

# Twenty years of development cooperation in the sustainable management of electronic waste

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Developing countries also produce large amounts of electronic waste. With the financial support of the State Secretariat for Economic Affairs (SECO) and under the technical direction of Empa, programmes have therefore been implemented in some countries since 2003 to set up recycling systems for electronic waste. In Ghana, where a national technical directive was developed two years ago as a basis for assessing regular audits of operations, training in auditing recycling companies of electronic waste was provided to staff of the national environmental authority in July and November last year.

Switzerland is regarded worldwide as a great role model when it comes to dealing with waste: For more than 25 years, organic waste has been either composted (separately collected green waste) or thermally recycled (household and commercial waste). In the separate collection of recyclable materials such as paper, glass, metal, etc., there is a high level of environmental awareness among the population, which has led to record-breaking recycling quotas. Switzerland also has a firmly established and customer-friendly collection infrastructure for electronic waste, which is why it has been one of the countries with the highest collection rates in Europe for years. This extensive experience prompted the State Secretariat for Economic Affairs (SECO) in 2002 to promote international development programmes in which the legal framework and technical directives are developed with partners in developing and emerging countries, the establishment of take-back systems is supported, and the development and expansion of the recycling sector is stepped up. Activities led by Empa began under the heading “Swiss e-waste programme” in India, China and South Africa in 2003 and were extended to Colombia and Peru in 2008. In 2013, the activities were renamed the Sustainable Recycling Industries Programme.<sup>1</sup> This programme was also used to launch activities in Ghana and Egypt.

The World Resources Forum (WRF), a spin-off of Empa, joined as an international implementation partner in 2013. WRF coordinates and monitors all activities and provides technical support together with Empa.

The success achieved through the programmes is impressive: Several of the partner countries have created a legal basis that obliges manufacturers and importers of electrical and electronic appliances to take them back at the end of their useful life by way of extended product responsibility. Building on this, collective take-back systems have been set up, new recycling companies have emerged, and existing ones have been able to expand their activities. Technical directives have been issued to make the state of the art mandatory for all licensed recycling companies. In order to monitor compliance, auditor training courses have been organised in all countries since 2021 under the direction of Empa. The first was Ghana in 2021, followed by Colombia and Egypt in 2022 and Peru and South Africa in 2023.

## Two-part training course

The training in Ghana was delivered in two parts due to COVID-19 restrictions. In a first, virtual part in July 2021, basic knowledge on the topics of legislation, environmentally sound handling of e-waste as well as audit preparation, implementation and technology was taught over three days together with the Ghanaian national Environmental Protection Agency (EPA). In November 2021, the knowledge imparted

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<sup>1</sup> See: [www.sustainable-recycling.org](http://www.sustainable-recycling.org).



Photo 1: EPA auditors at a pilot audit in Tema, Ghana.

in July was consolidated in a training course and practically applied in two companies.

There were around 15 training participants who showed great interest and commitment and were able to benefit from the many years of auditing experience of the two Empa experts. The pilot audits in the two companies identified the core issues in the auditing process. A critical, reflective, open and persistent, but also cooperative attitude towards the representatives of the audited companies helps to show them possibilities for improvement without simultaneously embarrassing them. Ultimately, it is not only about compliance, but also about support in the continuous improvement of the environmental performance and operational situations of the companies. Checklists were designed to help the auditors during the audit, but were not meant to be worked off mechanically. A technical discussion can be used to identify gaps and potentials that cannot be covered by yes/no questions. This requires both technical understanding and communication skills on the part of the auditors.

#### Switzerland's multidimensional contribution

With Switzerland's support, new jobs have been created in the partner countries over the past 20 years, valuable raw materials have been recovered in an environmentally sound manner and components containing hazardous substances have been disposed of in an environmentally sound manner. It became clear that the correct handling of waste would

create ecological as well as economical and social opportunities for society. Electronic waste is a prime example because the content of recyclable materials clearly exceeds all other waste streams.

At the international level, a new ISO standard on the sustainable use of secondary raw materials (ISO 59014), which combines aspects of the circular economy with those of fair and inclusive recycling, has been in the works since last year under the leadership of WRF. A first draft is expected by the end of 2022.

Switzerland can look back with pride on 20 years of successful international cooperation in the sustainable management of electronic waste.