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Thinking Policy Together

Sustainable Plastic Waste Management for Youth

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Introduction

Kenya is currently facing a youth unemployment problem with about 11.8 million unemployed youths. The country is also facing increased plastic waste pollution, presenting an opportunity for youth employment in plastic circularity. However, youth participation in plastic waste management is low due to negative perceptions of the sector, inadequate financing, insufficient waste management facilities, limited market access for recycled products, limited use of technology, weak partnerships and networking and insufficient information. In addition, plastic waste management is predominantly informal. The sector has approximately 32,000 plastic waste collectors of whom 62% are the youth.[1]

The actors in plastic waste management sector who operate largely informally are disadvantaged by the inability to access government-provided services such as finance, training, technology support and marketing. The plastic waste management sector has not attracted youth because of the hazardous nature of the job and the perception that the work in waste management is indecent. The youth recyclers in the waste management organizations operate recycling machines that are inefficient and produce substandard products out of recycled plastic waste materials.

Enhancing Plastic Waste Management for the Youth

To promote plastic waste management as an opportunity for the youth to earn a living while keeping the environment clean, several issues need to be looked at.

(i) Information on plastic waste management

Access to information on plastic waste management is an effective channel to behavioural change and an important factor in advocating for behavioural change in plastic recycling among the youth. The incorporation of the information access needs to be available freely and on other channels and not only in Education, Employment and Training (NEET), as acknowledged by the Kenya Youth Development Policy.[2]

Several strategies and policies at the global and national level are advocating for environmental education. The African ministerial conference on Environment has implemented measures in relation to raising awareness, knowledge management and dissemination, and training on environmental protection.[3] Despite the existing policies and acts on awareness of sustainable waste-management techniques, there is minimal interest and participation of youth in environmental activities such as recycling initiatives and other effective waste-management practices

Sensitization and awareness creation on plastic waste management contributes to the youth involvement in waste management. The National Sustainable Waste Management Policy 2020 recommends the need to integrate waste management into the education curriculum at all levels. The policy also calls for public awareness and education on sustainable waste management through education, media and public awareness initiatives. This has been done in the primary education curriculum while in tertiary education there is minimal inclusion of waste management in the curriculum, yet most of the youths can be reached through tertiary institutions.

(ii) Financing youth in plastic waste management

Financial stability is crucial to the operations and sustainability of youth-led plastic waste management organizations. Provision of finances for start-ups in waste management businesses and the plastic value chain institutions enhances their functional capacity. Transformative planning, strategies, and sustainable development through provision of funds enhance investments in circular economy business

models. The Green Climate Fund provides financial assistance to the Least Developed Countries (LDCs) and the Small Island Developing States (SIDS). It provides funds to invest in new technologies for sustainable development. However, it does not cater for investment in value addition in waste management. The climate fund is available for climate-related projects but excludes the waste management project as a theme of action. Out of all Green Climate Fund projects in Kenya, none has the provision of the funds for the plastic circularity economy.[4]

Leaders of African countries agreed to eliminate the open dumping of waste by promoting it as a resource for value addition and job creation. The leaders drawn from all African countries agreed to prevent and minimize the impacts of plastic pollution. The African Ministerial Conference on the Environment (AMCEN) adopted the series of agreements and decisions to reduce plastic pollution. Furthermore, the agreement advocates for creation of awareness, national intervention on marine and plastic pollution and addressing partnerships among African countries. However, the agreement has not been effective in implementation and value addition on plastic waste has not been initiated. Additionally, the role of youth has not been clearly outlined as part of the actors in implementation of plastic waste management. The agreement is meant to be adopted at the regional level, but it is not specific on allocation of funds to youth organizations dealing with plastic waste management.[5]

(iii) Plastic waste management facilities

Plastic waste management is an infrastructure-intensive sector. Effective waste management facilities ensure there is proper segregation of waste to enable the youths to take up plastic waste management without fear of health hazards related to open dumpsites. In Nairobi City, 2,400 tons of waste are generated daily and only 45% of this waste is recycled, which is below the targeted 80% by the National Environmental Management Authority. Low levels of recycling are attributed to poor waste management systems within the city regarding sorting, cleaning, classifying, washing and drying and grouping into commercial quantities. Sorting requires separation of the plastics according to their type and the purity it brings into the circular supply chain. Buyers along the plastic waste supply chain are considered as an aspect of value addition. Given that most waste management actors operate informally, Mr Green Africa developed an initiative to collaborate with the youth by buying the collected waste from them at fair prices, thereby giving them a source of income. Mr Green uses a tech-enabled approach to provide an alternative from the current informal approach. The plastics collected are demanded by plastic manufacturers and large fast-moving consumer goods.[6]

There exists laws and policies at the global and local level that support the need for efficient infrastructure in plastic waste management. The Basel Convention 2017 and the National Waste Management Policy 2020 seek to implement the efficient processes of recycling. The Basel Convention reviewed the policy on plastic waste and provided a report on environmental sound ways of managing waste by providing facilities throughout the product life cycle; that is, from collection to recycling stage. This report highlighted that improvement of such facilities would increase the segregation of waste right from the household level and enable efficient recycling of plastics.[7]

Issuing of licenses is essential in monitoring the effectiveness of the waste management facilities. The National Waste Management Policy 2020 provides for issuance of compliance licenses to waste collectors who were mandated to dispose waste in designated areas exclusively. Furthermore, the policy states that the government needed to provide waste segregated designs for trucks, a tracking system to eliminate open dumping and standard labels for all waste collection providers at the national and county levels.[8] This is yet to be established because open dumping without segregation of waste is evident in dumpsites such as Dandora dumpsite.[9] Nevertheless, the problem of inadequate recycling infrastructure is still being experienced, and this has hindered the growth of the recycling supply chain. Also, the role of youth-led recycling organizations is not outlined.

(iv) Market for recycled plastic waste

Availability of markets determines the success of the plastic waste recycling initiatives. The plastic waste circular value chain is an important sector in maintaining the constant production of goods out of waste. The global market for recycled products has grown substantially but remains less than 10% and the recycling rates remain less than 10% on average[10]. Kenya has established various market structures for the collection and recycling of plastic waste, leading to emergence of youth-led recycling start-ups such as Takataka Solutions, Mr Green Africa, Paschal Plastics Recycling Centre and the Plastiki Rafiki.[11]

The law does not clearly state the provision of market structures to support the products of plastic waste recycling. The policies and strategies are provided for promotion of circular economy but do not provide for any support to market structures for recycled products, leading to preference for new products over recycled products.

(v) Technology use in plastic waste management

Technology advancement is crucial in effective plastic waste processing circularity. This involves expanding and adopting existing waste management

technologies to the national strategies to build, enhance and maintain the requisite human resource capacity. Institutions of higher learning and research centres play a critical role in generating data and information to guide the development of technological innovations. Currently, research on waste management is inadequate, thus limiting youths in accessing the information to enhance their technological capacity.[12]

Advancement of plastic waste management can be achieved through collaborative efforts among all stakeholders. Some organizations such as Empower Digital and Global Ecosystem for Plastic Waste technologies are working towards ensuring sustainable cities and communities.[13] Despite the advancement in technologies, reduction of environmental impact of cities as per SDG 11 has not been achieved due to low recycling capacities, insufficient technological machines, and inadequate finances to purchase advanced machines.

Sustainable consumption and production agreement to combat plastic pollution has been affected by 65 global countries and 10 African countries under the UN Environmental Assembly. The agreement addresses marine plastic pollution, single-use plastics, which has been on the rise and commits to achieving global agreements with ambitious goals with the full participation and implementation. The agreement, however, fails to acknowledge the need for adoption of technology in promoting plastic circularity and how the youth can be involved in the development and improvement of the existing technologies.[14]

Adoption of best practices can help in the fight against plastic pollution in Kenya and enhance easier recycling of the plastics. Among the best practices is the Nordsense Smart bin Sensors in San Francisco. This is a technology company that developed Smart bin Sensors that are used on the garbage bins to show the fill level of garbage in the bins. The smart bin sensors technology has led to 80% decrease in overflowing of garbage bins, decrease of 66% in the requests for cleaning services, and a 60% decline in illegal dumping.[15] This is a great innovation to help in recycling of plastic, although youth in climate change in Kenya have limited knowledge on technological innovations and therefore continue to use manual plastic segregation.

(vi) Partnerships for sustainable plastic waste management

Partnerships at the global, regional, and national level are important in achieving sustainable plastic waste management by the youths. Combined efforts would help enrich the plastic circular economy. Agreements on the need for partnership in waste management are covered in the Basel Convention 2020, Sustainable Development Goal 17 (SDG), East African Development Strategy 2016/2017-2020/2021 and the National Sustainable Waste Management Policy. The Basel Convention 2020 developed a Plastic Waste Partnership (PWP), which outlines the need for member States to cooperate in minimizing plastic waste generation through sustainable ways of recycling. However, the strategy did not give clear elements of youth partnership in implementing the plan.[16]

SDG 17 calls for partnership in achieving other goals, including sustainable plastic waste management and creation of decent work for youths. This goal concentrates on overall partnership without any specification for youth engagement in all levels. Moreover, as captured under the East African Community Development Strategy 2016/2017-2020/2021, the member States committed to introduce bans on plastic waste. In response to this decision, majority of the East African countries have enforced bans on plastic bags. Nevertheless, these bans have not been effective in addressing the issue due to minimal regional partnerships among public and private stakeholders in enforcing the laws.[17]

Nationally, the National Sustainable Waste Management Policy outlines the role of the Government of Kenya in waste management planning and nurturing of partnerships with the county governments, international societies, media, civil society organizations, private sector and informal sectors. However, this policy has been inefficient in fostering partnerships as there is minimal implementation of collaboration in waste management. Youth-led organizations have not been indicated to be part of the stakeholders in the plan, which calls for their incorporation.[18, 19]

Recommendations/Policy Implications

(i) Incorporate tailor-made sustainable plastic waste management courses in primary, high school, and tertiary institutions curriculum and provide comprehensive training and certification on plastic waste management to schools.

(ii) Improve access to funds by youth-led organizations in sustainable plastic waste management through establishment of dedicated fund for youth organizations in plastic waste management.

(iii) Segregate waste at the points of collection to ensure easy sorting and cleaning and reduce the costs of recycling process.

(iv) Promote licensing of youth organizations in plastic waste management for formal recognition.

(v) Initiate policy interventions that ensure sustainability of plastic products at design stage by ensuring it contains fewer plastic materials of

reduced size and weight so as to minimize the impact it will have at end life.

(vi) Enhance the capacity of youth-led institutions to develop, utilize and/or adopt best technological innovations for waste management.

(vii) Build capacity for youth in waste management on material recovery and strengthen training institutions dealing with waste management.

(viii) Enhance linkages between government, academia, private sector, civil society and global sustainable waste management innovation 45 institutions.

(ix) Develop and implement international, regional, and national partnership strategies inclusive of diverse stakeholders including youth-led organizations.

(x) Create partnerships with international partners on plastic waste management.

Endnotes

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