

The open burning of waste

Open burning is a poorly understood but widespread practice with a catastrophic impact on human health, the environment and climate. Its effects are particularly acute across the African continent.

The context

Rapid urbanisation and unsustainable patterns of consumption and production have changed the volume and characteristics of waste generated across Africa. Lack of properly engineered waste management infrastructure in most urban centres leads to open dumping and burning of this waste.

In 2015, 19 of the world's 50 biggest dumpsites were in Africa^[1], where burning commonly takes place. With Africa's urban population projected to reach 56% by 2050 from 40% in 2014 (UNDESA 2014), the number of dumpsites is expected to be much higher in the coming decades if action isn't taken now.

The health and climate impacts

- Emissions associated with open burning include dioxins, polycyclic aromatic hydrocarbons and black carbon, which are highly toxic, carcinogenic and powerful short-lived climate pollutants^[2].
- Emissions are linked to immunological, reproductive and developmental abnormalities.
- Local communities and residents, particularly those living next to dumpsites, are at greater risk from contaminated water and food sources, land, air, and vegetation.
- Lack of evidence in a largely informal sector means the true scale of public health, environment and climate impact is unknown.



Douala Cameroon © WasteAid (2019).

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

Despite the grave impacts of open burning, awareness at all levels is low and policies and governance structures to address it in a systematic and coordinated way are often lacking. Furthermore, measurement methods and available data are insufficient, particularly when assessing a sector largely dominated by informality. Added to this complexity are the challenges of gender disparities and environment injustice, which exacerbate inequalities, particularly for communities living in close proximity to waste dumps and relying on economic activities around waste.

[1] UNEP 2015

[2] Africa Waste Management Outlook, UNEP 2016

Opportunities from better waste management

Although there are many challenges associated with the current state of waste management in Africa, there are also many potential economic and social opportunities to be gained from promoting an integrated and sustainable waste management system.

- **Waste to resource conversion:** an estimated 70 to 80% of municipal solid waste in African cities consists of recyclable and reusable materials and could therefore be diverted away from landfills towards waste-to-resource conversion.
- **Social innovation:** building upon Africa's existing vibrant culture of social innovation through the provision of safer waste collection and recycling services by informal groups, small-scale entrepreneurs and private businesses.
- **Industrial symbiosis:** promoting waste exchange schemes as demonstrated by the industrial symbiosis programme in South Africa, which diverted 6,160 tonnes of waste from landfill and saved 8,800 tonnes of virgin input material in 2016.

Africa Open Burning of Waste Programme and COP27

The United Nations High-Level Climate Champions for Climate Action together with Engineering X, an international collaboration founded by the Royal Academy of Engineering and Lloyd's Register Foundation, launched the programme on Safe and Sustainable Waste Management with a particular focus on reduction of the climate and health impact of open burning of waste in Africa.

The programme aims to:

- enhance awareness and appreciation of the impact of open burning on climate and health by gathering compelling and impactful evidence
- strengthen the community of practice and networks with a view to developing a common platform that both informs and enables changes in policy and practice
- coordinate with the wider Marrakech Partnership community of non-state actors, including the stakeholders in the Human Settlements/Built Environment pathway and the Race to Zero Cities campaign, to drive concerted action at pace and scale
- develop a net-zero, resilient pathway or set of pathways for systemic change that will inform the development of best practices to reduce open burning of waste and promote these to delegates at COP27 and more widely
- inform the development of international standards and protocols on waste management with particular relevance for climate change.



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Join us and a growing global community to advocate for action on stopping all forms of open burning of waste, in the lead up to COP27 in Africa in November 2022 and beyond.

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