

The urban political ecology of plastic bag waste problem in Nairobi, Kenya

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Abstract

Over 24 million plastic bags are consumed in Kenya monthly. More than half of the bags end up in the solid waste stream. Plastic bags now constitute the biggest challenge to solid waste management in Nairobi, the capital of Kenya and home to three million people. As a result, plastic bag waste has attracted great political and public attention, especially because the waste has myriad unique environmental problems. This paper seeks to unravel the problem of plastic bag waste in Nairobi through an urban political ecological perspective. Urban political ecology has done much to excavate economic, political, and cultural processes, as well as ecological dynamics that create and re-create urban environments. Little has been done in this context with respect to urban solid waste problems, with the exception of urban political ecology of environmental justice. However, research done within the context of urban political ecology of environmental justice has mainly focused on solid waste problems in the Western World, particularly USA. Drawing on research conducted in Nairobi, as well literature on business and politics, and solid waste management in Kenya, this paper examines the nature of plastic bag waste problem, its political-economic roots and implications for environmental justice.

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1. Introduction

There is widespread usage of polythene material in packaging and we shall soon put measures in place through our by-laws for companies involved to assist the city council in the disposal and management of the waste (John Ndirangu, former Nairobi Mayor, quoted in *Daily Nation*, September 23, 2000).

Plastic bags...provide several million habitats for mosquitoes to breed that increase the risk of malaria (Wangari Maathai, Kenya's assistant environment minister and 2004 Nobel Peace laureate, quoted in *AFP*, February 23, 2005).

In the 1970s and 1980s, Nairobi, the commercial and communications hub of East and Central Africa was famously

known as the 'The Green City in the Sun'. Magnificent skyscrapers, salubrious suburbs, forested parklands and arteries of well-landscaped boulevards characterized the City. Nairobi's present image, by and large, stands in marked contrast to its former self. For example, today, Nairobi is littered with some rather 'beautiful flowers'. These are not the kind of flowers that Teresa Sapiha wrote about when she observed that "The beauty and almost infinite variety of our wildflowers is one of the greatest pleasures for the traveler in East Africa" in her book "Wayside Flowers of Kenya" (1980). On the contrary, the flowers in question, which also come in variety of colors and sizes, are not pleasurable to the traveler's eye: some of these 'flowers' are the flimsy plastic bags that have swamped the city. More than 4000 tons of these bags are produced in Kenya monthly and half of them end up into the solid waste stream (UNEP/GOK, 2005).

Far from being an issue of visual pollution, plastic bag waste is associated with numerous environmental problems.

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First, plastic wastes block gutters and drains, creating serious storm water problems. Bangladesh, for instance, imposed a ban on plastic bags in March 2002 following flooding caused by blockage of drains (EPHC, 2002). Second, consumption of plastic bags by livestock can lead to death. Third, plastic bags are non-biodegradable, as such, their presence in agricultural fields decreases soil productivity. Fourth, improperly disposed plastic bags have been linked to spread of malaria because they provide breeding habitats for mosquitoes. Fifth, when burned, plastic bags release toxic gases such as furan and dioxin, and leave unhealthy residues that include lead and cadmium (Gordon, 1994).

In view of the magnitude of plastic bag waste and concomitant environmental ramifications, the government of Kenya (GOK) has identified plastic bag waste as a major solid waste problem in Nairobi, and in collaboration with the United Nations Environment Programme (UNEP) has prepared a policy proposal to address the problem (UNEP/GOK, 2005).

In this paper, based on research conducted in 2001 and 2005, I intend: to highlight the extent and nature of the plastic bag waste problem in the city; to highlight the political, economic and cultural processes that have created and sustained the waste problem; and suggest that this problem constitutes a serious urban environmental (in)justice. I begin with a discussion situating the UNEP's support for a solution to the plastic bag waste problem in Nairobi within the United Nations (UN) broad agenda for urban environmental planning, after which the paper proceeds in four major parts. First, I present a discussion of conceptual issues linking urban environmental changes and/or problems to economic, political, and cultural processes. In this part, also, I briefly discuss the concepts of political economy of production and consumption, with special reference to the notion of consumption fund, and the association between environmental (in)justice and urban environmental problems. Second, I present a brief sketch of my methods of research and empirical evidence concerning the problem of plastic bag waste. Third, I provide a political-economic analysis of plastic bag production and waste management in Nairobi, and environmental injustice issues associated with the plastic bag waste problem. Fourth, I provide conclusions of major themes emerging from this study.

2. Sustainable cities programme and participatory solid waste management

While the UNEP/GOK (2005) proposal recommendations have not yet been implemented, or are at the early stages of implementation, it is important that the UNEP's ideas, in this case, be broadly understood as part of the UN agenda for urban environmental planning and management, which has attracted mixed reactions from scholars and policy makers alike.

The UNEP/GOK (2005) proposal recommends a package of economic instruments that, it is hoped, will present a

lasting solution to the plastic bag waste problem in Nairobi. Among others, the recommendations include: (a) a ban on plastic bags of less than 30 μm ; (b) consumer awareness and anti-littering campaigns promotions; (c) schemes such as a national code of practice for retailers be promoted; (d) plastic bag levy be collected from suppliers and producers; and (e) environmentally friendly alternative bags be developed.

These recommendations have resulted from an extensive consultation process involving multiple plastic bag stakeholders. The stakeholders include ministries of local government, trade and industry, environment and natural resources, Nairobi City Council (NCC), National Environmental Management Authority (NEMA), Kenya Association of Manufacturers, Kenyan Plastics Sector Group, plastic wholesalers and retailers, and plastic consumers. In essence, the recommendations, and the process that has produced them, seem to fall under the UN agenda for achievement of urban environmental sustainability espoused during the Earth summit in Rio de Janeiro, Brazil in 1992. Solid waste management (SWM) figures prominently in this sustainability discourse, as spelt out in Chapter 21 of Agenda 21, a document adopted by the United Nations as a blueprint for action for environmental protection up to the 21st Century during the said Earth summit. Chapter 21 unequivocally stated that “environmentally sound waste management must go beyond the mere safe disposal or recovery of wastes that are generated and seek to address the root cause of the problem by attempting to change unsustainable patterns of production and consumption” (United Nations Conference on Economic Development, 1992, paragraph 21.4).

The summit's thematic guidance strongly favored community-led participation in the approach to environmental management, giving prominence to bottom-up participation rather than reliance on top-down approaches to urban planning practice (Dahiya and Pugh, 2000). The involvement of all kinds of stakeholders through a working group approach is central to the idea of bottom-up participation (Doe and Tetteh, 1999). Stakeholders are defined as those who cause problems, those who are affected by them, those who have the political power, and those who have the means to solve them (Nchito and Myers, 2004). This consultative rather than technocratic approach to city planning practice, is at the heart of the UN's ‘Environmental Planning and Management’ (EPM) agenda (Nchito and Myers, 2004; Halla and Majani, 1999). Through EPM, it is expected that the implementation of part of Agenda 21 can be actualized (Doe and Tetteh, 1999). The EPM approach has been promoted in the Sustainable Cities Program (SCP), and organized as demonstration projects in designated cities by the United Nations Center for Human Settlements (UNCHS) and the UNEP (Dahiya and Pugh, 2000). The UNCHS (1994, p. 6) describes the SCP as “...the principal activity of the international community for promoting and supporting sustainable development in the cities and towns of the world. The SCP does this by helping municipal authorities, and their public, private, and

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