



# **LESOTHO E-WASTE PROJECT**

## **FINAL REPORT**

**Department of Environment  
Ministry of Tourism, Environment and Culture  
Maseru  
LESOTHO**

**2018**

## Introduction

Waste of electronic and electrical equipment (WEEE) or E-waste is defined as whole items or parts or residuals from electrical and electronic equipment (EEE) discarded by the consumers before or at the end of their service life. The continuous technological change and the frequent replacement of electronic and electrical equipment especially in developed countries, leads to a rapid increase of E-waste globally in terms of volume and complexity.

E-waste has become a prominent issue in the national agendas of several African countries, and the interest is growing rapidly. Some countries in the region have already started implementing different initiatives, including inventories, diagnostics, pilot collection activities, educational campaigns, workshops and seminars. These activities have been mainly conducted through independent events, national and regional organizations or working groups and networks, mainly in response to local contexts, needs and developments. However, due to national differences in policy developments and the status of E-waste related initiatives, progress has been slow and patchy.

The environmentally sound management of E-waste during its collection, storage, dismantling, recovery, treatment and final disposal includes effective safety, occupational and environmental management practices. These were considered in this pilot whose aim was to contribute to achieving environmentally sound management of E-waste at the national level in Lesotho and serve as a lesson for other countries in the region.

It is noted that E-waste is a growing and economically valuable waste stream including in the developing countries as well. It is a waste stream that may play a vital role in creating gainful employment opportunities especially in the developing countries where unemployment is very high. Despite being a small country, Lesotho is also experiencing rapid increase in obsolescence of electrical and electronic devices leading to rapid increase in E-waste as well.

Even though the economic value of E-waste is well accepted, it continues to be mixed and lost with the general municipal waste on daily basis in most countries. This is a lost value and a lost opportunity to create green jobs within a country. In a country where unemployment is in excess of 30%, the opportunity to create these green jobs within the waste sector is a highly desirable thing. It is against this backdrop that the Department of Environment and the Africa Institute approached UNIDO to utilize an opportunity within the LDC project to pilot the first trial in the country for a managed E-waste collection system.

From the onset the pilot was structured in a public-private-partnership (PPP) model for sustainability. This means that the government had to find a local private company that would be responsible for all day-to-day activities related to the collection system. The government on the other hand must provide policy support to the company, run public campaigns and supervise the project overall. The local company that was identified by the government and vetted by its advisory multi-stakeholder committee called Committee on Waste Management (COWMAN) is called Group II. At the moment, Group

II is the only company in Lesotho that is collecting E-waste. Other waste companies are focussed on the other streams of waste such as municipal and medical waste.

Group II is a local company that is already involved in waste management in the country. It began its operations in 2012. Its activities include collection and transportation of medical waste from 4 southern districts (Mafeteng, Mohale's Hoek, Quthing and Qacha's Nek) from feeder clinics to incineration facilities located within the government hospitals. The company also runs a collection of card-boxes, bottles and aluminium cans especially in the capital city Maseru and then transports them to South Africa for recycling.

On the E-waste front, Group II is collecting end-of-life computers from the corporate sector for repair and dismantling in the local facility and then transporting the different fractions to their partners in South Africa for recycling. The company has been making efforts to diversify the devices it collects beyond computers to include many household devices such as mobile and landline phones, kettles, microwaves, televisions, radios, printers and so on.

Although Group II began its E-waste collection from the corporate sector several years ago, only a small amount was being collected. Most of the companies were not involved in the collection scheme and the E-waste that is being generated by the government and the public is not included. The government E-waste is stockpiled in the ministries and departments while that from the general public tends to be dumped with the general waste in dumpsites throughout the country.

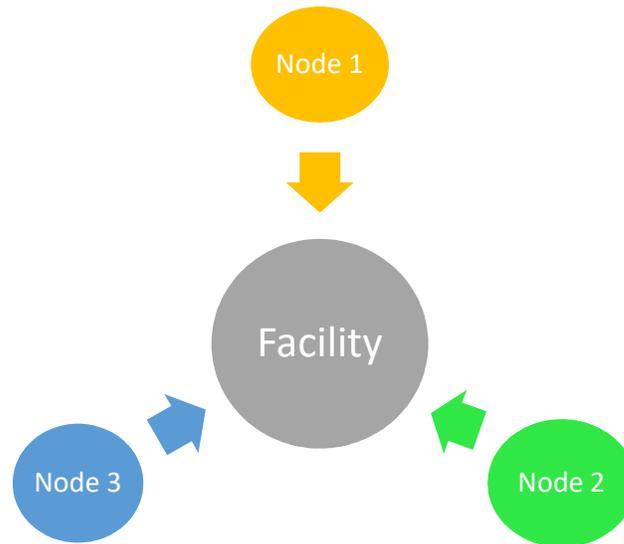
The government E-waste is stockpiled because of the bureaucratic decision-making process that needs to be followed before any equipment that belongs to government can be transferred to another party or even disposed-off. Given this lengthy process, the obvious tendency is simply to stockpile these obsolete and broken devices in some dark corner or office and simply ignore them.

For the waste from the general public, E-waste suffers the same fate as all other waste which is generated at the household level in the country, which is poor disposal. The waste management system is very poor and barely functional including the capital city. The consequence of this is that in addition to the main dumpsite which is run by the Municipality in the capital there are small dumpsites springing all over the neighbourhoods as people simply tend to adopt the out-of-household, out-of-mind attitude.

This pilot project therefore is the first attempt by Lesotho to develop an E-waste management system that will see all the collected waste repaired or sent for material recovery in the neighbouring country, South Africa. The pilot is therefore a quadripartite arrangement between UNIDO, Africa Institute, Group II and the government. If it succeeds it will provide valuable lessons to the country and the region.

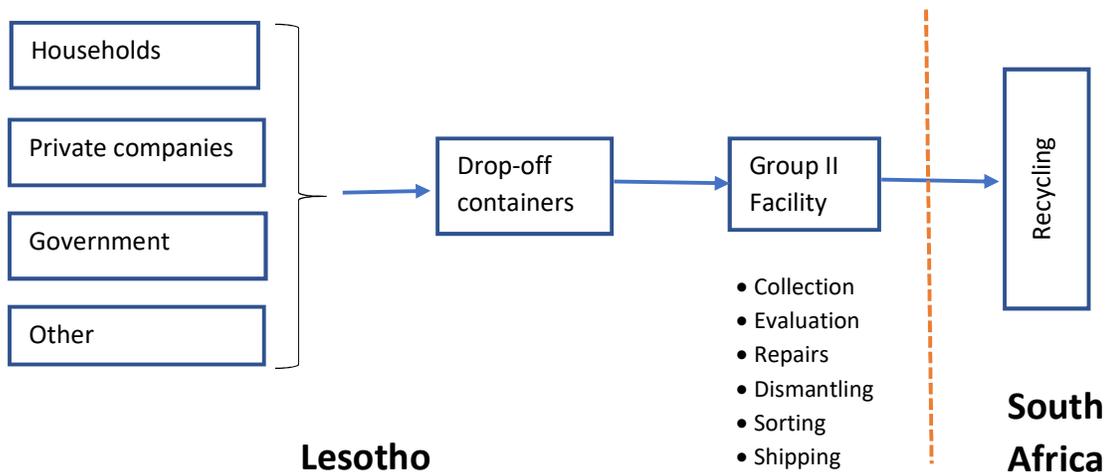
The project is using a wheel-and-spoke drop-off model. This means 3 drop-off nodes that all gravitate towards a single hub, the facility at Group II. At the drop-off nodes the customers will walk-in to drop-off their various wastes. These nodes will merely serve as collection centres. They are setup at places that have high population activities. One is at

the Sefika Mall which is a very busy mall close to the main bus station, another in the central business district (CBD) at Makoanyane Square, a public park within the CBD and the last one near the traffic and home affairs offices. For security, the E-waste is deposited into lockable containers that are locked so that the waste can only be accessed by authorised persons. Then on a regular basis the waste will be collected from these nodes and transferred to the hub by Group II.



At the hub the waste will be sorted, dismantled, packaged and labelled for export. It is also at the hub where repair-and-refurbishment will take place. This implies that community members, who want their un-functional electrical and electronic equipment repaired, may bring them to this centre for evaluation and repair.

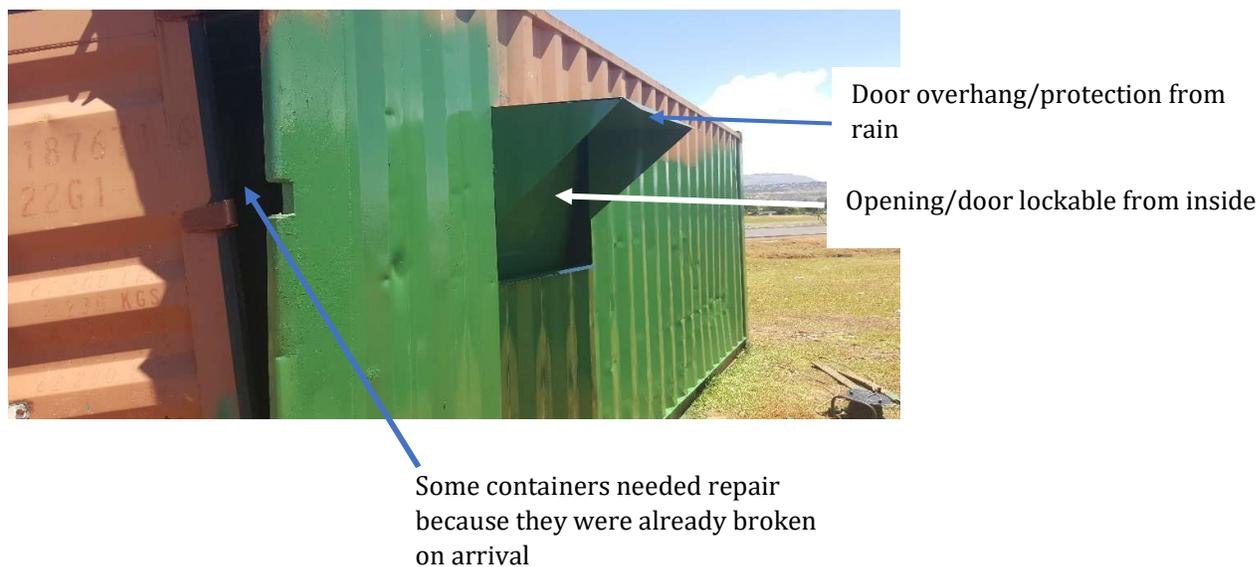
Any E-waste that has been dismantled, sorted, packaged and labelled will then be transmitted to an accredited recycler based in South Africa. The hub is located within the premises of Group II. Group II provides security and further value addition into the process. It is the responsibility of Group II to ensure that all activities throughout the value chain are compliant with all national laws and international best practices. This private sector champion oversees the pilot together with the multi-stakeholder working committee that is a subsidiary of COWMAN that is charged with supervision and support.



## The customization of the drop-off nodes

The pilot is using 3 shipping containers that have been adapted to serve as E-waste drop-off nodes. The 3 shipping containers have been painted and drop-in doors or openings opened. The doors or openings are lockable in order to secure the materials that have been dropped into the containers by the public and businesses. This is to prevent theft as well as securing the data or information that may be on some of the devices.

One of the key responsibilities of the project is to pilot a collection system that will protect the privacy of the equipment holders. Leakage of the private information or even confidential information could crash the collection system as people may lose faith in it instead see it as a risk. Electronic devices carry a lot of highly personal and in some cases very confidential information.



## **Branding of the containers**

A team of youth was assembled to brand the containers for the purpose. These are the youth who are at the university level and studying graphic design and art. They branded the containers using paint. They were given the concept and allowed to express the message that encourages the public to bring their E-waste to the containers in their own artistic way. The working group decided to engage the youth in this project both as an educational exercise and also because they represent future potential in inculcating more enduring environmentally sound management of E-waste and waste management in general in the country.

For it is invariably more the youth who are more active in this transient technological revolution that is ongoing and are also more amenable to changes that come with this perceived modernization. This group of 9 youth therefore forms a seed group that hopefully will continue peer education on this topic at home, with friends and relatives and in their institutions of higher learning and later in the organizations that they will work for. They represent hope.

Their enthusiasm in this work was highly commendable as they worked long hours and several weeks to express their educational and campaign message through the veil of these containers. It was therefore humbling when the Honourable Minister of Environment acknowledged their work by awarding them certificates of appreciation during the launch. It is a pity that there were only 3 containers and such limited time. It was clear that they had so much to say on the walls of those containers. They had such an enduring passion.

If this small pilot succeeds, it will be advisable to bring them back and perhaps many others so that the message embodied in this venture is deepened in this critical stakeholder group going forward. Amazingly they are a lot more aware and willing to do things than they are being given credit for. It is our failure to include them that blinds us to their awareness and commitment to a better environment. Initiatives like this pilot project that deliberately bring them on board allow them to channel their energy appropriately and express themselves at the national stage in a manner that is not always made available to them.



Container 1



Container 2



Container 3

## Project coordination

The project was led by a working committee that was established as a subsidiary of COWMAN. It comprised representatives from the Department of Environment, Ministry of Health, Group II (the private sector company that will collect the E-waste from the containers) and the consultant from the Global Environmental Solutions. The project working group met many times. It was responsible for planning, execution and supervision of the activities. The working group has resolved to continue working beyond the launch to support the pilot as volunteers.

## Making a documentary video

The working group resolved to document all stages of the project through a video. This video is meant to serve as an educational tool about the process. The video documentation is done by the in-house staff of the Ministry of Environment. All steps in this process are done by the Department including video editing, script and voice over. This means that the working group and the Department will continue working beyond

the launch of the pilot when the support from UNIDO and the Africa Institute will be ending.

## Information dissemination

1. A team from the Ministry of Environment, Outreach division planned a series of radio programs. It was resolved by the working group that these should start relatively close to the launch so that the public would not lose the momentum of the project.
2. Also planned was a press conference that was hosted by the Director of the Department of Environment. In the press conference, normally radio stations in the country, newspapers and the TV are represented. This will spread the message widely. The result of this press conference is that the pilot was presented in the news bulletins in both print, radio and television in the country.



3. Also planned was a TV program that featured the Department of Environment as the champion.
4. Flyers were printed that disseminated the project to the wider public. These flyers encouraged people to bring their obsolete devices to the drop-off nodes.
5. A brochure was printed for members of the public who are interested in reading slightly more about E-waste. It was written in Sesotho (the local language).
6. Bill- boards were placed along the 4 main entry routes into the CBD. The project financed 2 bill-boards and the ministry financed additional 2 more bill-boards.

## **Training**

Training was conducted on the 18<sup>th</sup> January 2018. In this training workshop 30 participants from key stakeholder institutions were present. The training focussed on three elements (i) the general awareness and characterization of the E-waste (ii) the concept of extended producer responsibility (EPR) in E-waste management and (iii) the guidance document that has been developed for E-waste management in the country at the facility level. In addition to the training, protective clothing was provided for occupational safety.

## **Reaching out to cabinet**

The working group noted that there is a lot of obsolete government equipment across all departments. It was decided that the Department of Environment must escalate this matter to the Minister's office and request the Honourable Minister of Environment to escalate the matter further to cabinet. The aim is to secure a cabinet decision that may be used to trigger the release of obsolete stockpiles that are within the government system. This is a long short and may take considerable time.

## **The launch**

The launch was done on the 19<sup>th</sup> April 2018. There was a considerable loss of time towards the launch because there was a cabinet reshuffle in February after the launch dates were confirmed with the previous minister. This meant postponement of the launch and re-initiation of the process with the new minister. For the launch, the working committee managed to secure attendance of the Minister of Environment who provided a keynote address, the Minister of Local Government who provided support from the waste management perspective and the Minister of Health who looked at the health aspect of E-waste and waste in general. The fact that this event was attended by these 3 critical ministers personally gave a positive sense of commitment that the government meant business. This was a positive signal since going forward that political capital will continue to be needed to nurture the collection system.

As part of the launch and as an awareness raising event, the working committee organized a match along the main routes of Maseru in the CBD. The most commendable of this match is that both the Minister of Environment and the Minister of Health completed the entire match of approximately 1 hr. Also present at the launch were Her Lordship the Mayor of Maseru and the representative of the Africa Institute, Dr K. Khalema. There were hundreds of other people who joined the match. Some came from the ministries of Environment, Local Government, Health, the city council and the general public.

The launch included a symbolic drop-in of waste into the containers by the dignitaries led by the Minister of Environment. This event was covered by TV, radio stations and print media. The momentum must be maintained so that ordinary people may embrace this

new approach. This event marks the first attempt in Lesotho at segregating waste. Currently waste is seen as other people's responsibility with no personal ownership by the waste generator. Once out of sight, then very quickly out of mind as well.

This project is asking waste generators to take personal responsibility of ensuring that their waste reaches the right place. And by depositing their E-waste into these containers, the waste generators sign a social contract with the government that they want a hazards free environment from pollutants emanating from E-waste, and with Group II in whom they bestow their confidence that from the containers onward, the E-waste will be handled in an environmentally sound manner in conformity with both national and international laws and in keeping with international best practices without any prevarication.

This pilot project therefore provides a quantum leap for Lesotho in the area of waste management. It is a trailblazer. It will continue to need more political support from the line ministries going forward. It is about changing the way people have been doing things since time immemorial to embracing a new ethic in waste management in the country.



The Minister of Environment delivering his keynote address



The Minister of Local Government delivering his address



Ribbon cutting by the Minister of Environment to inaugurate the launch



Representative of the Africa Institute, Dr K. Khalema at the match



The general public on the E-waste match

## Conclusions

Although E-waste is a valuable waste stream, many companies that are already involved in waste management have not seen its potential. In Lesotho, there is only one company that has diversified its operations to include E-waste. Their collection system is still at its infancy reliant mostly on call-outs from the corporate sector. For the most part all E-waste from the government and the general public has not been available to this company thus far. This means that the collection system that is being piloted in this project is the first attempt in the country to reach out to the government stock and the stock in the hands of the public.

To achieve success in this venture requires a change in mindset which can only be achieved through targeted and relentless public campaigns. The political will demonstrated in this project gives an encouraging signal that the government of Lesotho is committed to this idea. Since this project is organized in a PPP model, if the response from the government, private sector and the public increases the collection volumes, a sustainable industry in E-waste management in the country may be spawned. Given the high unemployment in the country including among young graduates from the university this will be a positive step in the right direction.

As Group II is already involved in the collection of paper and E-waste in the country, the pilot project was a positive stimulus that managed to galvanize all the key stakeholders in the country around the topic of waste management. It is common cause that a rudimentary management measure of waste in most developing countries is open burning which creates persistent organic pollutants (POPs). By piloting a collection infrastructure, the project has provided an opportunity to divert some waste streams that

would end up in open burning thereby minimizing the emissions of more POPs in the country.

## **Recommendations**

1. The public campaigns that are championed by the Department of Environment must continue in order to support the collection system
2. The collection points or nodes need to be increased to cover more high-density areas in the city
3. If the collection system succeeds, opportunities must be explored to extend the system to other 9 districts in the country
4. The ministry and the working group must reach out to other waste management companies in the country in order to encourage them to come on board and play a part in the E-waste collection system in the country
5. The city council must consider providing receptacles that segregate E-waste at their collection points
6. The drop-off nodes established by this project must be visited regularly by Group II for collection and inspection
7. Since the working group has resolved to continue working as volunteers to support the project, the ministry must continue to provide them with the meeting room at no cost
8. The ministry, Group II and the working group must reach out to other private sector companies that may be repositories to E-waste
9. The ministry and the working group must work on a possible extended producer responsibility concept that Lesotho may consider in order to support growth in this new industry
10. The ministry and the working group must explore further funding possibilities that will support the initiative especially during this infancy stage
11. The government must consider establishing an E-waste management policy
12. The ministry and the working group must finalise the video documentary that they have initiated as part of this pilot project
13. COWMAN must establish the current working group on E-waste as its standing committee and establish a procedure for reporting

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