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Descending the energy ladder? Oil price shocks and domestic fuel choices in Kano, Nigeria

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ABSTRACT

In recent years, the densely populated region around the burgeoning city of Kano in northern Nigeria has been the focus of much academic enquiry into the links between vegetation modification and fuelwood production and consumption. While many scholars have praised the socio-economic and ecological sustainability of Kano's rural–urban interface, arguing that indigenous agro-forestry systems will continue to resist urban fuelwood pressures for many years to come, other less optimistic observers have warned that exposure to a rapidly changing world economy is challenging traditional resource management systems like never before. Focusing on the case of Kano and its resource hinterlands, recent field-based evidence presented in this paper suggests that the latter supposition may be gaining increasing currency. In peri-urban regions, the rising prices of kerosene and other petroleum-based domestic fuels, coupled with the economic knock-on effects of a current petro-boom, are making fuelwood a much more attractive alternative as a domestic fuel choice. As lower and middle-income households shift away from commercial petroleum-based energy sources in favour of cheaper and more readily available biomass alternatives, it may be placing increased pressure on woodland resources and Kano's surrounding rural ecology: in the hinterlands of the city, local perceptions of research informants suggest that deteriorating economic conditions have driven some individuals to 'step up' fuelwood production to meet rising peri-urban demands. Although the intention of the paper is not to perpetuate crisis narratives or to suggest that fuelwood demand is causing runaway deforestation, the evidence presented does suggest that as conventional fuels become progressively more expensive, the poorest and most disadvantaged households may find it increasingly challenging to meet their basic energy needs.

Introduction

In the hinterlands of Kano, northern Nigeria's largest and most populous urban centre, the fuelwood trade has a long, rich history. For centuries, Kano has enjoyed a strong historical relationship with its surrounding rural area – most notably through the provision of seasonal employment and markets for food surpluses and other natural resources (Swindell et al., 1999) – and the city's periphery has long been heralded as a region of sustainable natural resource management. These long and buoyant systems of local and regional trading in 'Hausaland' have been well documented by scholars (see, for example, Prothero, 1972; Hill, 1972, 1977), and as far back as the fourteenth century, the growth and development of Kano has been propelled by a high demand for resources from its nearby rural hinterlands, including land, labour, building materials, food, water, and a regular supply of fuelwood for energy. Since these early days, indigenous conservation laws – particularly over land and forestry resources – have been widely respected: permanently cultivated fields of food crops and cotton have long been sustainably integrated with trees of economic importance, which has made an important contribution to the local economy.

Over the years, Kano has grown significantly both as a commercial hub and a residential centre, and so have demands for fuelwood and the other environmental resources required to sustain growing populations. Today, despite being one of the most heavily populated regions in semi-arid West Africa, observers have continued to marvel at the apparent sustainability of agro-forestry production systems around the city. As the true climax vegetation of its hinterlands has been transformed over the years through the influence of fire, grazing, cultivation and woodcutting, it has been replaced by the 'cultural vegetation' that presently characterises the landscape (Yusuf, 2001). The usefulness of trees and the

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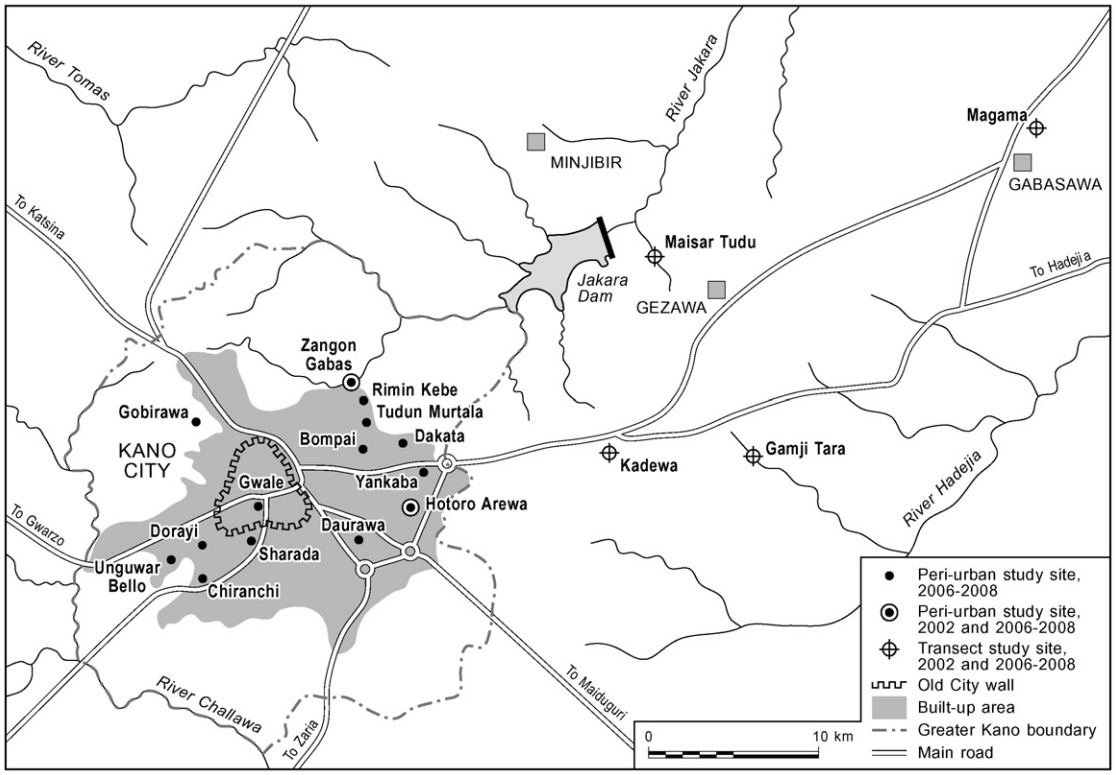

Fig. 1. Study sites in peri-urban Kano.

accompanying manicured appearance of this cultural mosaic of vegetation is now often referred to as 'farmed parkland' (Pullan, 1974), a sustainable agro-forestry strategy where certain trees are protected and integrated into farming systems. There is a rich body of literature focusing on the indigenous 'social forestry' of Kano's historically dynamic 'Close-settled Zone', which suggests that land managers will continue to support sustainable tree resource use for many years to come, even in times of increasing competition (e.g. see Cline-Cole et al., 1990a,b).

In this paper, critical attention is once again turned to the dynamics of peri-urban tree management in Kano's Close-settled Zone, focusing on recent developments which concern the long-established fuelwood interaction between Kano and its hinterlands. Rather than trying to measure tree-density, as a number of earlier studies have attempted to do,[1] our aim is to explore how new forces at local, national and global scales, are having an effect on domestic fuel choices. Although woodland management systems in and around Kano continue to demonstrate remarkable resilience during times of complex social and ecological change, evidence suggests that resource relationships between city and hinterland have further intensified. In the last four decades in particular, as urban centres throughout West Africa have physically expanded in size at unprecedented rates, woodland resources in peri-urban interfaces have been subjected to a host of new pressures associated with competition for land, markets and off-farm employment. During the 'oil boom' years of the 1970s, urban growth and its attendant demand for resources became particularly robust when the bias of state expenditure towards major cities such as Kano was expressed most dramatically by a proliferation of urban construction and development. At the time, severe droughts across the African Sahel, coupled with the impact of worldwide petroleum price hikes, led pessimistic observers to speculate that dwindling woodfuel supplies would eventually take hold as the 'other energy crisis' (Eckholm, 1975).

Tumbling oil prices during the 1980s generated complex and contradictory processes of change in Nigeria's political economy, which in turn had drastic knock-on effects for the fuelwood economy. During this period, the government increased foreign borrowing to meet balance of payment shortfalls following the oil-boom spending spree of the 1970s, and in June 1986, was forced to adopt the 'bitter economic medicine' of IMF austerity programmes. The economic downturn following the unanticipated decline in petroleum prices resulted in a slowdown of rural to urban migration, but by the late 1990s, Kano and its region were believed to support a population of over five million people (based on predictions from the National Population Commission Census, 1991), with densities of between 250 and 500 people per square kilometre (Mortimore, 1993). Although it is difficult to generalise about the direction and magnitude of the environmental impacts of structural adjustment programmes, studies carried out in other parts of Nigeria suggest that adjustment has had adverse effects on domestic fuel choices, and in particular has been linked to gender specific constraints in household energy management (Yahaya et al., 2007; Popoola, 1992).

Moving beyond the dichotomous Malthusian versus Boserupian debate which has dominated the focus of so many previous studies of environmental change, the concern in this paper is with how dramatic global economic forces are currently shaping household decision-making abilities that concern domestic fuel choices, which may be putting increased pressure on Kano's ecological footprint. As Hecht (2004) points out, most previous explanations for tree cover change in the developing world have not adequately

[1] For example, the detailed research conducted by Cline-Cole et al. (1990a) in the late 1980s, suggests that the average densities of mature farm trees were 12–15/ha in the western regions of the Kano Close-settled Zone and 7–9/ha in the eastern regions.