



NEWSLETTER #4

ABOUT

ReSoCart-ED means Recycling Solutions for Non-Reusable Printer Cartridges in Emerging and Developing Countries. The project is funded by the German Federal Ministry for Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV), started in May 2022 and runs until February 2024. ECOLOGICON GmbH and Umweltcluster Bayern e. V. form the ReSoCart-ED consortium to examine whether the recycling of printer cartridges could be an economically sustainable business model in the target countries.

INTRO

We welcome all readers of the ReSoCart-ED newsletter! We inform about recent decisions, the second visit to Ghana and ongoing activities as well as our plans for this year in the ReSoCart-ED project.

SUBCONTRACTING OF EXPERTS STARTED

The ReSoCart-ED team is very happy about the great resonance they got for the call for proposals in the fields of "legal framework", the "market situation", and the "informal sector" concerning the toner cartridge handling in Ghana. From the received proposals one had been selected for each topic. We are happy to cooperate with DGIC (Delegation of German Industry and Commerce) Ghana, the Mountain Research Institute as well as with the University of Cape Coast.

As mentioned above the project partners met the contractors in Accra in the end of April and discussed about the topics and goals of the works. The results will give a much deeper insight to the toner cartridge market and will open chances for possible local recycling routes.

The ReSoCart-ED partners will continue to subcontract local experts to help to improve the data pool as well as to identify a suitable toner cartridge treatment system in Ghana. The latter might be part of a follow-up project and requires a lot of information of market structure, legal and administrative knowledge as well as political information and support.

SECOND VISIT TO GHANA

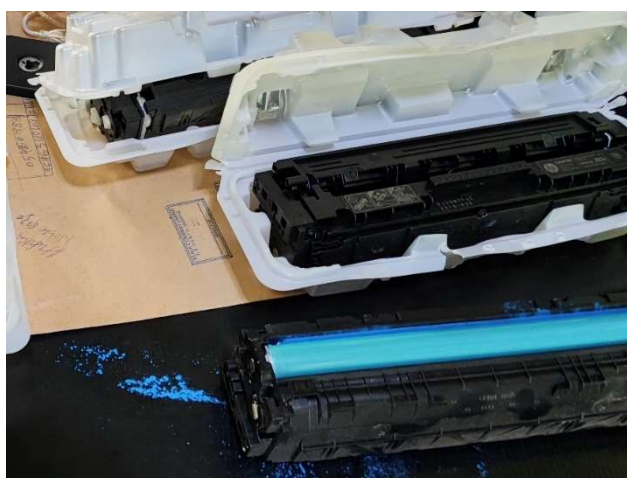


Figure 1: ReSoCart-ED project team (Viktor Klein, André Rückert, Florian Werthmann) visits stakeholders in Accra, Ghana in April 2023. (Photo by André Rückert, ECOLOGICON)

In April 2023 the second visit to Ghana was scheduled: Florian Werthmann and André Rückert (ECOLOGICON GmbH) as well as Dr. Viktor Klein (Umweltcluster Bayern e. V.) travelled to Accra from April 15th to 21st to meet local partners and deepen the cooperation (Figure 1). It was the goal to coordinate and arrange the next steps in the ReSoCart-ED project.

Since the framework data of the cartridge market, the regulations and role of the informal sector are analyzed, the German partners closely work together with local partners such as the Mountain Research Institute MRI, the DGIC Ghana, GIZ (German Agency for International Cooperation GmbH) and the University of Cape Coast.

During the visit to Accra the German partners together with their Ghanaian partners prepared a local collection case-study for toner cartridges. The goals are to obtain information about a possible future collection system as well as to establish a plastic-recycling of the waste cartridge plastic parts. For example, it was discussed how the collection workers could be trained on the specifications of cartridge types and which treatment is chosen for the different collected cartridges and parts (Figure 2). Ideally the recycled plastic can be reused in Ghana locally for new products – for this first contacts have grown in Accra (see Figure 3).



“We are looking forward to deepening our collaboration with our Ghanaian partners. We are confident to establish together a sustainable and efficient recycling system for toner cartridges in Ghana.”, quoted Florian Werthmann, managing director of ECOLOGICON GmbH and initiator of the project.

Figure 2: ReSoCart-ED project evaluates solutions for non-refillable toner cartridges in Ghana. As can easily be seen in the picture, the toner dust becomes a major problem when the EoL cartridge is dismantled for material recovery. (Photo by Viktor Klein, UCB)



The ReSoCart-ED project is an important step towards a circular economy in Ghana and tackle environmental pollution caused by WEEE (waste electric devices and waste electronics) as well as plastic waste. The German Partners are looking forward to continuing their cooperation with the Ghanaian partners on different activities as described in this newsletter.

Figure 3: Recycling of plastics is in general a possible way of treatment of the end-of-life cartridges and could be done directly in Ghana. It still needs to be evaluated, if local plastic recycling is also economically starting from toner cartridges. (Photo by Viktor Klein, UCB)

MALAYSIA ACTIVITIES DISCONTINUED

The project started with the goal to evaluate the toner cartridge recycling potential for two different regions: For western Africa in Ghana and for south-east Asia in Malaysia. However, although there was a clear interest from stakeholders, as learned during the visit to Malaysia, the continuation of evaluating the toner cartridge market required too many efforts to allow the full research work in two countries at the same time. Since the workplan in Ghana was a bit ahead, we decided to focus on this part of the project and to discontinue in agreement with our funding agency the activities in Malaysia for this project. Still, we see there a high potential for the toner cartridge recycling in the future.

TEST PROGRAM FOR CARTRIDGE COLLECTION PLANNED

For the treatment of the toner cartridges and a useful recycling strategy the material flow of the cartridges needs to be evaluated in as high quality as possible. A test of cartridge collection for a specific period of time is outlined and prepared at the moment. Legal requirements like a certification by EPA and the area where it should be carried out have to be clarified. This activity is in our focus currently, thus, we will inform you about the developments on our homepage as well as in the coming up newsletters.

IMPRINT

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