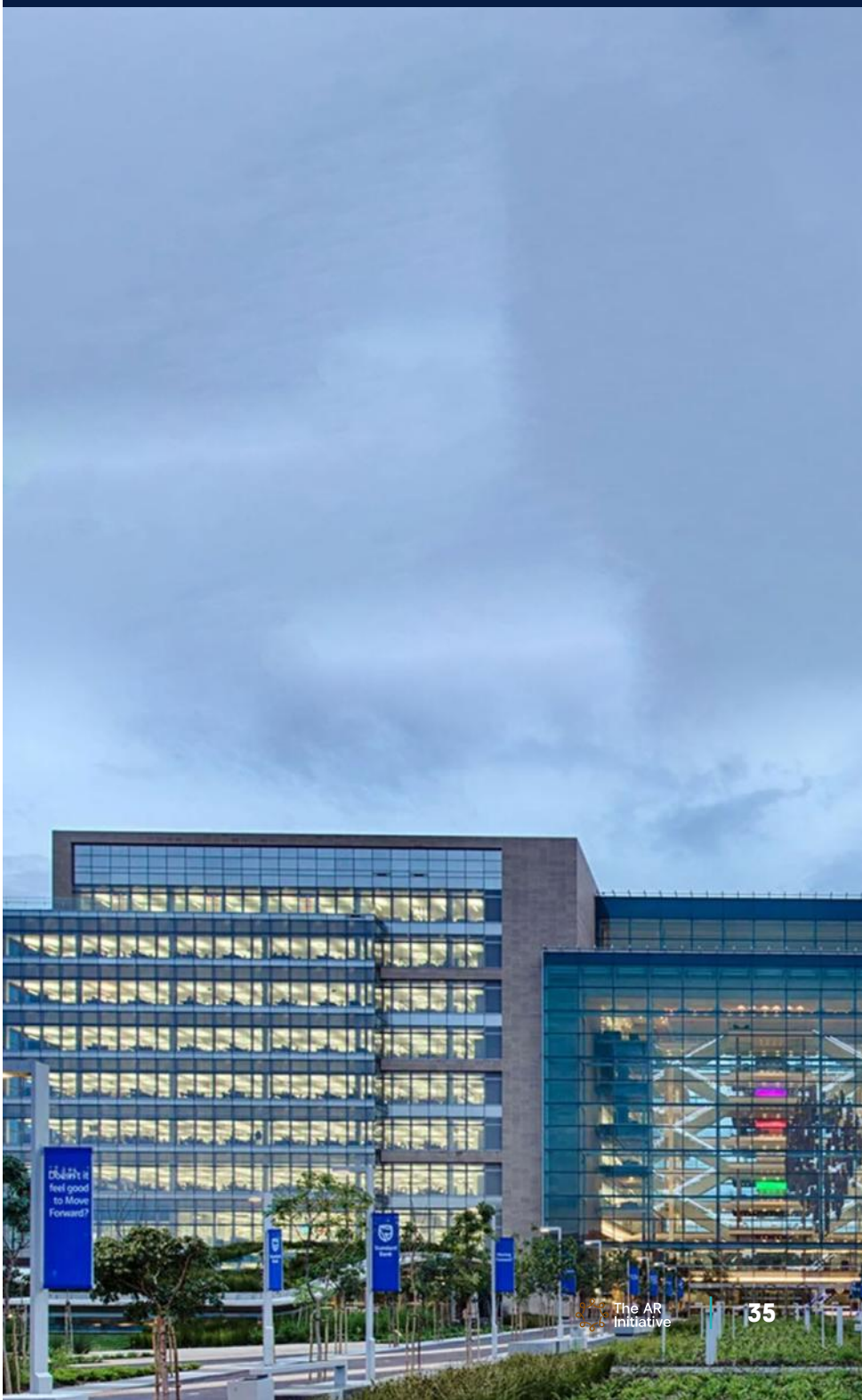
Standard Bank is one of Africa's largest banking groups, serving retail, business, and institutional clients across the continent and in key international hubs. The Bank has set an ambitious multi-year sustainable finance mobilisation target and is expanding its support for renewable energy, climate-smart infrastructure, and adaptation projects. It actively backs blended-finance structures and transition-aligned lending to channel more capital into initiatives that strengthen energy security, support small businesses, and build resilience to droughts and floods.

In 2025, Standard Bank raised its sustainable finance mobilisation target to R450 billion by 2028, explicitly including adaptation and resilience. The Bank is committed to achieving net-zero financed emissions by 2050 and continues to expand access to affordable, reliable power through both large-scale renewable projects and decentralised energy solutions for SMEs and households. By 2024, renewable-power generation finance was nearly six times that of non-renewable power, and between 2022 and 2024, the Bank achieved 82 per cent of its renewable-energy financing target, mobilising R53.4 billion toward Africa's green transition ■

Standard Bank

Sustainability Report

03



04

Access Bank
Head of Sustainability - Omobolanle Victor-Laniyan
Headquarters: Lagos, Nigeria
Founded: **1988**
Employees: **28,000+**

Access Bank is a leading Nigerian banking group with operations across Africa and a growing international footprint, serving individuals, SMEs, and larger corporates.

Sustainability impacts and milestones: Access Bank has been an early mover in Nigeria's sustainable finance market, issuing Africa's first CBI-certified corporate green bond of NGN 15 billion in 2019, catalysing Nigeria's local green capital market. The bank applies sustainability criteria in credit processes and runs programmes that support women-led and small businesses, financial inclusion, and community health and education. It reports progress annually, linking lending priorities to renewable power, cleaner transport, and resource-efficient operations within its own estate.

Access Bank has over 240 solar-powered ATMs, has planted over 2800 trees through employee engagement programs and implements waste reduction initiatives across the bank ■

Sustainability Report

05

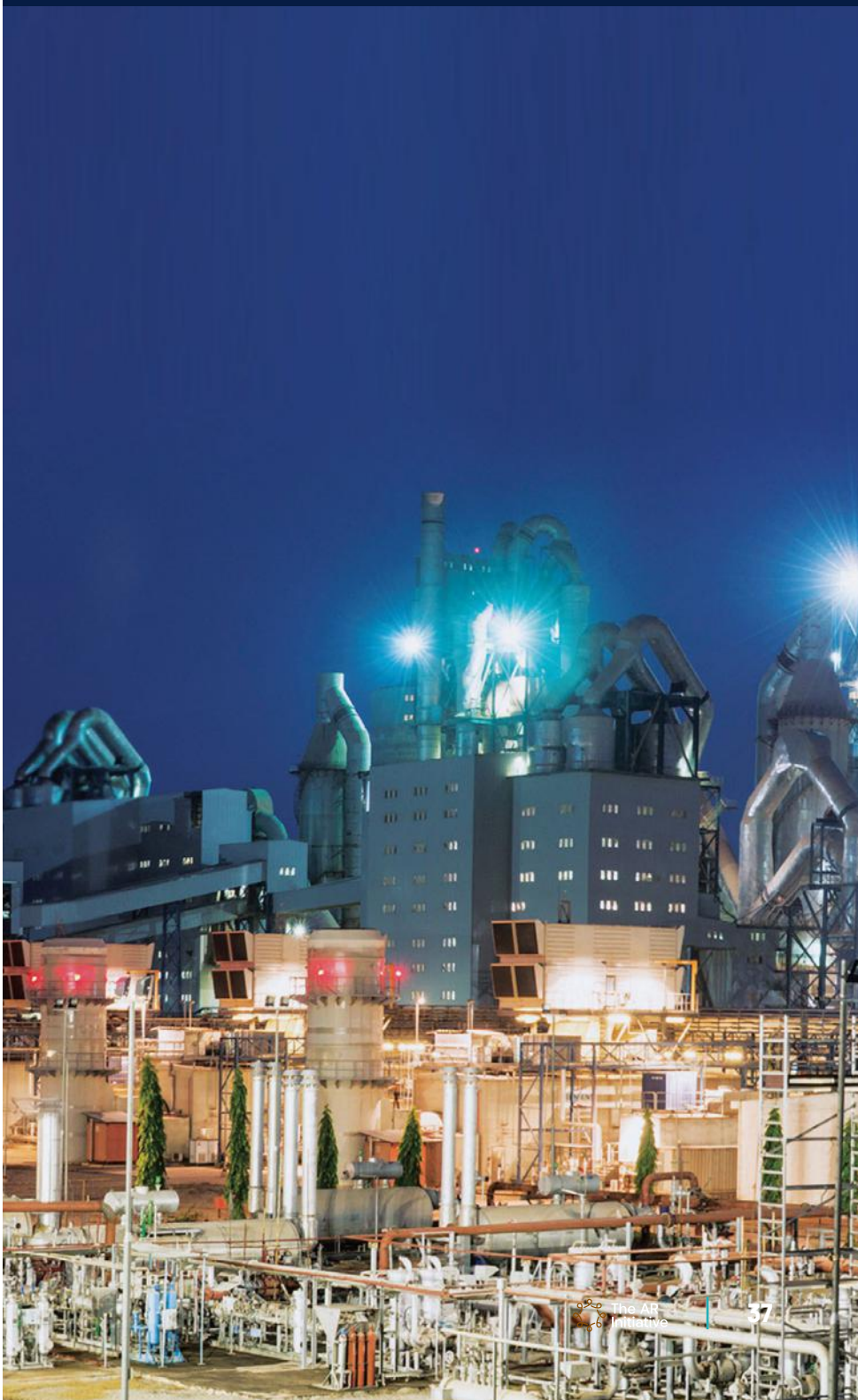
Dangote Cement
Head of Sustainability - Dr Igazeuma Okoroba
Headquarters: Lagos, Nigeria
Founded: **1992**
Employees: **19,112**

Dangote Cement, a subsidiary of Dangote Industries, is a major African cement producer with integrated plants and grinding facilities across multiple countries, supplying materials essential to building and infrastructure. The company is expanding the use of alternative fuels and raw materials to reduce the clinker factor and lower process emissions, while piloting natural gas and compressed natural gas in logistics to cut diesel consumption. It has increased co-processing of suitable waste streams in cement kilns, contributing to circular-economy outcomes and reducing landfill waste. In 2024, their alternative-fuel thermal substitution reached 10%, with 485,000t co-processed in kilns.

Across plants, Dangote Cement discloses energy and emissions data and invests in community programmes, with safety, water stewardship, and dust control as ongoing operational priorities ■

DANGOTE CEMENT

Sustainability Report



INNOVATION AND INDUTSRY

Green Hydrogen: The Next Phase of Africa's Renewable Energy?

Ifeoluwa Ettu

Africa has become a major focus of global interest in green hydrogen. Billions of dollars have already been committed to early-stage projects, and even more capital has been pledged by foreign governments and companies hoping to develop production hubs across the continent. Increasingly, Africa is viewed as a future destination for renewable hydrogen, a potential industrial pillar of the global energy transition.

Despite green hydrogen projects worth over $100 billion having been announced across Africa, roughly 600 million people (about 53% of sub-Saharan Africa's population) still lack access to electricity. As South African Minister Kgosientsho Ramokgopa observed, "The continent should enter the energy discourse better aligned, coordinated, ambitious, informed by sovereign and continental developmental motives". The question remains: can Africa leverage hy-

drogen in a way that strengthens both its economy and its energy security?

Africa's Green Hydrogen Alliance

In 2022, Kenya, Namibia, Morocco, Egypt, Mauritania, and South Africa established the Africa Green Hydrogen Alliance to accelerate project development and share technical expertise. Since then, Nigeria, Algeria, Angola, Djibouti, and Ethiopia have joined, with Tunisia expected to follow. Despite political momentum, actual project development remains slow. According to the Hydrogen Council, only about 5% of Africa's project investment volume has reached the front-end engineering design phase, compared with 20% globally; just 1% has passed the final investment decision, versus 7% globally. Even more, analysis reveals that 90% of public funding allocated to renewable hydrogen in Africa consists of targets and commitments lacking the details needed to justify deployment.

Why Africa?

Africa's appeal rests on strong fundamentals - exceptional renewable energy potential, land availability, strategic coastal access, and critical mineral reserves.

Africa has some of the highest solar irradiance on Earth and also boasts of large regions with excellent wind profiles. Green hydrogen requires huge amounts of energy to process, with solar and wind sources being the most favourable due to their renewable nature. Countries like Namibia, Mauritania, Egypt, Morocco, and parts of South Africa can generate renewable energy at globally competitive levels — a critical requirement for low-cost green hydrogen.

Africa's vast landmass and low population density in relevant areas are critical factors in its attractive prospects for green hydrogen. As hydrogen production requires space for electrolysers, renewable energy plants, pipelines, desalination facilities, and storage, Africa's large, sparsely populated regions make this feasible at scale.

Africa's unique positioning also provides it with extensive coastal access, with many countries having deep-water ports, established global shipping routes, and access to seawater for desalination — all essential for hydrogen export. North Africa's proximity to Europe, its pipelines, and its maritime routes further elevate export potential.

Finally, Africa boasts significant deposits of critical and rare-earth minerals needed for the development of green hydrogen and other renewable technologies, including platinum, lithium, cobalt, and rare-earth elements. South Africa holds 80% of the world's platinum reserves; Zambia possesses platinum and lithium; and the DRC possesses Cobalt and other rare-earth minerals. Namibia, Madagascar, and Morocco also have various relevant minerals to varying degrees.

The Roadblocks Ahead

Despite strong potential, the road ahead faces challenges, including high production costs, infrastructure deficits, slow disbursement of funding, skills and research gaps, foreign-dominated project ownership, and land and water concerns.

Green hydrogen production requires specialised infrastructure, making it one of the most expensive forms of renewable energy. With average costs ranging from $4 to $9 per KG, costs rise further in Africa due to infrastructure gaps and risk premiums. Although significant funding commitments have been made, around 90% of these commitments remain undisbursed. A report published by the African Green Hydrogen Alliance in partnership with McKinsey estimates that between $450 billion - $900 billion is needed in investments between now and 2050 to develop Africa's green hydrogen capacity properly. Also, about 80% of project funding originates from Europe, raising concerns about whether local energy needs, community interests, and industrialisation goals will be prioritised.

Furthermore, producing green hydrogen requires vast areas of land, and while Africa is blessed with a large landmass, hydrogen production directly competes with other uses such as agriculture and conservation. Questions have also been raised about indigenous land rights and the protection of Africa's important biodiversity and ecosystems. Also, water access is a hindrance as green hydrogen production requires water, and Africa's arid climes, while suitable for solar power, have little water resources.

Finally, local expertise in hydrogen technologies, advanced manufacturing and project management remains limited. Building domestic capacity is critical to meet the skills and research demands of the transition.

The Path Forward

Solutions exist, but they demand coordinated action. African nations will need to create green hydrogen corridors, regional frameworks that allow countries to share essential infrastructure such as pipelines, ports, transmission networks, and desalination facilities. Projects must also deliver tangible local benefits, including expanding electricity access for rural communities, rather than operating solely as

export-driven enclaves.

The International Energy Agency notes that emerging markets, including Africa, hold significant potential for low-cost, low-emissions hydrogen production. To unlock this, governments in advanced economies and multilateral development banks must provide targeted support through grants, concessional financing and risk mitigation. Concurrently, African governments must develop clear and stable fiscal and regulatory frameworks to attract investment while ensuring host governments capture long-term value.

Cross-country collaboration on mineral resources could strengthen bargaining power in global markets, while building local hydrogen demand is essential to prevent over-reliance on foreign markets.

Most critically, green hydrogen development must align with Agenda 2063's vision of a self-reliant, sustainable Africa. This requires embedding community consultation, benefit-sharing mechanisms, and biodiversity safeguards into project planning from the outset.

In 2024, the International Energy Agency revised its global 2030 hydrogen growth forecast downward, noting that the sector is now maturing and moving beyond the hype observed in recent years. Real progress is expected toward the end of the decade. If implemented effectively, the European Investment Bank estimates that Africa could produce 50 million tonnes of green hydrogen annually by 2035, creating jobs, decarbonising heavy industry, and transforming access to clean water and sustainable energy.

By 2050, green hydrogen could contribute between $66 billion and $126 billion to the combined GDPs of Alliance member countries—equivalent to 6% to 12% of their current GDP — and reduce carbon emissions by up to 40%. To date, $720 million has been invested, with more expected as the market matures.

Reaching these milestones, however, will require between $450 billion and $900 billion in investment, along with strengthened political will, technical capacity and institutional systems to guide the transition. Africa stands at a pivotal moment, with the natural advantages to become a global green hydrogen leader. Whether it can bridge the gap between potential and delivery will shape not only Africa's energy future, but also its place in the global shift away from fossil fuels ■

The Rising Cost of Fashion Waste and the Shift Toward **Sustainable Innovation**

Introduction

Fashion has become one of the world's fastest-growing waste streams. Globally, as many as 100 billion garments are produced each year, generating 92 million tonnes of textile waste . Sub-Saharan Africa alone produces around 5.8 million tonnes annually, much of which is improperly disposed of . Clothes are being produced faster, worn for shorter periods, and discarded more readily: between 2000 and 2015, the average lifespan of clothing fell by 36%, and, without intervention, global textile waste could reach 134 million tonnes by 2030.

Africa sits at the convergence of this waste crisis. It receives a surge of second-hand clothing imports from the Global North while also grappling with limited waste-management systems. The environmental impacts — from soil degradation and polluted waterways to rising microplastic contamination — are already visible across the continent. Yet Africa is also the site of growing innovation: designers, recyclers, and entrepreneurs are reviving circular practices, supporting local artisans, and rethinking how fashion can serve both people and the planet.

The scale of the problem

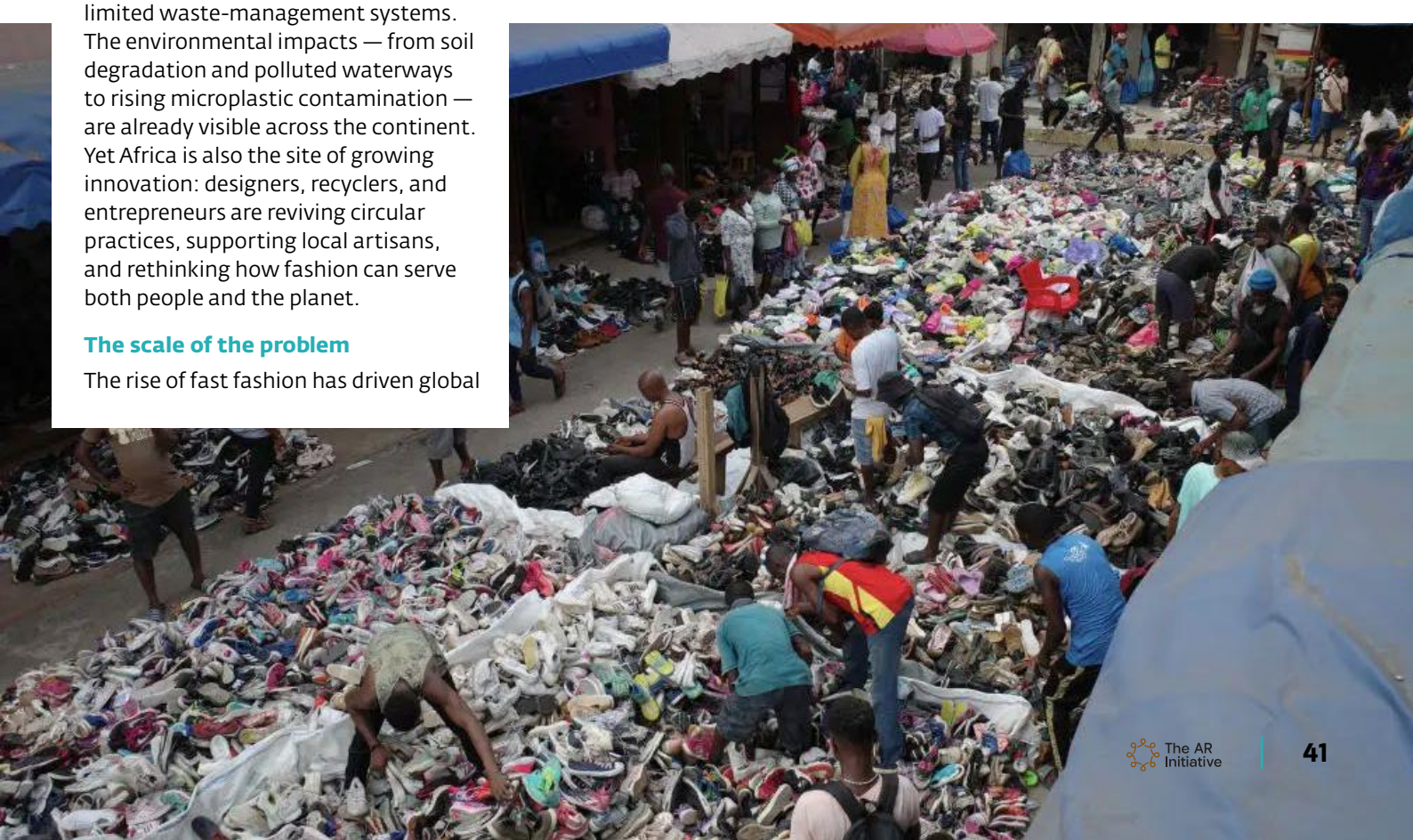
The rise of fast fashion has driven global overproduction on an unprecedented scale. Manufacturers in China, the United States, and Europe churn out billions of garments each year, many of which eventually end up in low-income countries unequipped to manage the volume of waste . Africa is a major destination of these garments: Nigeria, Kenya, Tanzania, Ghana, and Uganda rank among the top importers of second-hand clothing.

The numbers illustrate the challenge:

- In 2021, the EU exported 22.5 million kilograms of clothing to Kenya — more than 112 million items. Many of these second-hand clothes, known locally as "mitumba," were in poor condition, and a significant portion of them ended up in landfills and polluting waterways.
- In Ghana, Accra's Kantamanto Market handles 15 million garments a week, about 40% of which end up as waste.
- Uganda imported around 100,000 tonnes of second-hand clothing in 2023, much of which becomes landfill or is openly burned.

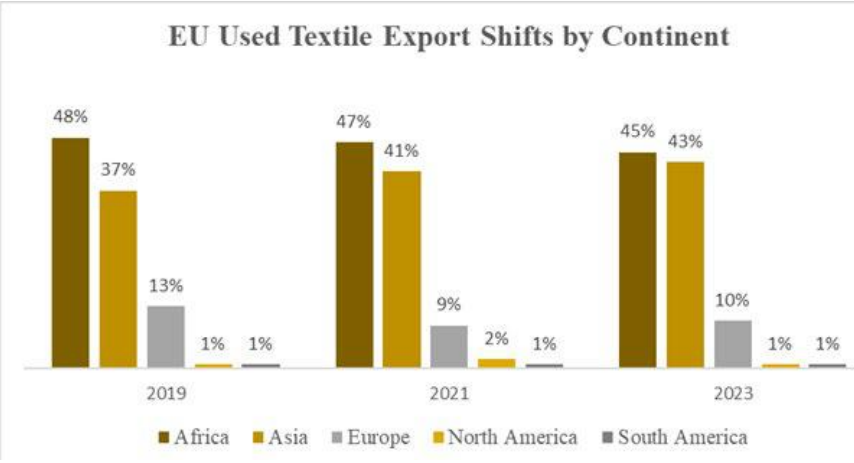
European exports continue to grow: despite producing high volumes of textile waste, Europe recycles less than 13%, sending large quantities to Africa and Asia. In 2019, 48% of EU textile exports went to Africa, and 37% to Asia.

In response, several African countries attempted to curtail the trade. In 2019, the East African Community (Kenya, Rwanda, Uganda, Tanzania, and Burundi) proposed phasing out second-hand imports, but only Rwan-



da implemented tariffs high enough to effectively restrict them. Others cited economic dependence on the used-clothing sector.

Meanwhile, textile production worldwide contributes about 10% of global carbon emissions , releasing an estimated 1.2 billion tonnes of greenhouse gases annually. For developing countries, the inflow of unwanted clothing adds an environmental burden to already strained waste systems.



The Environmental Impact

Landfill Accumulation and Incineration

Most discarded textiles end up in landfills or are incinerated. In the United States, 85% of textile waste, about 13 million tonnes, is dumped or burned each year. Europe faces similar challenges, with extensive reliance on landfill and waste-to-energy incineration. Greenpeace estimates that 60% of clothing ends up in landfills and 20% is burned globally.

In Africa, the impact is heightened by limited waste infrastructure. Lagos generates around 2,000 tonnes of textile waste per day; Kenya dumps 150–200 tonnes daily in sites such as Dandora. These practices release greenhouse gases, contaminate waterways, and create toxic smoke plumes that affect nearby communities. Textile-industry emissions are projected to rise 60%, excluding emissions from decomposing landfill waste, meaning the real impact is considerably higher.

Soil Degradation

As textiles degrade, they release dyes, chemicals, and microplastics that seep into soil, altering its structure and reducing fertility. For example, leachate, which is a toxic liquid formed during decomposition, carries harmful substances into groundwater and agricultural land. It contaminates the soil, reduces fertility, disrupts essential microbial life, and can even move into the food chain, creating health risks.

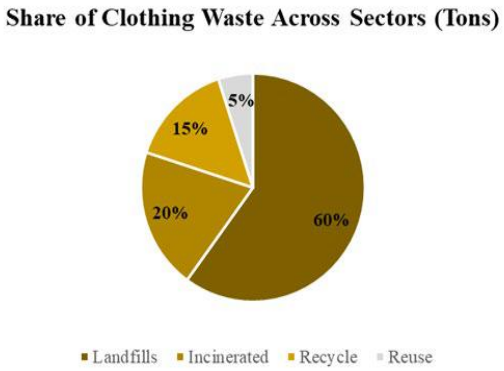
Microplastics pose a long-term threat. Synthetic fibres enter the soil through wastewater, sludge, and atmospheric deposition. Research shows that microplastic fibres can reduce soil stability by 26–38% and enzyme activity by 24–26%, undermining microbial life and nutrient cycles. These pollutants accumulate, entering food chains and affecting human health.

Water Pollution

The fashion industry is the second-largest water polluter after agriculture, producing 20% of global wastewater. This is primarily driven by the rapid production of clothes, most of which are made from synthetic fabrics. The dyes and finishing chemicals used on these fabrics leach into waterways during washing, dyeing, and production.

Across African textile hubs, the impact is visible:

- In Tanzania, the Ngeren-



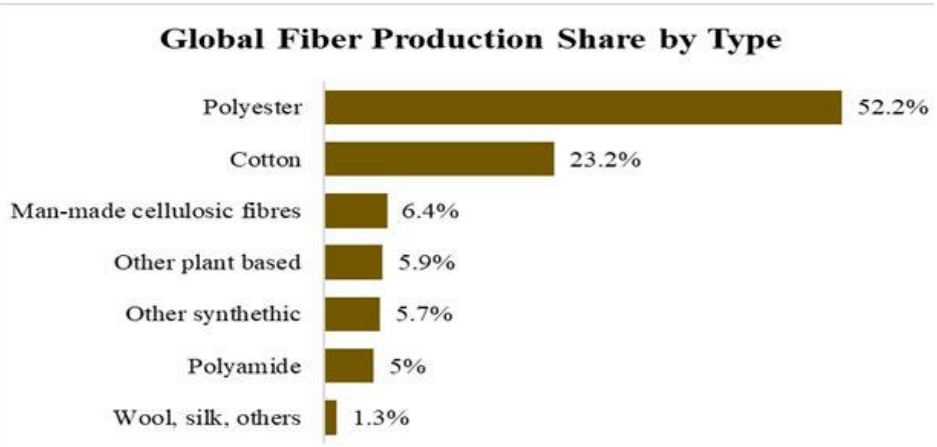
gere River has been contaminated by industrial effluent containing heavy metals and dyes at levels up to 1,000 times above WHO limits.

- Rivers in Lesotho have turned blue from wastewater discharged during denim production.
- In Nigeria, dyeing centres in Abeokuta release toxic wastewater into rivers; textile workers experience high rates of respiratory illnesses, allergies, and skin conditions.

Globally, washing synthetic clothes releases 500,000 tonnes of microfibres annually — the equivalent of 50 billion plastic bottles — much of which ends up in the ocean.

Microplastic Pollution from Synthetic Fibres

Synthetic fibres dominate modern clothing: polyester accounts for 52% of global fibre production. These fibres shed microplastics during manufacturing, use, and washing. A single laundry load can release 700,000 fibres. Estimates vary, but synthetic textiles contribute between 16% and 35% of global microplastic releases into the oceans. These fibres are now among the most common particles found in marine organisms.



Sustainable Innovations in Fashion

Despite the severity of the problem, solutions are emerging. Many brands, both globally and across Africa, are experimenting with circularity, recycling, and eco-friendly design.

Circular Economy Approaches

Fashion remains dominated by a linear model — produce, use, discard — which fuels overconsumption. Circular models seek to close this loop through reuse, recycling, repair, and resale. By 2030, circular business models could represent 23% of the global fashion market and be worth USD 700 billion. These models extend garment life, reduce waste, and create economic value.

Global brands are beginning to respond, with brands like H&M and Zara running low-impact textile take-back schemes; Patagonia, a leader in sustainable fashion, offers free repairs and recycles worn gear; and Eileen Fisher reworks old garments for resale through its Renew programme. Yet only 1% of used clothing is recycled into new garments, and just 12% of total textile waste is recycled — a gap that highlights the need for stronger systems.

Africa's Approach to Sustainable Fashion

However, African fashion has long traditions of sustainability rooted in craftsmanship, natural fibres, and slow, culturally grounded production. Historic textiles such as Aso Oke, Adire, Kente, Bògòlanfini, Shweshwe, and Kanga are durable, handmade, and biodegradable. These garments were created with care, often serving cultural and ceremonial purposes, and were designed to last, making the production inherently low-waste and deeply connected to local communities. Contemporary designers are building on this foundation:

- NKWO from Nigeria reduces waste through upcycling, natural dyes, and textile revival techniques.
- Shekudo, a Nigerian brand, works with local artisans, prioritising small-batch production and traditional weaving.
- Osei-Duro from Ghana uses deadstock fabrics and hand-dyeing processes to limit environmental impact.
- And, Malawi's Mayamiko integrates fair labour practices with responsible sourcing.

Textile recycling initiatives are also gaining momentum. For example, South Africa's Clothes To Good has recycled 580 tonnes of clothing, and Africa Collect Textiles, based in Kenya/Uganda, diverts waste from landfills and has saved 353 tonnes of CO_2 through reuse and upcycling.

Additionally, African fashion weeks increasingly spotlight sustainability, with events in Lagos, Johannesburg, Nairobi, and Addis Ababa showcasing ethical sourcing, circularity, and preservation of indigenous techniques. Lagos Fashion Week also recently earned the prestigious 2025 Earthshot Prize to help build a waste-free world.

The Way Forward

Building a more sustainable fashion sector in Africa will require coordinated action across the value chain. A major priority is the use of better materials. Biodegradable fibres such as organic cotton, hemp, and bamboo can help reduce chemical use and water consumption, and Africa's production of organic cotton has already grown by 90 per cent between 2019 and 2020. Improvements in consumer behaviour are equally important. Extending the life of clothing by just nine months can cut waste by 22 per cent and reduce water use by a third, highlighting the need for stronger public awareness campaigns that encourage repair, reuse, and responsible disposal. Policy support is also beginning to make a difference. Nigeria, for example, is investing in domestic textiles through industrial strategies aimed at improving cotton quality and building local manufacturing, with major projects underway in Ogun State and in Afrex-

imbank-backed initiatives. Rwanda continues to restrict second-hand clothing imports as part of its industrialisation strategy, while Kenya is expanding circular-economy training and financing new designers through its Fashionomics Africa programme. Together, these shifts show how African governments, investors, and entrepreneurs can begin to reduce dependence on imports, create new jobs, and build a more resilient and competitive fashion ecosystem.

Africa faces a growing crisis of fashion waste, fuelled by global overproduction and large volumes of unwanted clothing arriving from overseas. The environmental toll is increasingly visible across the continent. Yet Africa is not only bearing the consequences; it is also responding with innovation. Designers are reviving traditional techniques, entrepreneurs are developing recycling systems, and several countries are beginning to strengthen local manufacturing. With sustained investment, clearer policies, and greater consumer awareness, Africa can move from being a destination for the world's discarded textiles to becoming a leader in sustainable fashion. The continent has the creativity, the cultural heritage, and the growing technical capacity to shape a circular fashion economy that supports jobs, protects the environment, and strengthens climate resilience. The challenge now is to scale these solutions and ensure they become central to Africa's economic future■

Empowering African businesses with sustainability intelligence to build resilient and impactful businesses.

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