TRASH AND TRAGEDY
The impact of garbage on human rights in Nairobi City
Acknowledgements

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This report is dedicated to the communities whose human rights are jeopardized by the environmental disaster that is Dandora Dumpsite.

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List of Abbreviations

CCN  City Council of Nairobi
CESVI  Cooperation and Development
CSO  Civil Society Organisations
CSR  Corporate Social Responsibility
EKK  Exodus Kutoka Network
ISWM  Integrated Solid Waste Management
KAM  Kenya Association of Manufacturers
LA  Local Authorities
MOE  Ministry of Environment
NCBD  Nairobi Central Business District
NGO  Non Governmental Organisation
OPM  Office of the Prime Minister
PM  Prime Minister
PPM  Parts Per Million
PPP  Private Public Partnership
SWOT  Strengths, Weaknesses, Opportunities and Threats
ISWM  Integrated Solid Waste Management
UN  United Nations
UNEP  United Nations Environmental Programme
WFCL  Worst Forms of Child Labour
JICA  Japan International Cooperation Agency
A clean environment is essential to human health; however, cleaning operations generate waste that can adversely affect human rights if inappropriately disposed. While the poor are responsible for a small fraction of waste generated in the city, they bare the greatest burden of effects. Absence of a functional waste management system in Nairobi has resulted in indiscriminate dumping of waste in Dandora, one of the poorest neighborhoods in the city. Evidence from these neighborhoods demonstrates that contamination from the dumpsite has adversely affected human health, particularly through respiratory diseases, endocrine complications and cancer. At least half the children in surrounding neighborhoods have heavy metal concentrations in their blood that exceed the maximum level set by the World Health Organization. Despite these risks, between 6000 and 10000 people eke a living from on dumpsite, while over 200,000 people have indirect economic and social links to it. Consequently, many around the dumpsite do not want it removed for fear of losing its benefits.

City Council of Nairobi was to decommission the dumpsite in early 2012, after 8 years of planning. However, conflict between the council and the Kenya Airports Authority over the relocation of the dumpsite to Ruai has brought the process to a grinding halt. The resulting stalemate implies there will be no quick end to one of the largest and most flagrant violations of human rights in the country. The dumpsite exists in contravention of several provisions of the Constitution of Kenya, and a raft of Laws and Court Judgments.

Given the gravity and extent of human rights violation, decommissioning of the dumpsite should be a matter of National Interest, and certainly a priority for the County Government. However, public participation must be at the core of this process to ensure the poor are not buttressed further into extreme poverty. In particular, livelihood and decent work opportunities in the waste sector should be created.

To address this tragedy and injustice, the county government should immediately deploy modern technology to isolate the toxic waste from contact with people and the environment. Identification of a site for construction of a sanitary landfill is critical to a sustainable solution. However, for real change to happen, residents of the Nairobi must take responsibility for their waste, a key step is to demand urgent delivery of a safe and comprehensive waste management system, with a functional sanitary landfill.
3.5M Residents generate 600g everyday
decade ago the dumpsite was declared full, yet today it is still the only dumpsite serving Nairobi’s 3.5 million inhabitants. With each person producing an estimated 600 grams of solid waste daily, at least 850 tones are deposited there each day. What was once an abandoned limestone pit is now a mountain of decaying domestic, industrial, medical and agricultural refuse.

The waste has polluted the soil, water and air directly affecting more than 200,000 people in surrounding settlements of Korogocho, Babadogo, lucky Summer, and Dandora. These poor communities, while contributing the least to the problem, are bearing the burden of an environmental catastrophe. The most affected are between 6,000 and 10,000 persons who scavenge at the site. These men, women and children, commonly referred to as ‘Chokora’, brave the dangers of the dumpsite to escape the ravages of extreme poverty.

Scavenging involves sorting and recovery of food and recyclable or reusable materials for sale. At least 15,000 tonnes of recoverable waste is produced from the city each day, however, as the city lacks sorting facilities, it is all dumped at the site. Recovery is done manually through laborious processes involving poorly equipped and protected individuals working in small groups. These workers make meager income at great expense to their health.

Over 180 waste workers drawn from over 50 self-help groups and cooperatives operating in the dumpsite participated in the forums. Each worker knows a friend or relative recently deceased as a consequence of disease or injury sustained at the dumpsite. Infections, particularly of the respiratory tract, are a common cause of death. At least 25% of the workers had fresh injuries as a result of accidents from scrap metals and toxic waste. Accidental encounters with the ‘Boiler’, referring to disused contaminated industrial waste barrels, are a leading cause of injuries and limb amputations. These accounts are corroborated by hospital records from Kariobangi Catholic Mission Clinic where an average of 9000 cases of respiratory infections were treated annually between 2009 and 2011.

The African Network for the Protection and Prevention of children Against Child Abuse and Neglect, ANPCHAN, reports at least 53% of the children and youth at the dumpsite have respiratory tract infections, coughs and asthma. More than half of children around the dumpsite have blood lead level above 10 micrograms per decilitre of blood, indicating exposure to high levels of lead (UNEP 2007). The hematological systems of these children are also reported as suppressed, with 12.5% having haemoglobin levels below the normal ranges. A popular myth among communities around the dumpsite is that Kenyatta National Hospital has a ward dedicated to treating chest infections from Dandora and Korogocho.

Scientific studies have long demonstrated the link between unregulated dumping and negative health outcomes in neighbouring communities. People absorb toxins like PCBs, Dioxins and Furans by inhalation, ingestion and absorption through the skin. These elements
cause digestive disruption, low IQ scores and cancer. Anecdotal evidence from the community suggests a high prevalence of health complications emanating from the dumpsite. Anaemia, nervous system dysfunction, frailty, hypertension, kidney problems, decreased fertility, frequent miscarriages, low birth weight and premature deliveries, were reported in discussions with communities and workers at the dumpsite.

The more vulnerable community members are even worse off. Of the estimated 10,000 workers at the dumpsite, ANPPCAN reports that 85% are children below 18 years of age, some as young as young 10 years. Over 66% of children at the dumpsite are of school going age. Almost all (85%) work to complement their parents’ or families’ meager income; while a significant proportion (78%) scavenge for food. The number of children at the dumpsite is increasing rapidly: ANPPCAN reported 18% of children have been on the dumpsite for less than 6 months. Notwithstanding loss of education, the majority of the children (89%) cannot meet their basic needs, and experience irreparable damage to their health. Children are also forced to supplement income through illicit activities involving selling drugs, prostitution and other forms of crime.

Over 70% of the youth and children at the dumpsite have experienced various forms of abuse at the hands of gangs, most (71.4%) by businessmen, and almost all 91.6% by their peers. The research indicates that parental involvement in waste work is the most significant determinant of child labour at the dumpsite.
At least 53% of children and youth at the dumpsite have respiratory tract infections, coughs, and asthma.
In February 2012, Agnes Wanjiku, a former child labourer at the dumpsite, made national headlines by remarkably scoring 363 marks out of a possible 500 in her Kenya Certificate of Primary Education (KCPE) exam. This feat earned her admission and full scholarship at a leading secondary school. Without the dumpsite, it would not be possible for her family to provide food and support her to succeed in her exam.

However, Wanjiku is an exception; majority of the children in the dumpsite will not even attend school, let alone obtain a scholarship. Yet her story exemplifies the paradox of life at the dumpsite. While it is a means by which many realize basic existence, it has entrapped the most vulnerable in an unhealthy existence. While it is true that fewer children sleep hungry in Korogocho and Dandora because their families make a living from the dumpsite, it is also true that most will suffer adverse and irreversible damage to their health and development. Only a precious few, like Wanjiku, will break free from the clutches of extreme poverty.
The promulgation of the Constitution of Kenya in 2010, with express provisions of the Right to a Clean and Safe Environment, vindicated decades of demands by communities affected by the dumpsite. The Constitution stipulates that the environment is to be protected for the benefit of present and future generations, particularly through the elimination of processes and activities that are likely to degrade the environment. To the extent that unregulated dumping continues in Dandora, an illegality persists. The constitutional responsibility of the State to regulate use of land in the interest of public safety and health is failing; moreover, dumping of waste at Dandora amounts to selective exposure of affected populations to an environmental hazard, which violates the right to protection and equal benefit of the law.

The dumpsite falls foul of a several legal provisions:

- **The Local Government Act**, section 201, confers legal responsibility of solid waste management to the City Council of Nairobi. The Council, in 2007, instituted a raft of solid waste by-laws to regulate the management of solid waste, wherein the council affirmed its responsibility to collect, treat and dispose of, or otherwise deal with, all domestic waste and other litter generated within its jurisdiction. The council has failed to maintain this commitment.

- **The Public Health Act** provides that the Council has to employ all lawful, necessary and reasonably practicable measures to keep their jurisdiction clean and sanitary to prevent occurrence of nuisance or conditions liable to be injurious or dangerous to human health. The Act prohibits, inter alia, disposal of waste at any site not established in accordance with a license issued by the Authority. Moreover, the Act prohibits disposal of toxic waste into or near a water resource or the atmosphere.

- **The Environmental Management and Coordination Act** EMCA (1999), explicitly prohibits discharge or disposal of any waste in a manner likely to cause pollution to the environment or ill health to any person. The Act prohibits, inter alia, disposal of waste at any site not established in accordance with a license issued by the Authority. Moreover, the Act prohibits disposal of toxic waste into or near a water resource or the atmosphere.

The City Council of Nairobi (and thereafter the County Government, after the general elections), the National Environment Management Authority (NEMA) and the Ministries responsible for local government and the Nairobi metropolitan bear the legal responsibility for the ongoing violation of human rights at the dumpsite.
Over 200,000 people have close economic and social ties with the dumpsite.

850 tonnes deposited everyday.
Fear of Exclusion

Despite the serious human rights and environmental concerns about the dumpsite, there is little public outcry among city residents. This is primarily because the dumpsite is situated on the periphery of the central business district, and out of sight for most. In addition, information about the dumpsite and the proposed decommissioning process remains outside the public domain. Only communities living around the dumpsite are aware of its effects, but they too are kept in the dark about the formal plans to decommission the site.

Failure to publicize the negative impact of the dumpsite has kept public demand for redress low. Moreover, it has also fostered public mistrust and dissent towards the decommissioning process, particularly among communities and waste workers. Waste workers have affirmed that they will not accept closure of the dumpsite at the expense of their livelihoods. No information is publicly available about how dependents of the site will be incorporated into the decommissioning process.

Fear is also expressed by the indirect dependents of the dumpsite, who have close social and economic ties with waste workers. Through empathy or sympathy, communities, particularly in Korogocho, are unwilling to support any initiative without viable economic alternatives for solid waste workers, as it would transfer the economic and social burden to them.

The resulting misapprehension has undermined public confidence in the decommissioning process, despite the promise of improved living conditions.

The situation is exacerbated by disjointed and anti-poor policy positions emanating from the Government. For example, in late 2011, the government issued a statement through the Government Spokesperson in which it was stated that “after substantive consultations” with the stakeholders, the government was closing the dumpsite due to “massive environmental degradation.” The news was met with sharp reactions from dependents of the dumpsite who took to the streets in protest. The protesters were particularly vexed by the spokesperson’s assertion that the workers were a “shameful lot of scavengers who were trying hard to destroy our environment.”

In the absence of information, anti-poor statements emanating from government only serve to confirm the suspicions of poor communities that they will not benefit from the decommissioning of the dumpsite. This has also provided fodder for antagonists of the decommissioning who have rallied communities against the process. Most of the anti-decommissioning forces have deeply vested business interests that thrive in the prevailing chaos.
Loss of Livelihood

Notwithstanding the public mistrust and skepticism at community level, there is insufficient information about the extent to which livelihoods that have depended on the dumpsite will be protected. It is unclear the extent to which the project budget makes provision for the restoration and rehabilitation of livelihoods that will be lost when the dumpsite is decommissioned.

It is widely reported that decommissioning will cost KES 5.4 billion, to be funded through development assistance grants. The extent and detail about the grant conditions are scarce and outside the public domain. Consequently, fear abounds that no investments have been proposed for the creation of decent work and livelihood opportunities for solid waste workers. Communities fear a decommissioned dumpsite will only create new opportunities for middle and high income segments of society. The fear is that academic and skills criteria will be used to preclude them from the new solid waste economy. Unless communities are informed and supported to adapt to improved solid waste management practices, their fears of marginalization will become a reality.

There is compelling evidence that human capital is abundant around the dumpsite, even by the fact that between 6,000 and 10,000 households, already derive an income from the site. Initiatives by Non-Governmental organizations have demonstrated that this potential can be used to transform lives. In 2011, a pilot...
programme by Concern Worldwide and Kutoka Network supported 100 solid waste workers to improve their livelihoods by granting workers KES 20,000 and by providing vocational skills training.

The project aimed to establish safer and more productive livelihoods for solid waste workers. Participants were encouraged to build on their existing skills and practice, with a focus on decent work. The most preferred activities among the participants were the manufacturing of charcoal from recycled material, trading in scrap metal or plastics and small-scale agriculture. After twelve months, 60% of the businesses established through the grants remained in operation, with profits averaging 30%. Participants who augmented existing capital, realised returns as high as 125%. About 30% of the participants did not make profit, while only 10% failed.

Such programmes have demonstrated that investment in waste workers and waste related businesses can positively transform the livelihoods of the poor. This potential remains unexploited in Nairobi city, where only 3 metric tonnes of solid waste is recycled from an estimated 15,000 metric tons created daily. With adequate investment, solid waste has the potential to create decent livelihoods for thousands of individuals. Increased and systematic collection of solid waste, as planned in the ISWMP, could significantly enhance livelihood opportunities for the poor by enhancing the efficiency and scale of recycling businesses.
It is unclear what purpose the decommissioned dumpsite will be put. Media reports suggest that the site may be converted into a recreational park or an energy plant. However, there are conflicting views from various agencies about the best use for the land. While the City Council of Nairobi does not consider it feasible to extract natural gas from the dumpsite, the Kenya Electricity Generating Company (KENGEN) announced in 2011 that it planned to create 50 megawatts of electricity from the rehabilitated site by investing KES 9 billion. Private sector firms like Multriwell, have confirmed that they have the capacity to profitably generate energy from natural gas at the dumpsite.

At forums, representatives of the private sector expressed optimism on both electricity generation and carbon trading based on a rehabilitated dumpsite. They demonstrated that based on a model (capacity of 2 metric tonnes, a total area of 20 ha, height of 15m, achieved density of 0.65 ton/m³ and calorific value of LFG at 20 MJ/m³), Dandora dumpsite has the potential to produce green energy at a price of 0.027 €/kWh (Multriwell). In addition to increasing the capacity of the national grid, this technology can contribute to carbon credits. Projects resulting in the reduction of greenhouse gas emissions, (like renewable energy, energy...
Calculation of Energy Potential of the Dumpsite

| Landfill gas production (20 years) | 138,800,000 m³ |
| Electricity production (40% efficiency) | 156,657 MWh |
| Realisation Cost | € 4,300,000 |
| Electricity Costs | € 2.97 |

An analysis of the two options, suggests that unless affirmative action is taken to protect the interests of the poor, they may not immediately benefit. With only 18 percent of slum dwellers’ houses connected to electricity in Korogocho, compared to 60 percent in the rest of Nairobi, electricity generated from a gas plant would not be useful to the community unless it is offered at subsidized rates and prioritised for these poor communities.

Korogocho is one of the most congested areas in Nairobi, with over 250 dwelling units per hectare. Most houses are constructed of earth, timber and waste tin cans. A recreational park would be at odds with the need for land and housing.

efficiency, and afforestation) can earn valuable carbon credits through the Clean Development Mechanism (CDM) - a project led by UNEP. The revenue generated from selling these CDM credits (CERs) makes projects that otherwise would not have been undertaken feasible. Emissions Trading prescribes that CERs can be used by companies in the EU to meet their emission targets, as long as the project that delivers the CERs is registered as a CDM project, before 1 January 2013.

In November 2011, it was widely reported in the press that the City Council of Nairobi announced an international tender worth KES 600 million to convert the Dandora Dumpsite into a recreational park. The outcome of this process is unreported and it remains unclear if this would preclude natural gas harvesting.

Whether the land is to be converted into a recreational park or a natural gas plant, it is unclear how either will directly benefit the poor.
MODEL FOR THE CONVERSION OF A DUMPSITE INTO A SANITARY LANDFILL
Call to Action

Despite the gravity of the disaster at Dandora Dumpsite, authorities appear to be impeded by bureaucracy and political apathy. The sudden conflict between Kenya Airports Authority and the City Council of Nairobi, despite eight years of planning and consultation, demonstrates the absence of requisite coordination and leadership. The KAA objection to placing a new dumpsite adjacent to the airport has sounded the death knell for the decommissioning process. A new location for a landfill has now to be found by the City Council of Nairobi.

Even if the plans for the Ruai site had gone ahead, the decommissioning process would not be complete before 2016. It therefore appears human rights in Dandora are to be abrogated indefinitely, a position that is untenable under the new Constitution of Kenya.

To redress the situation the following actions are urgently required:

1. The City Council of Nairobi (thereafter County Government) should work with the private sector to urgently deploy technologies that isolate the waste at the dumpsite from the environment. This is critical to averting further human suffering and environmental degradation.

2. The City Council of Nairobi (thereafter County Government) should immediately allocate land for a sanitary landfill. Dandora site is not sustainable, as it lacks the fundamental qualities of a sanitary landfill, which isolates waste from the environment.

3. The County and National governments and development agencies should dedicate resources for the rehabilitation of livelihoods and social protection for affected communities. The Ministries responsible for Labour and Social Development should establish programmes that support affected workers and vulnerable groups to find alternative sources of income.

4. The County Government and Civil Society Organisations should undertake awareness raising and education campaigns to transform solid waste disposal behavior in Nairobi City. A culture of solid waste reduction, reuse and recycling is the backbone of a long term solution to the disaster in Dandora.

5. A formal institution comprising stakeholder representatives should be constituted and resourced to oversee the decommissioning process. This institution will provide leadership by enhancing public participation, transparency and accountability, which are currently lacking. Given the transition towards devolved government it is critical for a multi-stakeholder institution to co-ordinate the multiplicity of actors to be involved in the process.
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