

**Transportation  
Patterns In  
Nairobi  
&  
Programs  
To Improve  
Opportunities  
For Bicycling**

**Njagi Gakunju & Dave Mozer**

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FOR BICYCLING**

**Njagi Gakunju and David Mozer  
International Bicycle Fund**

This paper was originally prepared for and delivered at  
"VeloCity 1989: International Bicycle Conference",  
Copenhagen, Denmark, August 21 to 23, 1989

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Published by the International Bicycle Fund  
4887 Columbia Drive S, Seattle, WA 98108-1919 USA

ISBN 0-9623052-4-3

The International Bicycle Fund is an independent, non-profit organization. Its primary purpose is to promote bicycle transportation. Most IBF projects and activities fall into one of three categories: planning and engineering, safety education, and economic development assistance. IBF's objective is to create a sustainable, people-friendly environment by creating opportunities of the highest practicable quality for bicycle transportation. Directed by David Mozer, IBF is funded by private donation. Contributions are tax-deductible to the extent allowed by law.

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## **Introduction**

Nairobi calls itself the "Green City In The Sun," but now the leaves are black with motor-vehicle exhaust soot and the sun is filtered through a brown haze on many days. Year-by-year there is increasing congestion, decreasing air quality and a lengthening list of social problems. Most of the actions exposed in the current debate fail to address the social problems, would do little to clear the air and are the old tried and failed solutions for "solving" congestion. Where does the city stand today, and are there any workable strategies to improve the quality of life?

## **Pre-Industrialization**

Nairobi was built at the turn of the century. It expanded out of a work camp of the Mombasa/Uganda railroad. At that time the primary means of heavy transport was ox-wagons. Consequently the roads were designed for slow-moving traffic.

Since those humble beginnings, few major changes have been made to the road grid in the central city. As the population has grown and sophistication of transport technology has progressed the city's roads have become choked with motor-vehicles of a kind and in numbers never initially envisioned.

For many decades the problem was manageable. Through the first part of the century the largest employers in the city were government departments and corporations like the railways. These organizations, perhaps unwittingly, played a part in keeping the congestion to a minimum by encouraging their workers to use bicycles to travel to work. The government even built some bicycle paths.

In those days, employers were even required to provide parking facilities for bicycles. To this day you can see some of these lying unused outside some of the older government buildings.

### **Independence And Transportation Colonialism**

With the attainment of independence, the focus of transport shifted to the car. It became the symbol of success for an emerging Africa, and the symbol of upward mobility for the new African. Attitudes evolved. If you wanted your neighbor's high regard you needed to drive a car -- lacking a car to drive, you would be a passenger in one, take a taxi, use the bus, or even walk, so long as you were not on a bicycle. In the 1960's the existing bicycle paths were abandoned. City planners stopped incorporating bicycle paths into new road structures and hundreds of miles of shoulderless roads were built in the city.

It is no secret that the gap between the poor and the rich increased in Less Developed Countries. What is not as widely realized is that since independence the gap not only increased in income but also in mobility: Of those who were cycling to work previously a few started driving, but far more have found themselves storing their bikes and walking or taking commercial transport. The major complaint by former bicycle commuters is that the roads became too dangerous.

For workers who could not afford cars, had long walks or who were too scared or too proud to bicycle to work on congested and dangerous roads, a new, rather indignant means of urban transport evolved - Matatus. These are normally small trucks or pickups that are meant to carry less than a ton of weight. They are converted in makeshift garages to vans that can pile in as many as thirty passengers. People are crammed in them for an equivalent of US 10 cents for a distance of 10-15 Kilometers. Not only are the passengers treated like cattle, but there are

no motor-vehicle emission standards and they puke clouds of smoke into the city's air supply.

Despite or because of their relative economic efficiency, matatus are also notoriously dangerous and poorly maintained which contributes to a high accident rate. Five hundred people died in road accidents in Kenya in the first six months of 1989 -- most were in overcrowded matatus.

As the option to bicycle or walk has been cut off, buses and matatus have become the solution for thousands. Commuting by bus is probably safer, but not necessarily more comfortable.

The current phase of the crisis dates back a decade. The late 1970s saw what was popularly known as the "coffee boom". After frost destroyed most of Brazil's coffee, the price for a ton rocketed from US\$800 to US\$4000 within one year.

With this new wealth, cars were imported in quantities never seen before. And they began strangling the movement of vehicles in the city.

The coffee boom also brought a mushrooming of housing estates in the rural areas near the city. Fast bucks were made, but as planned communities they have failed. All services are far away. Houses were put up, but no schools, clinics, post offices, fire stations or employment centers were built. Even during this period of plenty, no provisions were made to develop bicycle paths or even footpaths. Because the suburbs lack schools, parents are forced to crisscross the city to deliver their children to school in the morning and pick them up in the afternoon. Every day thousands of work hours are lost in the process of dropping kids off and picking them up. There are virtually no school buses. Every development was directed towards the automobile -- a pattern that prevails to the present.









Table 1. Passenger Cars In Use (in thousands)

	Year	1970	1975	1980	1984
Kenya		95.9	97.3	113.6	122.0
Tanzania		33.6	40.6	45.4	n.a.

Source: 1983/84 Statistical Yearbook, United Nations, New York, 1986

Table 2. Kenya Passenger Car Imports

1978	1979	1980	1981	1982	1983	1984	1985	1986
10,682	5,642	11,010	3,262	3,781	4,203	5,340	6,576	6,936

Source: Annual Trade Reports: Kenya Customs and Excise Department

In the city center more and more land is being surrendered to automobiles and less and less is available for people.

With the coffee boom over, the eighties brought difficult years. Kenya is locked into servicing its cars with fuel and spare parts while the Kenya Shilling has steadily lost value against the major international currencies. In an economy that imports all its petroleum and locomotive machinery, this has become unbearably expensive. And, while the government has increased tax rates, the condition of the roads has deteriorated.

Currently in Nairobi:

- o Workers ride in congested buses and "matatus" that exhale noxious fumes.
- o Those who cannot afford bus fares walk to work, sometimes for hours.
- o The affluent still crisscross the city in search of better schools for their children.
- o An insignificant number of workers ride bicycles to work on unfriendly and dangerous roads. Many more refuse because of the danger.
- o Others wait for buses desperately wishing they could cycle home.
- o For the affluent, urban stress therapy is administered by the growing number of posh health clubs. For the poor, they forget the trials of every day travel by drinking crudely processed illicit alcoholic drinks.

### **Community Reaction**

There is a ray of hope. Uvumbuzi Club, which was formed as a wilderness conservation club by those who were worried about the degradation of the environment, has turned its

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attention to urban conservation. It is now starting a campaign to promote the use of bicycles in urban centers.

The club has held an annual bicycle awareness day since 1987. The number of participants was 70 in 1987 and 150 in 1988. For each event literature on the importance of bicycle transport was translated into Swahili, printed and distributed. Resolutions and memoranda were delivered to city planners on both occasions.

Recently, Uvumbuzi ran articles in the country's leading newspapers on the advantages of riding to work, including one entitled "Cycling To Work For More Benefits". Representatives have also given interviews to the Kenya television and radio on promoting bicycling in Kenya.

To make an impact in the future, Uvumbuzi Club and the Road Safety Unit are conducting cycling clinics for young people on a monthly basis.

In conjunction with the International Bicycle Fund (IBF) and other international bicycle organizations, Uvumbuzi is now developing a broader agenda. It includes:

- a) Education on transport. People need to be aware that their actions affect conditions. Programs are needed that target groups such as city and national planners, politicians, workers who walk, matatu/bus drivers and passengers, and parents that crisscross the city taking children to school.
- b) Use of foreign exchange. Already, the country's bill for imported petroleum products is enormous (30% of all export earnings), not to mention expenditures on short lived vehicle and spares. A poor country like Kenya needs to direct funds into more beneficial projects.
- c) Reducing pollution. Increased pollution in Nairobi is creating health hazards. The implications need to be publicized. Data from developed countries will assist.

- d) Rational use of transport resources. Private automobiles are excessive for most of the trips they make. This will be highlighted in conjunction with the aspect of using the country's resources wisely.
- e) Productivity of urban land. Road and parking waste a lot of scarce space. Motorists need to see bicyclists as allies, not as competitors for space.
- f) Access for young people. With bicycle lanes, children can go to school and other activities on their own and their parents will become more productive.
- g) Fiscal accountability. The infrastructure needed for bicycles is cheap. In a city that is always short of funds for more pressing projects like schools, health centers and housing, money currently used on roads and road maintenance could be better used.
- h) Generate tourism. The current leading source of foreign exchange in Kenya is tourism. Cyclists can be an additional source of revenue for this sector.

Independent interest in bicycle transport has emerged from other areas. There have been a number of letters-to-the-editor in local papers decrying the situation for bicyclists and the degradation of the urban environment. The IBF has received queries from graduate students doing research in urban planning, medical students concerned with long term health issues for urban residents and a variety of non-governmental organizations concerned with various aspects of the quality of life in Nairobi.

### **New Developments**

There are signs of change in Nairobi:

- o In the last few years the newspapers have increasingly been covering bicycle activities as well as urban environment issues which are related to bicycling.

- o In June 1989, the government reduced the duty on bicycles to 20% (from 40%).
- o In the National Assembly, the Assistant Minister for Culture and Social Services, Hon. Lomanda, called for the Ministry of Local Government and Physical Planning "to look into the plight of the city's cyclists."
- o The Minister for Public Works, Mr. Mibei, has directed that lanes for cyclists and pedestrians be built on roads that pass through densely populated areas.
- o In Nairobi, the City Council has begun grading some of the heavily used bicycle and pedestrian corridors between residential and industrial areas of the city. The program has not realized its full potential benefit and has been criticized because: projects have been poorly engineered; sections of improvements are discontinuous; quality of the final surface is poor.

#### **Agenda For The Future**

Nairobi's policy makers need to continue to address the needs of bicyclists. There are more of them than there are car owners. First, top policy makers need to recognize and take a personal interest in the value of bicyclists to their nation, city and citizenry. Next action plans should be developed and implemented that are consistent with this priority. To be effective the agenda needs to address all four "E's" of bicycling: engineering, education, encouragement and enforcement. In general terms the following action items need to be pursued:

- o Citizens need to be organized and trained as advocates for bicycle transport. A top priority is to review all public works planning and projects that impact on the transportation infrastructure.
- o All public works projects should be evaluated for their impact on mobility: What is their general impact on urban movement? What is their impact on the poor? And

specifically what is their impact on access for bicyclists and pedestrians? Any projected negative impact needs to be mitigated.

- o Governments need to adopt and enforce comprehensive policies for improving the quality of human settlement: Zoning, land use and road construction policy should direct development patterns that create trip lengths that are practical for cyclists and pedestrians. Specifically, the location of housing, employment, retail, schools and recreation centers, and the network between them should favor non-motorized access.
- o Government should promote attitudes and take action to support sustainable transport systems. Practices should be consistent with national interests to increase access and mobility diversity, increase the efficiency of the existing infrastructure, decrease congestion, lower air and noise pollution, reduce demand for petrol and foreign exchange, and increase individual health and personal mobility.
- o Tax and tariff policies should encourage non-motorized transport. Motorists need to pay the real cost of driving.
- o Credit should be made available for bicycle purchases. The public and private sector should participate.
- o Programs need to be initiated on road safety and the benefits of sharing the roads with bicyclists so that citizens feel and are safe when they choose to bicycle and motorists recognize the value of cyclists.
- o Government needs to address air quality issues. This may mean starting to monitor air pollution, and establishing and enforcing motor vehicle emission standards so that cyclists can be assured that the environment is healthy enough for their activities.

It is not too late to make Nairobi a liveable city.

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ISBN 0-9623052-4-3 1.50