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E-waste management in South Africa. Sida PDC grant

Progress Report 1. December 2012

General Background

The objective of the project funded by Sida's PDC facility is to identify business and cooperation possibilities along the e-waste value chain between stakeholders in Sweden and in South Africa.

Ref. Invitation Letter dated September 2012, attached as Appendix 1

The first fact finding mission to South Africa was made 26 November to 7 December 2012. Preparations were made since the project's inception by contacting various stakeholders in Sweden including private sector producers such as Ericsson and Electrolux, a number of recycling companies and with Boliden, the world's largest smelter of electronic scarp. Contacts were also made with relevant authorities such as the Swedish Environment Protection Agency and several research institutions. A list of contacted Swedish stakeholders is attached, Appendix 2. This list also includes updated contacts with stakeholders in South Africa (and in VietNam)

Sweco, as one of Sida's contracted facilitators for energy and environment in South Africa, provided valuable support to arrange for certain contacts and meetings. Additional time had to be spent and a great deal of flexibility had to be adopted on follow up meetings with known and new stakeholders that came up as relevant during the course of the mission.

Approach

It is considered important to address e-waste management in a holistic way and consider and include the whole value chain from EEE (Electrical & Electronic Equipment) reaching its end of life until new raw materials have been produced. Sweden has an established, if not an absolutely perfect, but a well functioning e-waste recycling management system based on cooperation and competition between authorities, municipalities, trade organizations and private sector recycling companies and producers. Sweden is thus well placed to offer system solutions to South Africa as well as to other countries which lack a proper e-waste management system today.

It needs to be borne in mind that e-waste is a valuable resource and that recovery of this resource has a substantial positive effect on environment and climate. Recycling of e-waste fits well into the EU's Raw Materials Initiative (RMI).

General E-waste situation in South Africa.

Although far more advanced in many respects than many other countries on the African continent there is an extensive informal business and trade going on with end of life EEE without much control and environmental concern also in South Africa. The awareness is generally low both re the environmental damage that is caused by the current practices but certainly so about the value contained in the EEE. The current "recycling" is a cherry picking practice by which only those materials which is of known value is being recycled and/or traded, with limited disassembly, to a great extent in the black market.

South Africa's National Environmental Waste Management Act 2008 calls for a common platform between stakeholders under its so called National Waste Management Strategy to systematically improve waste management in South Africa. The Strategy envisages an important role for industry which has responded by preparing inputs and proposals for implementation of such a strategy. At the moment there are two industry groups that have prepared separate proposals one led by EWASA (E-Waste Association of South Africa) and the other by the IT Association of South Africa's Producer Environment Group.

E-waste management in South Africa is fragmented among a variety of stakeholders both informal and formal with both up to standard practices and with no standards at all. Ferrous metals have been traded since long by dealers in urban areas while informal collectors scavenge municipal collection points and landfills and comb streets with trolleys on waste disposal days. There are then a large number of operators ("recyclers"), from very small to some larger, within the next link in the value chain using manual and various mechanized processes. A general observation is, as mentioned above, that the knowledge and methods of handling hazardous and fractions of little or no value (ex CRTs, LCD monitors, batteries and ozone depleting gases in fridges) are limited and scarce. Most operators also do not enforce basic health and safety regulations. There is thus a huge need for a) a holistic management system that generate funds from valuable components to pay for the treatment of the hazardous and non valuable ones and b) investments in technology to recycle those latter components. Although technology investments are necessary to manage certain types of e-waste, a sustainable e-waste management system in South Africa should benefit from manual dismantling and treatment methods. With huge unemployment rates many jobs can be created within a sustainable e-waste management business in South Africa successively transferring also jobs from inform to formal sector. By improving its e-waste management system South Africa thus has the potential to benefit from increased domestic processing with value added activities, job creation while being in a position to assist other African countries with these experiences.

In order to achieve the above, awareness has to be raised among all stakeholders maybe in particular so at grassroots public level. Awareness raising campaigns thus have to become part of revised environmental and climate change policies and activities including from primary school education to high level corporate and government programs.

Conclusions and Proposed way forward

There are a few specific links in the e-waste value chain in which Swedish competence can contribute to improve the current status.

1. Assisting to introduce current best global practice, the EU WEEE Directive as basis for a sustainable South African e-waste management system

It is probably safe to state that the EU WEEE Directive is the current global best practice stipulating mandatory requirements for governments and producers and providing guidelines for member countries adoptions. A key element of the WEEE Directive is the Producer and the responsibilities Producers have to take.

The voluntary initiatives taken by the two groups mentioned above, EWASA and the ITA Industry Group have clear merits and aim to improve e-waste management in South Africa. However both proposals only cover part of what the WEEE Directive defines as WEEE and proposes the creation of a Registry and a Producer Collective Scheme into which producers need to pay fees according to types and weight of products they place into the market. Such as system will become an extra burden on producers which have already included costs for take back schemes into their products pricing. Furthermore it creates a monopolistic position for the proposed bodies while EU member countries have adopted an open free market policy which is open for competing parties to manage the e-waste value chain.

It would be worthwhile to propose to the DEA (Department of Environmental Affairs) an intervention by which Government and other stakeholders in South Africa (incl. industry, civil society and labor) will be able to take advantage of the experiences gained in Sweden and possibly other EU countries. This could be done by arranging study tours and seminars/workshops as well as practically work on introducing in South Africa a law that practically mirrors the EU WEEE Directive.

2. Establishing up to standard recycling company(ies)

There are a large number of small and larger operators (“recyclers”) in South Africa. According to some stakeholders none of these operators is a “real recycler”. Some do part of a full sorting, dismantling and final processing while others are pure traders adding no or limited value to the recycling process. Much material is thus only partly processed before it is being exported or dumped at landfills. The informal character of much of these operations prevents responsible buyers in other parts of the world to buy material from South Africa. Furthermore there is a potential to much more value within South Africa by increased and improved processing while more jobs will be created and greater tax revenues for the government when workers may be transformed from informal to formal sector.

Existing operators may thus be encouraged to expand their e-waste recycling businesses to become fully fledged e-waste recyclers by investing in training or joining forces with foreign experienced recyclers or a combination of both.

An idea would be to begin on a pilot scale using as much manual labor as possible, the main investment being in human capital and not primarily in too sophisticated or large scale machinery.

One recycling company has initiated an interesting concept called WeCare (could have been named WEEECare. The essence of this concept is that it focuses at consumer/user level in South Africa's townships and township schools. It is based on the fact that only 5 million people in SA have access to a computer and that new computers are not affordable among the poor majority. WeCare thus aims also to sell refurbished second hand computers at discounted prices with a commitment to take back the equipment the day when it reaches its end of life. Township inhabitants will be organized in groups to help also collect other types of (e-)waste.

One of South Africa's largest refineries is planning to develop its upstream business into e-waste recycling being aware of the increasing volumes and business worth in "urban mining". This refinery is keen to learn and understand the appropriate business models and possible equipment needed.

3. Recyling equipment

Irrespective of what is said above re focus on manual labor there may be need for certain types of equipment to treat for example toxic and highly hazardous e-waste material such as those containing mercury, lead, cadmium and beryllium including also ozone depleting gases.

Swedish manufacturers of equipment for treatment of fluorescent lamps and CRTs could set up a demonstration plant in South Africa that could be a show case to all recycling companies and to the authorities in the country and also to neighboring countries as applicable. A Swedish equipment supplier had been given a commitment to establish such a demonstration plant under the Demoenvironment facility. The commitment has now been cancelled due to a lengthy process in SA to finalize a required EIA for the project. The potential co-funding from South Africa's IDC (Industrial Development Corporation) may be revived if another funding source is found to replace Swedish Demoenvironment.

4. Awareness raising

As mentioned above there is a huge need to raise awareness on e-waste among all stakeholders in South Africa. This can be done with support and participation of Government, industry and foreign development institutions. Full such campaigns can be launched provided that there are solutions available on the ground while campaigns explaining producer responsibility can be conducted at earlier stages. Awareness campaigns are important components of an encompassing holistic approach to solve the e-waste problem in South Africa.

5. Creation of an E-waste Strategic Alliance

It is a challenging thought to create an alliance among various stakeholders including government and public sector, industry and civil society with a focus to introduce improved solutions on the ground. Such an alliance could complement other "alliances" or initiatives earlier formed to stop the e-waste problem around the world. With private sector/industry at the drivers' wheel the focus will be workable business solutions ensuring open competition and corporate responsibility.

Potential sources of non-Swedish funding

GIZ is one of Germany's development agencies active in South Africa. Germany provides support to partnerships with EU's private sector (and with South African subsidiaries of EU companies) , ref www.developpp.de within a number of focus areas such as urban environment, raw materials, climate change, resource conservation and energy, all of which with strong relevance to e-waste management. GIZ welcomes proposals from interested companies as well as from "strategic alliances". The ongoing project between GIZ and MTN is one example of a project supported by GIZ under its Africa Facility.

Another source of funding can be the IDC (Industrial Development Corporation) in South Africa, ref www.idc.co.za. IDC is particularly interested in development projects that have a potential to create jobs among underprivileged groups.

There may be reason to follow up with the EU office to explore any form of coordination and/or co funding knowing that environment is high also on EUs agenda in South Africa. EU's RMI (Raw Materials Initiative) is of course highly relevant to South Africa

The way forward

Detailed discussions and meetings will now be held in Sweden with a number of stakeholders to identify their possible interest and to modify the proposed interventions as necessary. These discussions will be open for expanding the possible approach or maybe reducing the scope of the next step.

It is envisaged that some interested parties would travel with Georange to Vietnam and to South Africa to meet and discuss in more depth possible engagement with relevant parties in the two countries. Centec and Chamber Trade Sweden may support the arrangement of workshops with parties in Vietnam and South Africa respectively.

The approach is still holistic keeping the whole value chain intact while interventions may be stronger and more focused at certain links and less so in others.

The most challenging idea is to establish a strategic alliance, bringing together players from industry, trade associations, unions, government, academia, development aid organizations and civil society (primarily Swedish but open also to stakeholders from other countries), to assist developing countries to improve their e-waste management systems. One could begin with a small group of dedicated producers, ideally also together with Swedish EPA. VietNam and South Africa could be pilots for such an alliance while it would be open to work in many other countries. Such an alliance could be supported by Sida's B4D and/or Germany's partnership programs with the private sector. (pls do see www.developpp.de) With a holistic approach focusing on the entire EEE end- of-life value chain such an alliance would offer its experiences on a transnational basis with replicability as guiding objective.