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Phasing out of open burning of waste in Africa

Note by the secretariat

I. Background

1. The 10-year implementation plan for 2014–2023 for Agenda 2063 of the African Union has set an ambitious aspiration that by 2023 African cities will recycle at least 50 per cent of the waste they generate. While most African countries are still very far from achieving that goal, the United Nations Environment Programme (UNEP) has indicated that even higher rates can be achieved by focusing on (i) the diversion of organic waste away from landfill towards composting, bioenergy recovery and higher-value product recovery, followed by (ii) refurbishment, repair, reuse and recycling of mainline recyclables such as plastic, paper, metal, glass, tires and e-waste.

2. In 2016, approximately 180 million tons of waste, representing about 9 per cent of global waste, was generated by sub-Saharan African countries. Only about 11 per cent of that waste was disposed of in properly designed and managed sanitary landfills, while more than 60 per cent was disposed of in controlled landfills and open dumpsites. As a result, in 2015, 19 of the world's 50 biggest dumpsites were located in sub-Saharan Africa. Poor waste collection and disposal often reinforce residential open burning of waste, which is almost always coupled with open burning at dumpsites.

3. While agricultural waste burning, household/neighbourhood burning and forest fires make significant contributions, open waste burning at dumpsites is the main source of notorious pollutants across Africa. Africa is one of the fastest urbanizing regions in the world. Uncontrolled dumping and open burning of waste are the main waste management methods available to most African cities, where up to 90 per cent of waste is estimated to be open-dumped and often burned.

4. Open dumping and burning of waste occurs widely across Africa due to a lack of waste management infrastructure. This is resulting in the discharge of numerous environmental pollutants, including short-lived climate pollutants that create health hazards and contribute to climate change. According to a recent report on open burning of waste in Africa:[1]

(a) Emissions associated with open burning of waste include dioxins, polycyclic aromatic hydrocarbons and black carbon, which are highly toxic, carcinogenic and powerful short-lived climate pollutants;

* In accordance with the decision taken at the meeting of the Bureau of the African Ministerial Conference on the Environment held on 26 May 2022, the eighteenth session of the Conference, which was adjourned on 16 September 2021, will resume as an in-person meeting in Dakar from 12 to 16 September 2022.

[1] D. Mebratu and A. Mbandi, *Open Burning of Waste in Africa: Challenges and Opportunities* (2022). Available at https://engineeringx.raeng.org.uk/media/u4mnsto5/open-burning-final-report_1.pdf.

(b) In addition, methane generated by decomposing organic waste accounts for 20 per cent of global methane, while open waste burning accounts for 11 per cent of black carbon. Both methane and black carbon are short-lived climate pollutants that contribute to climate change, while black carbon is also an important component of particulate matter;

(c) More than 1.2 million premature deaths occur every year in Africa due to exposure to air pollution, to which the waste sector is a significant contributor, accounting for approximately 29 per cent of fine particulate matter;

(d) Preliminary studies conducted on children and adolescents living and being schooled in close proximity to a major dumpsite reported respiratory, gastrointestinal and dermatological illnesses such as upper respiratory tract infections, chronic bronchitis, asthma, fungal infections and allergic and unspecified dermatitis.

II. Mandates on waste management and pollution in Africa

5. In resolution 5/7 on the sound management of chemicals and waste, the Environment Assembly noted with concern that the target set by the 2030 Agenda for Sustainable Development to achieve, by 2020, the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and to significantly reduce their release to air, water and soil in order to minimize their adverse impact on human health and the environment had not been met, and committed itself to strengthening efforts to achieve that target.

6. Mandates and decisions aimed at tackling the issue of managing waste and its hazardous components have emerged from a range of platforms, strategies and processes, including*:*

(a) The 2008 Libreville Declaration on Health and Environment in Africa, in which African countries reaffirmed their commitment to the implementation of the 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes within Africa and the 2008 Bali Declaration on Waste Management for Human Health and Livelihood and recognized the constraints on accelerated implementation of the integrated strategies needed to protect populations against risks resulting from environmental degradation, poor sanitation and poor waste management;

(b) The East African Community development strategy for 2011–2016, which recognized the lack of effective legislation and inadequate funds and services for municipal waste management and the low priority given to solid waste management as major challenges facing member States;

(c) The 2001 regional indicative strategic development plan of the Southern African Development Community;

(d) The 2016 plastic waste management strategy of the Economic Community of West African States;

(e) The 1992 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and its Ban Amendment and plastic waste amendments;

(f) The 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa;

(g) The 2001 Stockholm Convention on Persistent Organic Pollutants, which requires 185 parties to prohibit, eliminate or restrict the production, use, import and export of a number of hazardous chemicals and plays a pivotal role in reducing hazardous additives found in plastic, ensuring that it is safer to use and easier to recycle;

(h) The 2013 Minamata Convention on Mercury;

(i) The 1992 United Nations Framework Convention on Climate Change;

(j) Resolutions of the African Ministerial Conference on the Environment on:

(i) Chemicals and hazardous waste management;

(ii) Managing pollution in Africa;

(iii) Environmentally sound management of all types of wastes, including hazardous, potentially hazardous and toxic chemicals, covering:

a. Sound urban and industrial waste management, as well as other aspects of urban environmental degradation;

b. International trade in hazardous, potentially hazardous and toxic chemicals;

c. Implementation of the Bamako Convention;

d. Industrial standards and laws;

e. Inventory taking and management of the ozone-depleting substances in the Africa region and strengthening of capacity for the implementation of the Montreal Protocol and activities relating to the United Nations Framework Convention on Climate Change.

III. Opportunities to be derived by Africa as it deals with waste management

7. According to the *Africa Waste Management Outlook* report published by UNEP in 2018, 70–80 per cent of municipal solid waste generated in African cities is recyclable, with an estimated economic value of $8.0 billion per annum. Such waste includes biodegradable waste, plastics, paper products and other recyclable materials. It is estimated that only about 11 per cent of waste is recycled, with most of the recovery and recycling operations handled by informal waste service providers and recyclers. This indicates the major opportunities that exist to use waste as a secondary resource to generate jobs and sustainable livelihoods.

8. Waste treatment and disposal has gone through various stages of evolution in tandem with the change in consumption and production patterns, resulting in various types of waste treatment and disposal technologies and techniques that could be deployed by African countries. The choice of treatment technology must be based on the physical and chemical properties of the waste and the specific resource value to be generated. For instance, the application of the Fukuoka method for landfill development and management, supported by the “three Rs” – reduce, reuse and recycle – could provide a sound basis for developing an integrated and sustainable waste management system.

9. Attempting to address the problem of open burning through piecemeal and isolated interventions at one or another point of the waste management system would be neither effective nor efficient. More specifically, phasing out both planned and spontaneous open burning of waste would require transformational change in the waste management sector in Africa. The transition from piecemeal interventions to systemic transformation would require a paradigm shift in the waste management hierarchy towards an integrated waste management system that gives preference to prevention and circularity over treatment and disposal.

10. The systematic integration of the informal waste recyclers who are currently playing a vital role in getting waste back into the African economy as a secondary resource through reuse, recycling and recovery of end-of-life products would strengthen local manufacturing, create jobs, address unemployment and build more inclusive and sustainable local and regional economies. This would require recognizing the vital role informal actors play in the sector; providing the required technical and institutional support to improve their operating and working conditions; building on their creativity and expertise in waste recycling and reuse; and paying attention to gender-based considerations, targeting women who are both victims and value creators.

11. To make rapid progress, there is a need to maximize what is already working for the continent through targeted incentives. A key area of incentives that could be prioritized is fiscal and non-fiscal incentives aimed at empowering informal waste pickers and those running small-scale recycling enterprises to formalize their enterprises and turn them into tax-paying businesses that will expand the tax base. On average, the informal sector is estimated to employ up to 80 per cent of labour, accounting for up to 55 per cent of gross domestic product in Africa yet remaining out of reach of tax structures. Programmes of incentives – especially fiscal incentives whereby governments reduce the risk of such actors to enable them to borrow affordably from market financers so they can grow and formalize their trades – will go a long way towards expanding the tax base and safeguarding African governments’ fiscal space. This is an opportunity for governments to potentially gain more than $8 billion a year ($8 billion from recycling alone) from the use of waste as a secondary resource input.

12. Skills retooling, especially for young people, to enable them to gain skills in areas of recycling and create enterprises that tap into the $8 billion in recycling opportunities is critical for addressing the perennial youth unemployment challenge that continues to grow, hence a “waste for jobs” policy combining skills and fiscal incentives for young people is crucial.

IV. What Africa needs to do to phase out open dumping and open burning of waste

13. In its 2018 *Africa Waste Management Outlook*, UNEP identified a lack of public awareness, weak legislation and enforcement, an insufficient budgetary provision for waste collection and disposal, inadequate and malfunctioning operation equipment, lack of effective public participation and inadequate waste management governance frameworks as the main pressure factors affecting the state of waste management in Africa. Addressing these challenges would require action at the following major intervention levels in an integrated way:[2]

(a) Attitudinal: changing the mindset of the general public and policymakers on waste management and the adverse effects of open waste burning;

(b) Institutional: enforcing contextual regulation prohibiting open waste burning and economic instruments that incentivize waste reduction and utilization as a secondary resource (circularity);

(c) Infrastructural: building an efficient infrastructure mix with distributed grids based on the principles of integrated waste management;

(d) Operational: building the required operational and technical skill sets for implementing an integrated waste management hierarchy.

14. Integrated implementation of the proposed interventions across the above four levels is important. Furthermore, all interventions need to be designed and implemented within the context of achieving systemic transformation across the broad consumption and production system. The promotion of circular economy through effective promotion of reusing waste as a secondary resource would be an important vehicle for this transformation. This would require the active engagement and contribution of the primary actors and stakeholders in creating an enabling condition for the transition.

15. Addressing the challenges of waste management in general and open dumping and burning of waste in particular in the African context would require concerted action by all stakeholders at the national and international levels. More specifically, the following three major actors would be responsible for taking the necessary actions in their respective areas:

(a) National governments: as signatories of all major international and regional agreements and conventions on environment, climate change and chemical and waste management, national governments have the primary responsibility of creating the enabling conditions through enactment and enforcement of the necessary policy and regulatory instruments. This would include:

(i) Integrating waste prevention and valorisation into their national sustainable development and green economy strategies;

(ii) Incentivizing the adoption of circular economy practices that can offer economic, social and environmental benefits;

(iii) Mobilizing and allocating the financial resource needed to develop the required institutional and physical infrastructure for efficient and integrated waste management systems.

(b) Cities: as the local governments primarily responsible for the provision of waste management services to their constituents, cities are the frontline actors that could and should play a decisive role in phasing out open burning through the development and implementation of an integrated and sustainable waste management system. The required actions would include:

(i) Utilizing available citizen networks and community-based organizations to change public attitudes towards open burning and disposal of waste;

(ii) Enacting the necessary regulations and bylaws that prohibit open dumping and open burning and incentivize waste segregation, reuse and recycling at all levels;

(iii) Making informed decisions on waste infrastructure investments that are based on the right mix of the most efficient technologies and techniques that give

[2] Ibid.

priority to the use of waste as a secondary resource and place people and communities at the centre;

(iv) Facilitating more active and coordinated engagement and contribution of private sector and informal waste management service providers.

(c) Development partners: both the quantity and earmarking of development financing for waste management need to change if the systemic transition in the waste management sector in Africa is to be achieved. The specific areas of support would include:

(i) Building the capacity of national and local governments by creating the required skill sets for efficient development and implementation of integrated waste management systems;

(ii) Facilitating the transfer of knowledge and technologies that are relevant to the context and responsive to the operational conditions and needs of the countries;

(iii) Providing the investment support required to fill the financial gaps for the development of waste management infrastructure.

16. It is projected that African countries could achieve a 60 per cent reduction of open waste burning by 2030 and fully phase out open waste burning by 2040 through changing individual and institutional attitudes, addressing existing systemic deficiencies within their waste management systems and promoting circularity through the use of waste as a secondary resource. This would require the participation of multiple stakeholders, including national governments, local authorities, private sector and civil-society actors, development partners and community groups, including informal waste service providers and recyclers.

17. The United Nations high-level champions for climate action are supporting the initiative on phasing out of open waste burning in Africa in collaboration with Engineering X, an international collaboration founded by the Royal Academy of Engineering and the Lloyd's Register Foundation relating to open burning of waste in Africa. The initiative aims to launch a multi-stakeholder partnership on phasing out of open waste burning in Africa at the twenty-seventh session of the Conference of Parties to the United Nations Framework Convention on Climate Change in Sharm el-Sheikh, Egypt.

V. Proposed action

18. AMCEN may wish to adopt a decision to initiate policy interventions and processes that will lead to phasing out of open dumping and open burning of waste, based on, among other things, the necessary actions described in paragraph 15 of the present note.