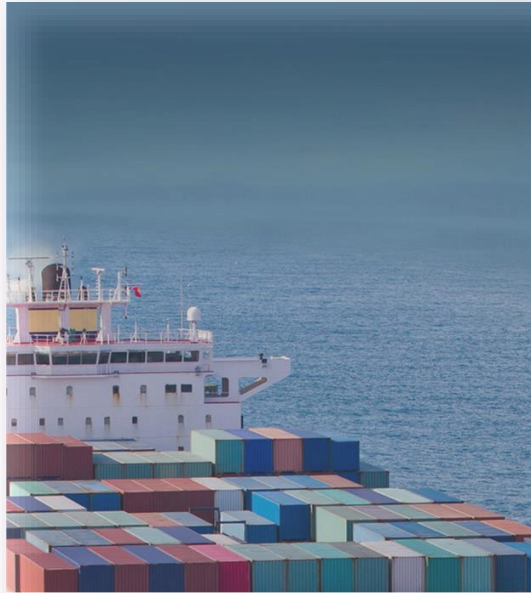


Basel Convention



What we do

TRANSFRONTIER SHIPMENT



Worldwide waste transfrontier shipment and mediation to EU licensed disposal facilities (we act as their international representatives)



Worldwide in-situ operations for hazardous waste assessments, decontamination, repackaging, licensing

CONSULTING

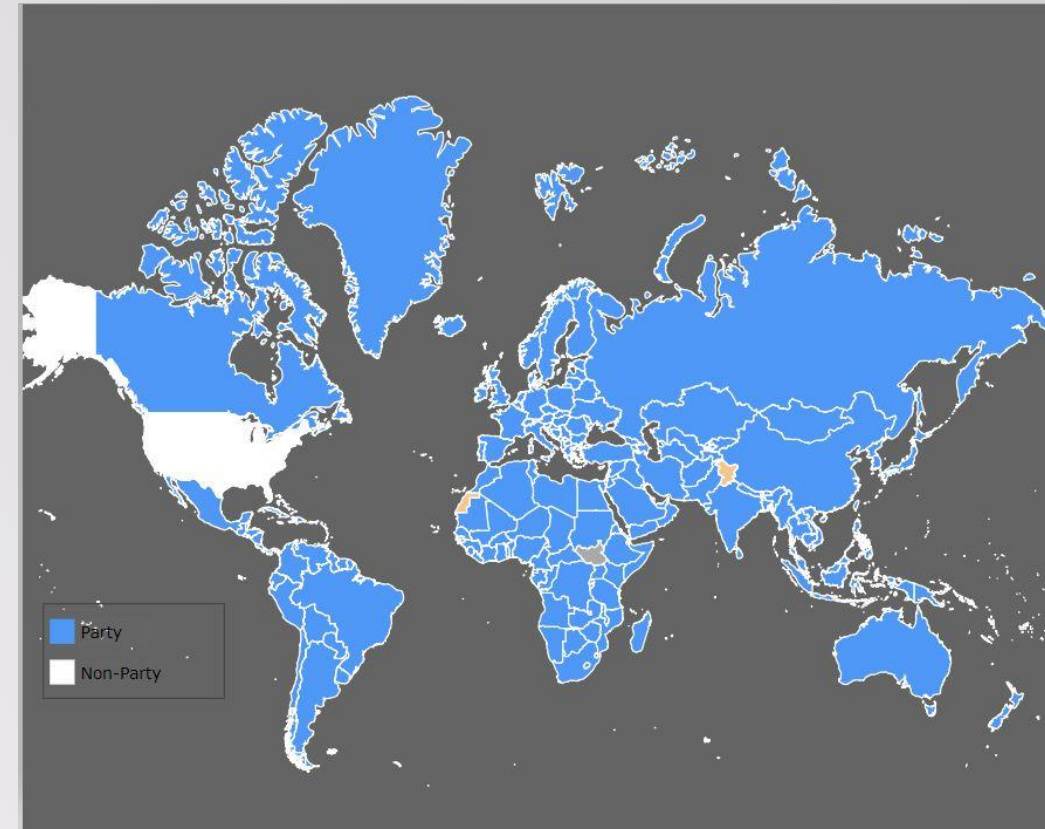


Technical waste management consultancy & project developers worldwide (hazardous & non-hazardous waste)

Introduction to Basel Convention



| Important dates | Countries | Highlights |
|---|--|---|
| Agreement: late 1980s Adoption: March 22nd, 1989 Entering into force: May 5th, 1992 | Signatories: 53 Parties: 187 | <ul style="list-style-type: none">• Objective: Protecting human health and the environment from adverse effects caused by hazardous and other wastes.• Goals: Reduce transboundary movements of hazardous wastes, minimize waste generation and hazardousness, ensure environmentally sound waste management.• Support: Assist developing countries in environmentally sound management of hazardous and other wastes. |

















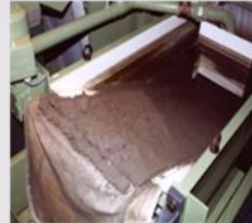

Definition of hazardous waste



The type of hazardous waste and its treatment is characterized by:

- The types of hazardous substances it contains
- The **concentration of hazardous substances** it contains
- The **physical properties** of these substances
- The **chemical properties** of these substances
- The **potential of these substances to react** with each other

Hazardous waste can occur in all areas of life

| Households | Solid | Pasty/sludge | Liquid | Hazardous / Non hazardous | |
|---|--|---|---|---|---|
|  |  |  |  |  |  |
| Industry |  |  |  |  |  |
| Commercial & Healthcare Sector |  |  |  |  |  |

Definition of WEEE and types of WEEE waste

Waste Electrical and Electronic Equipment (WEEE) is defined under the Basel Convention as electrical or electronic equipment that is waste, including all components, sub-assemblies and consumables that are part of the equipment at the time the equipment becomes waste.

E-waste can be categorized as **hazardous or non-hazardous waste** under the Basel Convention.

| | |
|---|---|
| 1 | Temperature exchange equipment |
| 2 | Screens, monitors, and equipment containing screens having a surface greater than 100 cm ² |
| 3 | Lamps |
| 4 | Large equipment (any external dimension more than 50 cm) including, but not limited to, Household appliances; IT and telecommunication equipment; consumer equipment, musical equipment; electrical and electronic tools; toys, leisure and sports equipment; medical device etc |
| 5 | Small equipment (no external dimension more than 50 cm) including, but not limited to: Household appliances; consumer equipment; luminaires; equipment reproducing sound or images, musical equipment; electrical and electronic tools; toys, leisure and sports equipment etc |
| 6 | Small IT and telecommunication equipment (no external dimension more than 50 cm) |



Categories of EEE covered by the EU WEEE Directive after the transitional period (after August 2018)

Environmental and human impacts of E-waste

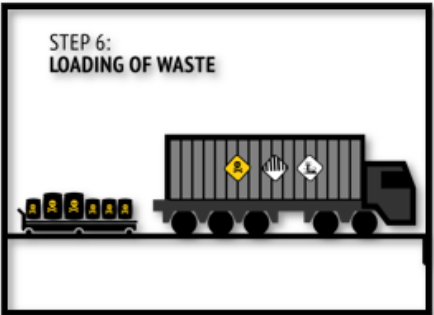
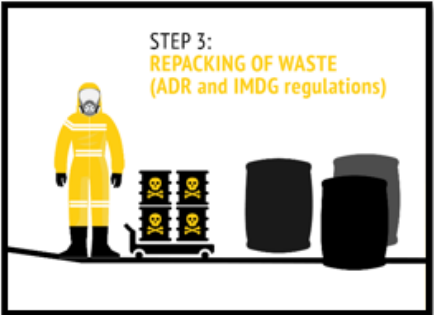
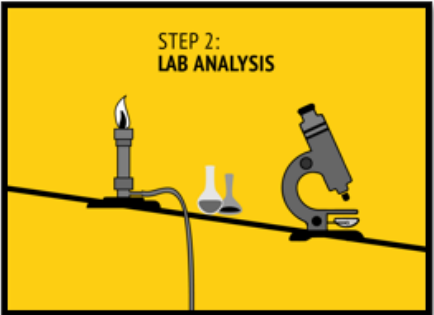


Environmental and human impacts of E-waste

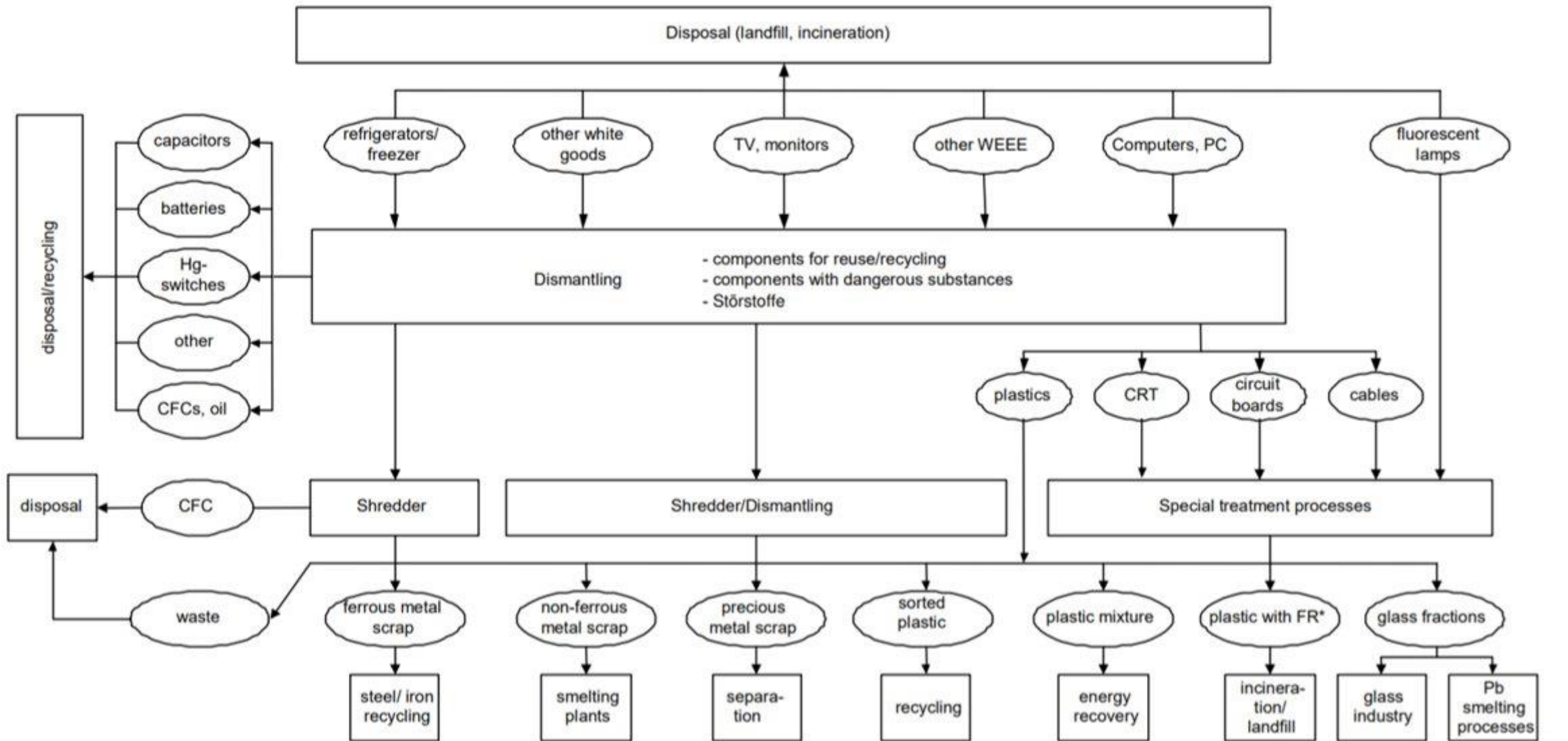


Basel Convention Export process

Transfrontier shipment of waste



Treatment Technologies



Reference projects:

Design, built and consult on a handover center for special waste from Agbogbloshie, Old Fadama

Date: 05/2018 - ongoing

Agbogbloshie / GHANA

Waste Type

- Waste Electronics and Electrical Equipment (WEEE)



Status quo

- Toxic emission on the in the Agbogbloshie dumpsite
- Improper handling of WEEE
- Lack of awareness in WEEE
- No incentive mechanism for sound recycling of WEEE



BFS Role

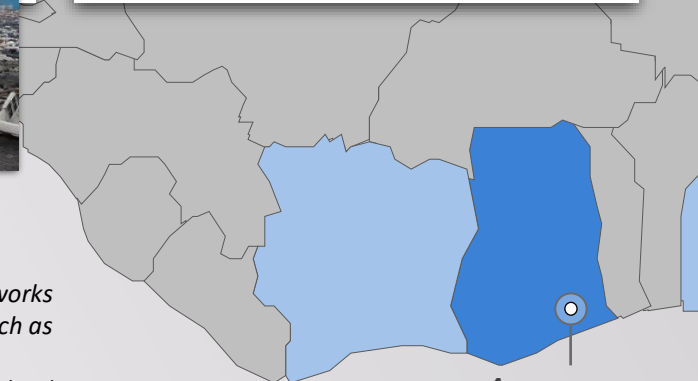
- Technical Consultant
- Technical Advisor to GOPA Infra GmbH / KfW Bank



Solution

- Providing concept and layout of handover center of WEEE
- Conducting market surveys on WEEE trading structures & prices
- Formulating procedures for WEEE fractions purchasing
- Pro for strategy in tendering of accumulated WEEE fractions
- Managing whole the RFP preparation and issue process, as well as bidder evaluation
- The RFP tenders services of collection, storing of hazardous waste

Agbogbloshie in Ghana remains tragically famous for being one of the most toxic locations in our world. The people working and living on this electronic scrap dumpsite, among them many children, are facing a dire future. Few income alternatives, ongoing illegal imports of WEEE amounts by local and international networks and a lack of any HSE measures for the informal sector are just some reasons for that. As part of a dedicated team consisting of local and international experts such as GOPA Infra and Ramboll, BlackForest Solutions supports as a technical advisor to improve the conditions on site. The main target is to implement processes that mitigate toxic emissions on the dumpsite, which are especially caused by open burning of electronic scrap. The 3 years projects is funded by German development bank KfW and is conducted in close cooperation with Ghanaian stakeholders.



Accra

BLACKFOREST
SOLUTIONS GmbH

The detailed feasibility study to establish sustainable hazardous waste management for end of life solar products and waste batteries, followed by RFP development & proposals evaluation for tendered services in supplying lead acid battery waste treatment facilities

Date: 08/2019 – 12/2020

RWANDA

Waste Type

- Hazardous waste
- Waste batteries



Status quo

- Inadequate handling of waste batteries
- Needs for improvement of the current dismantling & recycling facility for hazardous waste



BFS Role

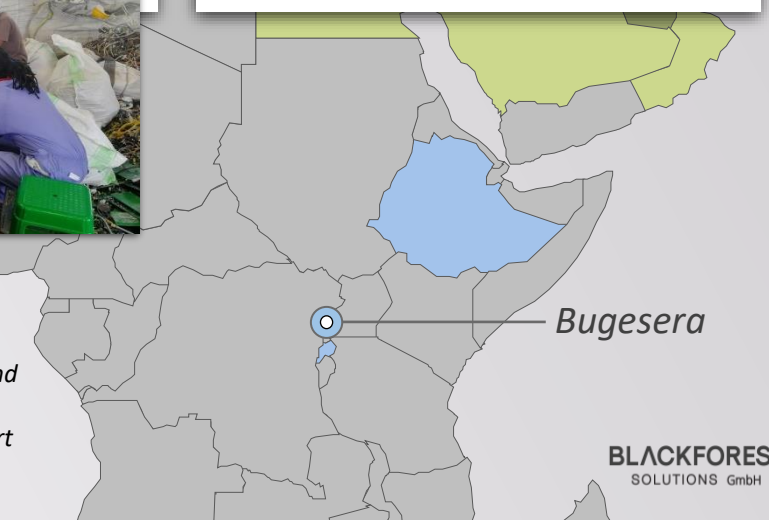
- Technical Consultant for hazardous waste management
- Local Project Lead
- Responsible for whole RFP management process from RFP document preparation until evaluation of EPC contractors as suppliers of lead acid battery waste treatment facilities



Solution

- Improving the existing legislative and compliance framework for an environmentally sound hazardous waste disposal
- Providing cost and revenue structure (e.g., cost recovery options for the local operators in hazardous waste management)
- Responsible for whole RFP management process from RFP document preparation until evaluation of EPC contractors as suppliers of lead acid battery waste treatment facilities

BFS, together with colleagues from Ramboll, supported the technical assessment for a European Union delegation in Rwanda. BFS analysed how to evaluate the feasibility of business models in the recycling sector in Africa and how to increase treatment capacities for hazardous waste in emerging countries. For that, BFS conducted a feasibility study for the establishment of sustainable waste management systems for end of life solar products and waste batteries in the existing e-Waste facility located in Bugesera Industrial Park. BFS assessed various stakeholders and treatment facilities in the land of a thousand hills, including facilities for e-scrap, lead batteries, Lithium batteries as well as the informal sector in the country. This project is part of an increasing commitment of BFS in the African continent, now being active in three countries in West and East Africa.



THANK YOU!

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