

# PRELIMINARY SURVEY ON THE IMPORTED SECOND HAND COMPUTERS IN KENYA – THE CASE OF NAIROBI

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## INTRODUCTION

### **The survey**

This survey is follow-up of the findings of the brief survey done on the importation of used computers in Mombasa Kenya on 4<sup>th</sup> and 5<sup>th</sup> December 2006 by James Puckett, Rachel Kamande and Richard Kiaka. The results of the survey indicated a high probability of the imported refurbished computers being taken to Nairobi which is relatively larger. A recommendation was thus made by the survey team that a similar survey should be done in Nairobi to help give the clear picture of the state of the trade in the e-waste in the country and perhaps the region (East Africa). Eco-ethics international – Kenya (EEIU-K) and iLima-Kenya selected survey persons- **Richard Kiaka** and **Rachel Kamande** respectively while **James Puckett** of Basel Action Network made significant input by giving the necessary guidelines. This survey was limited to second hand computer shops, warehouses (go-downs) and dumpsites. The survey took two and half days (10<sup>th</sup>, 12<sup>th</sup> and 13th February, 2007).

### **The survey area**

Nairobi is the capital city of the republic of Kenya and has an estimated area of 684 square kilometers<sup>1</sup> and an estimated population of over 2.6 million (GOK, 2003)<sup>2</sup> and perhaps it is the largest city in East and Central Africa. Due to the large population and the improved facilities Nairobi attracts almost every kind of business in Kenya. It has the highest number of industries, tertiary learning institutions, government and private sector offices. These are the major users of computers in the country. Compared to other towns, in the region (East Africa) Nairobi is considered more technologically advanced and IT is fast growing in the town.

## SURVEY METHOD

Our method of study was almost snowballing. We identified one refurbished computer shop and from the operators of the shop we got a list of other shops and warehouses. We later noticed that most of the shops were situated in single houses/blocks or plazas. We therefore sampled three blocks in the town (Revlon plaza-Biashara street, Popman house-Nyakach lane off River road and Bagwanji house-Biashara street). In Revlon plaza there were about 11 refurbished computer retail shops of which we sampled 2; Sysco-net and the other, in Popman house there were about 8 refurbished computer shops of which we took a sample of 2 – Patronics infotech Ltd and the other and in Bagwanji house there was one shop of which we considered for the survey. In total we sampled 5 out of a

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<sup>1</sup> See <http://en.wikipedia.org/wiki/Nairobi>.....retrieved on 26<sup>th</sup> February 2007

<sup>2</sup> See Government of Kenya report by the Ministry of Health in collaboration with the Japan....2003

possible fifty refurbished computer shops in the town. More shops were far outside the town centre and our capacity would not let us reach them or sample more. Moreover, we were keen on shops with a capacity of not less than 200 computers at a time.

The shops directed us to a number of warehouses in the Nairobi's industrial area, Vision plaza (Mombasa road, Mitsumi, Castors house-Standard Street, One World, and others in Lunga Lunga). Again due to limited capacity we only sampled 2 warehouses in –one in Vision Plaza and the other in Lunga Lunga-Industrial area.

We were directed to three dumpsites (Ngara, Limuru and Dandora). All are far outside the town centre and risky. We needed a hired security to access these areas. Due to our limited capacity we did not get to the dumpsites but got some information on what goes on in the sites.<sup>3</sup>

Our main methods of data collection were interviews and observation where the use of photography was key. We were guided by the questions in the guide sent to us by James Puckett of BAN and took pictures of the scenes. Close range pictures were taken able to show relevant writings on the computers such as country of origin-even though most computers had their tags removed, 'faulty', 'not working' and brand names.

## RESULTS

### 1. Shops

Compared to Mombasa, Nairobi had a good number of computer shops most of them refurbished. We surveyed a total of five (5) shops. As was noticed in Mombasa, most of the shop operators would not allow us into their premises without a thorough scrutiny of our investigative objective especially those in the downtown (known for illegal business). Of the five shops sampled, three were interesting for the study-they deal in faulty computers. The shops purchase the junk from the warehouses in lots (one lot they claimed holding between 200-500 faulty computers or parts). They'd recycle the recyclable parts and discard the rest by selling to scrap dealers and /or give free to street



children. Of the three the highest purchaser would buy approximately 2 lots of 200 faulty monitors and parts after every two weeks while the rest would buy one lot of faulty computers from the warehouses depending on the rate of sale of the recycled computers. According to the dealers, over fifty other people do the business. Future study should ascertain this.

*Figure 1: Sysco retail shop at Revlon Plaza stocked with refurbished computers from USA*

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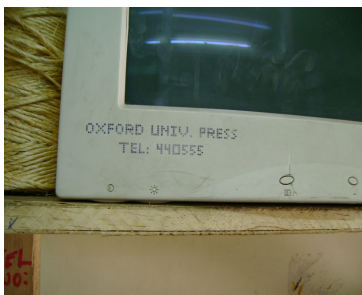
<sup>3</sup> Security does not necessarily refer to police. There are some locals, part of the scavengers who take people to dumpsites on agreed terms. They are friends to the scavengers in the sites.

Those dealing in faulty recycle what is recyclable and discard the rest. More study should be done to ascertain the figures given by our respondents. They prefer the refurbished computers to clones because they are sources of original parts.

The sale of refurbished computers was found to be higher in Nairobi compared to Mombasa. While the average sale approximately averaged at 5/day in Mombasa, the approximated figure was almost four times in Nairobi standing at 20 complete units per day and 5 units a day on a good and bad sales day respectively. The good sales season were identified to be between December and March as most colleges and business are preparing for a new year of business. The retail prices of the refurbished computers have no wide variation, but fell between Ksh 15000 (\$208) and Ksh 25000 (\$347) depending on the Brand<sup>4</sup>. The average of a brand new computer is Ksh. 55 000 in Kenya. More survey needs to be done on this aspect to determine the profit *vis a vis* environmental cost and the correlation be studied. Two of them were willing to allow us access their records only if we paid some money.

The shop operators dealing in the business admitted that even after buying the computers from the warehouses still some would be faulty. For example Sysco-net (dealing in assorted working refurbished computers) approximated that 5%-10% of what is bought from the warehouses is faulty and this is done deliberately by warehouse operators in a bid to dispose of the junk they import. It is therefore clear that the burden is shifted to the retailers who then increase their prices to cater for the loss. This is further shifted tot the consumer.

For that reason, 10% extra is always given by the importers to the dealers to carter for faulty lot. It can be assumed that 10% of all the refurbished computers imported in Kenya are non-recyclable and are therefore waste traded on or simply dumped to Kenya. This could be true according to the respondents from the warehouses. Future survey can ascertain this figure.



There were no asset tags which would show the country of origin. However, the dealers asserted that they remove the tags which mostly indicate that the computers come from USA and the UK. A further observation in a shop revealed a monitor of a computer with inscription of Oxford University Press –most likely originated from the UK.

#### *Oxford university press inscriptions*

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<sup>4</sup> The exchange rate is \$1 to be e equivalent to Ksh 72 in the prevailing currency market at the time of report writing. The computer brands mostly traded on were Compaq, Dell, Toshiba, Apple, HP.....

Most shops we surveyed had huge junks and people working to recycle the computers though it could not match Nigeria's case (going by the documentary from BAN done by Jim). Some CPUs and monitors were marked with asterisks, not working and faulty writings.



*Non-recyclable computer parts in a retail shop*



*Computer technician recycling  
Computers in a retail shop, Nyakach lane*



*Faulty computes from warehouse marked waiting dismantling*



*Displayed un-recyclable computer parts awaiting disposal to Ngara*

When asked about the fate of the faulty and non-recyclable 5%-10%, the dealers gave four destinations:



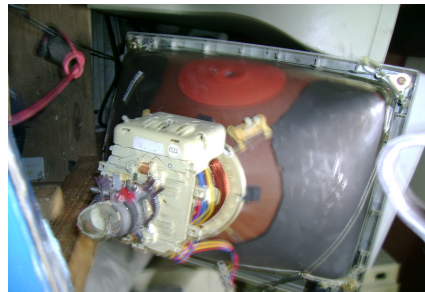
1. Sell to scrap dealers- looking for resistors, aluminum, monitor casing used as flowerpots and seats in informal sectors,
2. Give to street children in a collection of other wastes- they never mind what the street children would do with them
3. Take to Ngara and Limuru damp site to be burnt –one of the respondents admitted burning of the trash in Limuru (some 20Km from Nairobi town)<sup>5</sup>
4. Take to IT colleges to be used in practical sessions

*Faulty computers sold to retailers from a warehouse*

When asked if they were aware of any health implications of the wastes, the burning and the dumping, only one of the dealers expressed strong knowledge on the harmful smoke during burning. We thus assumed low awareness level of Kenyans to the dangers of the computer components no wonder e-waste is not closely monitored by the government in fact one of the dealers admitted that Kenya has not developed proper e-waste disposal system as IT just picked up a few years ago.



*Gadgets used in recycling computers in a retail shop along Biashara Street Nairobi*



*Non-recyclable monitor awaiting sale to scrap dealers*

### **The warehouses**

Compared to Mombasa where there only seemed to be two refurbished computers warehouses, Nairobi had a good number. Two warehouses were surveyed. Most of the computer containers are opened in Nairobi. The 20 feet container was approximated to be carrying 500 complete units computers while the 40 feet one was approximated at 1000 complete units.

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<sup>5</sup> Ngara is close to the heavily polluted Nairobi River whose waters join other major rivers to the Indian Ocean. Ngara is not a dumpsite per se. We refer to it as a dumpsite because waste is dump there but not because it is a designated dumpsite by the government.

The respondents approximated that over 50 containers of refurbished containers are imported each year. Out of every container imported, 10%-20% is faulty i.e. not in any working condition. For this an equal percentage (10%-20%) is given free to the importers to cater for the cost of the junk. Perhaps this is done deliberately as an incentive to accept the waste. They mostly import from UK and USA.



*A typical second hand computers warehouse in Nairobi's industrial area-Lunga Lunga -Kinetics Engineering Ltd.*

Though there were signs of people trying to repair and recycle the faulty machines in the warehouses, much of the junk is sold to those dealing in faulty machines to recycle them at their retail shops and later sell the non-recyclable parts to scrap dealers as has been mentioned earlier in this report.



*Non-recyclable computers in a warehouse in Nairobi's industrial area Lunga-Lunga awaiting sale to scrap dealers*

When asked on the development of the business through time, we were shocked at their response. The business only picked up in 2003 and doubled in 2006 when the government removed Value Added Tax (VAT) on computers. Compared to the response from the retailers on the life span of refurbished computers to be 5 years, in the next few years (2-3) e-waste is likely to be an emerging problem in Kenya. Moreover, the chances of the business doubling in size in the next 2 years are high with the Computerization of schools programme and the rural electrification programme being enhanced by the government and development.



*Sorted faulty computers from container awaiting sale to scrap dealers*

The dealers would not disclose the companies or individuals they import from perhaps because of fear of intimidation. Instead they hinted that the dealings are done through the internet. They were not comfortable with taking of pictures. In response to the view of others on the business, the dealers expressed high knowledge on those who have shown interest and with the widening demand, Kenya will soon be flooded with refurbished computers and worse still the 10%-20% faulty ones will cause havoc at the dump sites.

### **The dumpsites**

Three dumpsites were mentioned during our interviews with the dealers –Ngara, Dandora and Limuru. The dealers would say that the non-recyclable parts end up in the dumpsites but would not admit that they do it. Only one of the dealers admitted that he burns the non-recyclable parts both electronic and non-electronics in an open air in Limuru.

As was the case in Mombasa, the dumpsites are very insecure with scavengers hungry for money. We therefore needed some security (local men) and have some money to give to the scavengers. Moreover the dumpsites except for Ngara are some kilometers out of Nairobi town. We did not go to the dumpsites given lack of capacity for the reasons given already. However, a clear picture of how the wastes end up in the dump sites need to be given.

The retailers hinted to us that the scrape dealers and scavengers-street children (locally known as *chokora mapipa*<sup>6</sup>) extract valuable elements such as copper, aluminum and others from the waste. Burning was sited by the dealers as the most common method. No acid was ever mentioned however they could not ascertain this. Further survey should reveal this.

### **CONCLUSION**

Despite the significant difficulties and challenges, the survey helped in answering one of our questions emanating from the Mombasa survey- where are the refurbished computers containers from the port of Mombasa opened? Digital boom is growing in Kenya and east Africa though not at the rate experienced in other countries. Nairobi seems to be the center of the trade in the East Africa though a thorough survey should be done to ascertain this statement. The business has developed in Kenya at a fast rate since the year 2003 and last year (2006) was the turning point when the VAT on computers was removed. What is the cost of this fiscal policy? What is the trend of the growth of the digital boom in Kenya and East Africa? What is the awareness level of the people involved and the possible victims of the waste on the dangers of the trade? What policy frameworks exist in Kenya to tackle the fast approaching problem and how do they relate to the Basel Convention? How ready is Kenya to respond to this new trade-waste nexus? What can be the role of relevant NGOs, researchers, professionals, and activists in the issue and how can they be empowered to play the role? These are some of the questions that this report poses however not rhetorically.

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<sup>6</sup> *Chokora mapipa* is a Kiswahili (Kenya's national language) word literally meaning one who scavenges dust and rubbish bins. All street families are these days referred to as *chokora mapipa*.

## **RECOMMENDATIONS**

1. A thorough survey should be done as a follow-up on this preliminary survey with a wider sample size. This survey should factor in the significance of the dumpsites, the government arm in charge of the environmental issues (National Management Environment Authority), Environmental lawyers and professionals and even the respective embassies and high commissions.
2. a proper analysis of existing policy framework in Kenya and East Africa as a whole in relation to trade in hazardous waste should be done and relationship drawn in it their relevance to tackle the e-waste problem even as the implementation of the school computerization and rural electrification programme get underway. Reference should be made to the globalization paradigm.
3. To give a clear picture of the case in question in the region (East Africa) similar surveys should be done in Uganda and Tanzania.
4. Given the results so far of this survey, a proper monitoring scheme should be put in place. This can be done in piecemeal starting with the two organizations (iLima and EEIU-K). This should include surveys, periodic reporting, early warning, sensitization and awareness creation, influencing policies. This of course is limited to the availability of resources.
5. The survey team should work on activism after verification of facts to persuade/compel the government to subject importers of used computers to conduct a Environmental Impact Assessment (EIA) and Audit before continuing with the business
6. We recommend that a summary of this preliminary survey and the thorough survey be presented in the coming Basel meetings and any other local and international meetings relevant to the course (to show the case of East Africa)