

KING Jason (2023) : Environmental impact of the DYNAMIC medical research project and associates e-waste management

SUMMARY

The objective of this thesis was to answer the following research question: What is the impact on human health and the environment of the digital part of the medical research project "DYNAMIC" and, in particular, how is the end-of-life of Waste Electrical and Electronic Equipment (WEEE) in Tanzania? In order to answer this question, it was necessary to understand the legal (global and Tanzanian) perspective on WEEE management, as well as the current general context of WEEE management in the country.

Tanzania's legal framework for WEEE management

In order to understand the legal point of view, in the world and more particularly in Tanzania, concerning the management of WEEE, a research work in scientific reviews was necessary. Indeed, it is essential to understand the laws in force concerning the management of this type of special waste (Secrétariat de la Convention de Bâle, 2012) in the world before looking at the different laws and acts in force in the country (National Energy Policy, 2003; National Environmental Policy, 2021). Once this work was done, field research was necessary to understand the application and the thinking behind these different laws. Within this framework, an interview with an official in the district of Ilala allowed us to understand that many laws and policies are implemented in the country to regulate WEEE. There is therefore a strong awareness of the need for proper management of this special waste.

Tanzania's general framework for WEEE management

Once the legal framework is observed, it is necessary to compare it to the reality on the ground. In order to understand the current procedures in the field, a series of interviews, from the head of the Ilala district to the CEO of the NGO "The Recycler", an NGO specialized in WEEE management (interviews in 8. Annexes), were necessary. The legal framework is rigorously applied in the city, where the number of staff allows for constant monitoring of the various actors responsible for WEEE management. There is thus an official recycling channel that functions well. However, there is still a lack of companies specialized in the complete management of this waste, only a few NGOs are involved in the management of all the components found in this equipment. In the villages, the lack of knowledge of the villagers as well as the low number of staff in charge of the surveillance, the laws are not as well applied, and one finds uncontrolled deposits of these dangerous waste.

Environmental and human health impact of WEEE generated by the DYNAMIC project

Finally, these results provided a true and complete picture of how WEEE is managed in Tanzania. The analysis therefore consisted of measuring the impact of the "DYNAMIC" medical research project's WEEE on human health and the environment in relation to the legal framework (and in force). Several solutions were identified, including not bringing in any EEE, using a web interface and the

equipment in place, offering a second life to all EEE that can no longer support the project, and contacting an NGO that specializes in managing this type of waste.