



Report of the

# **SWITCH Africa Green Regional Sector Meeting on INTEGRATED WASTE MANAGEMENT**

11 - 12 June 2019  
Accra, Ghana



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# INTRODUCTION

The SWITCH Africa Green regional sector meeting on integrated waste management was held on 11 and 12 June 2019 in Accra, Ghana. The meeting provided a platform for dialogue among sustainable consumption and production (SCP) experts, policy- and decision-makers, financial institutions and micro-, small and medium-sized enterprises (MSMEs) about scaling up and replicating green business opportunities in the integrated waste sector. Specifically, the meeting brought together government officials from Burkina Faso, China Ethiopia, Ghana, Kenya, Mauritius, Nigeria, South Africa and Uganda and representatives from regional economic communities and organizations such as the Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC), the European Union, financial institutions and United Nations agencies, as well as experts and stakeholders in the waste sector.

The platform afforded stakeholders an opportunity to discuss the economic viability of enterprises in the integrated waste management sector that had improved livelihoods, generated income and created jobs while preserving the environment.

The meeting was officially opened with remarks by Mr. John Pwamang, Ghana Environmental Protection Agency, Mr. Robert Wabunoha, Regional Coordinator, Environment Governance, United Nations Environment Programme (UNEP), and Ms. Susana Martins, representing the delegation of the European Union to Ghana. A keynote address was also delivered by a representative from the Ghana Ministry of Environment, Science, Technology and Innovation, the host of the meeting.

The speakers noted that the regional sector meeting was a good platform for sharing lessons learned and best practices in the integrated waste management sector in the region, allowing the successes and challenges in implementing SWITCH Africa Green in the integrated waste management sector to be widely shared in support of replication and scale-up.

Mr. Wabunoha also noted that green business development in integrated waste management had changed the narrative from “waste as a menace” to “waste as a resource”. The time had come to upscale and replicate the successful interventions in the waste sector. Green financing was key to the success of such efforts, and efforts should now focus on accessing green financing to encourage the waste-to-wealth tangent.

In his statement, Mr. Pwamang urged participants to use the platform to highlight both the challenges of and the possible solutions for sustainable waste management in Africa, and to provide opportunities to learn and share green business experiences in the waste sector. SWITCH Africa Green had provided opportunities for enterprises in Ghana to engage in sustainable consumption and production practices, resulting in increased profits and new green jobs, among other positive impacts. Creating an enabling environment through the development of relevant waste sector policies would enhance the replication and scale-up of the successful interventions.

In her remarks, Ms. Martins stated that the European Union was committed to enhancing a circular economy in Africa. Waste had become a valuable resource for Africa, and with the growth of industrial symbiosis, the achievement of a circular economy in Africa was imminent. The successful impact of the interventions implemented by SWITCH Africa Green in the project countries was evident from the survey results.



*Ms. Susana Martins, representative of the delegation of the European Union to Ghana.*

*Photo | SWITCH Africa Green*



*Mr. John Pwamang of the Environmental Protection Agency, Ghana.*

*Photo | SWITCH Africa Green*

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## SESSION 2: SETTING THE SCENE

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### **MODERATOR: MR. PATRICK MWESIGYE, REGIONAL COORDINATOR, RESOURCE EFFICIENCY, UNEP**

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Ms. Rhoda Wachira, Programme Management Officer, UNEP, presented the SWITCH Africa Green Regional Sector Report on Integrated Waste Management: Focus on Green Business Development.

The SWITCH Africa Green programme focused on four sectors: integrated waste management, tourism, agriculture and manufacturing. In the integrated waste management sector, the programme focused on several subsectors, including industrial symbiosis, waste-to-energy, waste-to-compost, management of waste electrical and electronic equipment (e-waste) and municipal waste management services. There were five grantee projects in those subsectors, each funded to the tune of \$200,000 to \$250,000. The six participating countries had all worked on the industrial symbiosis subsector, with Burkina Faso, Ghana and Uganda also focusing on municipal waste and e-waste management.

Ms. Wachira reported on a survey developed to capture the sustainable consumption and production interventions implemented through the SWITCH Africa Green programme and measure their impact. The survey had targeted 30 per cent of the 3,000 beneficiary MSMEs in the programme. The survey results showed that in terms of financial impact, the MSMEs had seen a positive impact on their sales through either a reduction in the cost of production or improvement in production processes, product quality or marketing strategies. In addition, the enterprises had seen increased incomes, new business opportunities and improved working environments. Socially, green jobs had been created, employees had improved skills and occupational health and safety standards had been met. Environmentally, there had been significant implementation of the three “Rs” (reduce, reuse and recycle), as well as implementation of waste management policies.

Notably, 65 per cent of MSMEs reported that new jobs had been created during the implementation period. The e-waste subsector reported a 70 per cent increase in the number of staff, which was attributed to new production processes and products.

Ms. Wachira recommended providing an enabling environment for the enterprises in the sector, including through promoting strategic partnerships and collaborations, increasing public education and awareness, supporting sustainable markets and trade for green products and developing green financing mechanisms for the integrated waste sector.

## SESSION 3: PANEL DISCUSSION: WASTE AS A RESOURCE – SOME GOOD PRACTICES

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### **MODERATOR: MR. BERNARD YAO KOFFI, HEAD, ENVIRONMENT AND CLIMATE CHANGE DIVISION, ECOWAS COMMISSION**

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The session highlighted interesting examples of good practices in green business and sustainable consumption and production from selected enterprises in the region.

#### **1. TURNING E-WASTE INTO PROFIT: THE POTENTIAL OF LANDFILLS IN GHANA**

##### **Presenter: Ms. Vivian Ahiayibor, Managing Director, City Waste Recycling Limited, Ghana**

Ms. Ahiayibor presented how her enterprise turned waste into profit through a sustainable model for the collection, segregation and processing of e-waste from fridges and batteries. She also explained how the enterprise had closed the loop between collectors and buyers of e-waste, noting that adding value to waste gave the local community an appreciation of the “waste to wealth” concept. The enterprise had also created jobs for young people, who collected e-waste safely and generate income by selling the various components.

## 2. WASTE TO TREASURE: A CASE OF INDUSTRIAL SYMBIOSIS IN UGANDA

**Presenter: Mr. Philip Idro, Chief Executive Officer, Upland Rice Millers Co. Ltd., Uganda**

Mr. Idro showed how the industrial symbiosis project had converted the large amounts of rice husks generated by his company into a resource for other companies that use the rice husks as fuel in industrial boilers. That had led to an increase in income for the enterprise due to a decrease in fuel costs, from \$16 per MW for diesel to \$4 per MW for the rice husks. Rice husks, once an environmental nuisance for the community, had thus been turned into a treasure.

The company had also discovered a second revenue stream for the local farmers who supplied the rice, when they encouraged them to use the rice stalks as animal feed. The additional revenue stream had become important for the farmers, especially during the periods between the three rice selling seasons in Uganda. The resultant multiplier effect had seen local farmers increase their revenues from rice farming.

## 3. BEATING PLASTIC POLLUTION IN SOUTH AFRICA

**Presenter: Mr. Tshepo Mazibuko, Managing Director, K1 Recycling, South Africa**

Mr. Mazibuko described how his enterprise had grown over the years from waste picking to owning a waste collection centre and plastic recycling plant. He described the strategic partnerships and collaborations with partners and the Government of South Africa that had enabled him to build his business. He also highlighted the importance of business skills development for MSMEs to enable them to turn their waste initiatives into businesses that brought in profits.

Mr. Mazibuko explained how, as a young graduate, he had been unable to find a job, and hence had turned to waste picking in 2009. Despite considerable challenges, with hard work, his company had grown from waste picking to operating a buy-back centre in 2011, a recycling plant in 2013, and now a sizable plant in Johannesburg, with support from the Government of South Africa since 2017. The company gives back to the community by continuously educating waste pickers during community feeding programmes and giving them the first opportunity when a new job opens up. His firm has grown from a single employee to 16 permanent employees and over 1,000 suppliers in about 10 years.

## 4. FROM WASTE TO ENERGY: BIOGAS IN GHANA

**Presenter: Mr. Raymond Ateghi Okrofu, Country Manager, Safi Sana, Ghana**

Safi Sana had unlocked the potential of biogas as an energy source through a partnership with the local municipal authority. The enterprise had identified the gaps in the ability of the local government to convert waste to energy, being its lack of both the expertise to develop and run the biogas system and the financial means to maintain the system. Mr. Okrofu explained how biogas technology had been developed in Ghana in an informal settlement in the city of Accra for energy to be sold to the main grid. He described the challenges encountered by the venture, including in obtaining the relevant permits and licenses, as well as financial constraints. Notably, the enterprise had benefitted from Ghana's Renewable Energy Act of 2011, which provided for a regulated feed-in tariff, thus enabling the state electricity company to buy the power generated by the enterprise.

# SESSION 4: EXISTING CIRCULAR ECONOMY AND INTEGRATED WASTE MANAGEMENT PRACTICES

**MODERATOR: MS. WILHELMINA QUAY, DIRECTOR, SCIENCE AND TECHNOLOGY POLICY RESEARCH INSTITUTE, COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH, GHANA**

The session was a dialogue on emerging and existing circular economy and integrated waste management practices in three regions, Africa, Asia and Europe, and included three presentations on international experiences with the circular economy and integrated waste management.





*From left: Session panellists Ms. Adeyemo Oluwabukola, Mr. Jens Nørgaard and Mr. Tingzheng Guo.*

*Photo | SWITCH Africa Green*

## 1. THE EUROPEAN UNION'S TRANSITION TO A CIRCULAR ECONOMY

### **Presenter: Mr. Jens Nørgaard, SWITCH to Green facility, European Commission**

Mr. Nørgaard presented the European Union's action plan for implementing the circular economy, giving the European Union plastics strategy as an example. He said that the circular economy was closely linked to the achievement of the Sustainable Development Goals and explained the available financing opportunities. He noted that the circular economy model was very attractive compared to the integrated waste management model.

## 2. INTEGRATED WASTE MANAGEMENT IN THE CITY OF LAGOS

### **Presenter: Ms. Oluwabukola Adeyemo, Head of Legal and Advisory Services, Lagos Waste Management Authority**

Ms. Adeyemo emphasized the importance of working in partnership through public-private partnerships to solve the waste problems in the city. Various waste segregation initiatives by the municipality of Lagos were highlighted, along with capacity-building efforts and challenges. She suggested that some of the practices adopted by Lagos could be replicated in other cities in the region.

## 3. SUSTAINABLE WASTE MANAGEMENT MODELS FROM CHINA

### **Presenter: Mr. Tingzheng Guo, Director, Department of Energy Conservation and Resource Utilization, Ministry of Industry and Information Technology, China**

Mr. Guo described how, by transitioning to green industries through the tax regime and promotion of industrial symbiosis to reduce waste, some industrial parks had attained zero-waste status. A catalogue on industrial symbiosis technologies had been helpful in efforts to scale up industrial symbiosis in China.



## SESSION 5: REVIEW OF THE REGIONAL SECTOR REPORT ON INTEGRATED WASTE MANAGEMENT: FOCUS ON GREEN BUSINESS DEVELOPMENT

**MODERATOR: MR. PATRICK MWESIGYE, REGIONAL COORDINATOR, RESOURCE EFFICIENCY, UNEP**

A closed-door session was held for the peer review of the SWITCH Africa Green Regional Sector Report on Integrated Waste Management: Focus on Green Business Development. Panellists for the session were:

- ▶ **Reviewer 1:** Mr. Percy C. Onianwa, Basel Convention Coordinating Centre for the African Region, University of Ibadan, Nigeria
- ▶ **Reviewer 2:** Ms. Sarah Feresu, University of Harare, Zimbabwe
- ▶ **Reviewer 3:** Mr. Romanus Opiyo, Stockholm Environment Institute Africa Centre (via written comments)

It was noted that the report documented very good results for the programme, which was inspiring, given that the programme had only been implemented over a four-year period. Comments included suggestions to restructure the report to reduce its length, include the steps taken to achieve the results and provide more details in the methodology section. After a discussion with the participants, including the national focal points and representatives of the European Commission's SWITCH to Green facility and the SWITCH Africa Green secretariat, it was agreed that the revised report would be circulated by the end of July 2019.

## DAY 2

### SESSION 6: PARALLEL WORKING GROUPS: CREATING AN ENABLING ENVIRONMENT FOR CIRCULAR ECONOMY AND INTEGRATED WASTE MANAGEMENT

**MODERATOR: MS. SARAH FERESU, UNIVERSITY OF HARARE, ZIMBABWE**

Ms. Feresu first gave a recap of the discussion from day 1 of the meeting and introduced the group work that would form the basis for discussion on day 2. The participants then broke into five parallel working groups to discuss the creation of an enabling environment for the circular economy and integrated waste management. The groups discussed financing for enterprises in the sector; the circular economy and integrated waste management policies for local governments; technical assistance models for enterprises involved in waste management; innovative solutions for turning waste into business opportunities; and green products from waste – sustainable trade and markets.



*Members of group 1 discussing financing for enterprises in the sector.*



*Members of group 4 discussing innovative solutions for turning waste to business opportunities.*

*Photo | SWITCH Africa Green*



*A discussion among participants in group 5, on green products from waste – sustainable trade and markets.*

*Photo | SWITCH Africa Green*

## SESSION 7: PLENARY DISCUSSIONS

**MODERATOR: MR. LAMBERT FAABELUON, DIRECTOR, GHANA NATIONAL CLEANER PRODUCTION CENTRE**

During the session, the groups formed in session 6 reported to the plenary, with their recommendations presented by the group moderators.

### GROUP 1: FINANCING FOR ENTERPRISES IN THE SECTOR

**MODERATOR: MR. CHARLES BOATENG, DEPUTY HEAD, PUBLIC SECTOR, ZENITH BANK GHANA**

#### Recommendations and observations

- ▶ Public-private partnerships are key to allowing the private sector to bid for a specific area of waste management, such as collection, sorting, recovering, or, through an association, recycling.
- ▶ Governments can provide seed funding to enable small-scale enterprises and start-ups in the sector to either scale up or replicate successful interventions.
- ▶ Fiscal approaches, such as incentives, levies and monitoring, should be implemented in an innovative way to encourage investments in the sector.
- ▶ Sourcing green funds from financial institutions, including tapping into international green funding sources such as the Green Climate Fund, is encouraged, and countries should work with partners to develop the relevant proposals.

- ▶ Countries should promote the “polluter pays” principle, whereby companies producing plastics contribute to the clean-up of their products. Policies can be developed to ensure successful implementation of the principle, even in countries where plastics are not produced.

## GROUP 2: CIRCULAR ECONOMY AND INTEGRATED WASTE MANAGEMENT POLICIES FOR LOCAL GOVERNMENTS

**MODERATOR: MS. IRENE KAMUNGE, DIRECTOR, LEGAL SERVICES, NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY, KENYA**

### Recommendations and observations

- ▶ There is a need to shift current policies in the region, which mainly deal with waste disposal. Africa needs policies that view waste as a resource.
- ▶ Environmental management is key in integrated waste management, as the impact of waste on the environment is alarming. Countries need to look beyond the economic and social attributes of waste.
- ▶ There is a need for local tax incentives to promote waste initiatives. The funds from waste collection should be channelled back into the waste sector.
- ▶ Capacity-building on policies and best practices for the local community are required to enhance implementation at the local level.
- ▶ Public-private partnership frameworks can strengthen integrated waste management (design-build-operate). For instance, local governments can look for innovative corporate social responsibility opportunities to support the waste sector.
- ▶ There is a need for overarching regional and national policies that mainstream a waste-to-resource approach, based on which local governments can align interventions in the sector.
- ▶ Policies need to be informed by research and data, hence countries need to collect data on their waste.
- ▶ Africa should look to develop green financing policies to support enterprises in the sector.

## GROUP 3: TECHNICAL ASSISTANCE MODELS FOR ENTERPRISES IN WASTE MANAGEMENT

**MODERATOR: MR. SHEPHERD MUCHURU, REGIONAL PROGRAMME OFFICER, ENVIRONMENT AND CLIMATE CHANGE, SADC SECRETARIAT**

### Recommendations

- ▶ Encourage research and development in the sector to improve local technology and/or acquire green technologies.
- ▶ Create awareness through curriculum development in schools, universities and technical institutions.
- ▶ Governments should provide essential infrastructure to support the whole value chain.
- ▶ MSMEs require partners to enhance their business development strategies through capacity-building and resource mobilization.
- ▶ There is a need to strengthen National Cleaner Production Centres to advance sustainable consumption and production in the waste sector, create platforms to provide links between waste streams and enhance waste-sector networks.
- ▶ There is a need to engage business authorities in strengthening and facilitating green business opportunities for MSMEs in the waste sector.

## GROUP 4: INNOVATIVE SOLUTIONS FOR TURNING WASTE INTO BUSINESS OPPORTUNITIES

**MODERATOR: MR. JENS NØRGAARD, SWITCH TO GREEN FACILITY, EUROPEAN COMMISSION**

### Recommendations and observations

- ▶ Use existing MSME networks, such as associations and cooperatives, to access finance.
- ▶ National Cleaner Production Centres are needed to advance MSME business development.
- ▶ Establish local technical expertise on sustainable consumption and production to continuously assist MSMEs.
- ▶ Develop local waste segregation mechanisms in the countries.
- ▶ Develop web-based platforms to encourage networking by waste MSMEs.
- ▶ Implement extended producer responsibility to address the waste management menace in Africa.

## GROUP 5: SUSTAINABLE TRADE AND MARKETS

**MODERATOR: MR. ROBERT HAMWEY, ECONOMICS AFFAIRS OFFICER, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT, GENEVA**

### Recommendations

- ▶ Develop enabling policies and incentives such as tax holidays for green products.
- ▶ Support the formation of associations of producers of green products.
- ▶ Enhance sustainable public procurement policies.
- ▶ Develop standards and certification for green products.
- ▶ Enhance value addition through sustainable packaging.
- ▶ Address issues of pricing and costing of green products.
- ▶ Support social media trends in establishing markets, especially for the growing middle class in Africa.
- ▶ Conduct research on new product lines and preferences.
- ▶ Produce a catalogue of information on green products to create awareness.
- ▶ Support patenting for green products; for example, provide World Intellectual Property Organization assistance for innovators and entrepreneurs.

## SESSION 8: POLICY RECOMMENDATIONS FOR AN ENABLING ENVIRONMENT FOR THE CIRCULAR ECONOMY AND INTEGRATED WASTE MANAGEMENT

**MODERATOR: MR. ROBERT WABUNOHA, REGIONAL COORDINATOR, ENVIRONMENT GOVERNANCE, UNEP**

The last session of the meeting was a panel discussion on policy recommendations for an enabling environment for the circular economy and integrated waste management from a regional perspective. The panellists were Mr. Faabeluon, Mr. Koffi, Mr. Muchuru, Mr. Becquet Polycarpe Bationo, Director of the Promotion of Entrepreneurship and Green Investments, Ministry of the Environment of the Green Economy and Climate Change, Burkina Faso, and Mr. Hezekiah Okeyo, Director, Ministry of Industrialization and Enterprise Development, Kenya.

Noting that the meeting had provided evidence that the transition to waste-as-money was underway, Mr. Faabeluon explained that in Ghana, having a web-based waste trading platform had allowed for effective management of waste. It was time, he said, for Africa to develop policies for the collection, segregation and reuse of waste, because without that, upscaling current waste initiatives would be a challenge.

In his remarks, Mr. Koffi said that for Governments to prioritize waste in their plans and policies, there had to be visible evidence of the economic, social, health and environmental value of waste. Such evidence would ensure the political will to develop waste management policies. He also reiterated that green financing policies were key to making progress in the sector. He stressed the role of regional economic communities in waste management and urged stakeholders to champion free trade agreements for waste in the circular economy chain between countries. He pointed out that ECOWAS had a renewable energy policy that provided an enabling environment for preferential energy rates in the region. Significantly, there was a call to expand the good practice of an e-waste trading platform in Ghana into a regional platform for ECOWAS.

Mr. Okeyo remarked that it was time to use scientific evidence to develop policies, which was how waste should be prioritized nationally. Policies on waste were needed at four levels: household, municipal, national and regional. The East African Community was developing a policy framework to anchor the seven “Rs” (recycle, refuse, reduce, reuse, repair, regift, recover). In terms of achieving sustainable markets, development of standards and certifications of green products was key. Regulations on the movement of waste, and infrastructure support for waste collection and transportation, were also important.

Mr. Muchuru reiterated that Africa currently had inadequate waste policies. Programmes like SWITCH Africa Green provided justification for policies by showcasing best practices in the sector. Partnerships with the private sector also encouraged green business opportunities. He noted that SADC was developing an integrated recycling plan.

Mr. Bationo spoke about the importance of developing regional projects on waste that would raise the profile of the sector and encourage waste-to-wealth initiatives in Africa.

### **Conclusion and main recommendations for developing an enabling environment for the circular economy and integrated waste management in Africa**

Mr. Wabunoha summarized the outcomes of the meeting, including the main recommendation, which was that Africa should develop a regional framework for integrated waste governance, with a focus on regulating trade in waste within countries and across borders, looking at barriers to trade in waste and its products and making recommendations on how to address it. UNEP was willing to follow up on the development of the regional framework to support an enabling environment for the circular economy and integrated waste management in Africa.

In summary, emphasis was placed on four main areas: capacity-building and awareness-raising with regard to the potential of the circular economy and integrated waste management practices; improved evidence, including data collection in the sector, for informed decision-making and for the development of relevant waste policies and legislation; leveraging of green financing and investment opportunities; and public-private partnerships to build robust waste services and infrastructure for tackling waste issues.



*From left: Mr. Lambert Faabeluon, Mr. Robert Wabunoha, Mr. Bernard Yao Koffi, Mr. Shepherd Muchuru, Mr. Becquet Polycarpe Bationo and Mr. Hezekiah Okeyo.*



## EXHIBITION SEGMENT

The exhibition segment showcased successful, innovative solutions for integrated waste management and highlighted the current and potential strengths of green business in Africa. Various green products, mainly recycled and upcycled from industrial symbiosis, were displayed.



*Some of the of SWITCH Africa Green beneficiary enterprises showcasing waste as a resource during the exhibition segment of the meeting.*

Photo | SWITCH Africa Green



*From left: Mr. Philip Idro, Mr. Tshepo Mazibuko, Ms. Susana Martins, Ms. Vivian Ahiayibor and Mr. Raymond Okrofu Ateghi.*

*Photo | SWITCH Africa Green*





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