



Urban Agenda Platform

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# Sustainable Recycling Industries (SRI)

Region	Europe and Central Asia
Themes	Waste Management
Start Year	2014
Sustainable Development Goals	Goal 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

## Summary

SRI builds capacity for sustainable recycling industries with focus on e-waste and related waste streams in developing countries.

## Background and Objective

With the growth of the global economy and the digitalization of today's businesses and society, electrical and electronic equipment has become more affordable and in combination with short usage times of the devices Waste Electrical and electronic Equipment (WEEE or e-waste) has become the fastest growing waste stream worldwide. Due to the presence of toxic substances in many products on the one hand, inappropriately managed e-waste can cause health risks and environmental damage. On the other hand, e-waste also contains valuable materials, such as metals, and is therefore an important source for secondary raw materials. Industrialized countries have regulated e-waste management based on the principle of Extended Producer Responsibility (EPR). This has led to the establishment of take-back schemes and the growth and professionalization of an e-waste recycling industry. Driven by the value of secondary raw materials, developing countries have also seen a steep growth in e-waste recycling activities over the past decade. Individuals and businesses in the recycling sector are providing economic subsistence to themselves and their communities and are contributing positively to the circular economy. In the absence of appropriate rules, control mechanisms and technical capacities, however, their activities often have negative impacts on humans and the environment. Collection and crude recycling techniques of ewaste mainly happens in the so-called informal sector, causing various issues, among others, exploitation of the most vulnerable individuals (incl. child labour), tax avoidance and illegal practices, as well as unfair competitive advantages over formal players through the externalization of environmental and social costs. While the SRI partner countries all have their specific characteristics and feature different development stages in adapting sustainable recycling solutions, all countries face similar challenges in the implementation and enforcement. Institutional capacities are still weak, quality and sustainability standards are not equally developed, technical capacities are mostly low and access to crucial recycling infrastructure for hazardous waste fractions is not available. Thus, making large technological investments, a level playing field that supports sustainable recycling industries must be created. The overall development objective of the programme (SRI continuation) is to contribute to favorable framework conditions that enable the development of a sustainable recycling industry for e-waste and related waste streams in SECO partner countries. The programme is focusing on governance and technology aspects that allow for an optimal recovery of secondary raw materials and the safe management of hazardous substances. In all its activities, SRI strives for inclusive approaches, aiming at beneficial economic conditions for both the private industry and the informal sector. SRI leverages the concept of a circular economy and contributes to actions on climate change mitigation through a reintegration of secondary raw materials into industrial processes.

## Actions and Implementation

The SRI programme will intervene in the areas policy and legislation, normative requirements, technology and business development and problematic waste fractions. Key actions for the project phase for a new location generally include setting up partnerships with local authorities and involved stakeholders. Actions include training workers in best practices, local workshops on health & safety, formalization of informal workers, licensing existing recycling facilities if they are willing to adapt best practices. Next to the country components, SRI also encompasses a knowledge component building up on current achievements, incl. the successful ISO standardization process, life cycle methods and data. Reporting on progress by local country partners to the project lead team in Switzerland provides data for evaluation and successive release of appropriated funds ensure maximal efficiency of project funding.

## Outcomes and Impacts

SRI is implemented in five countries, namely Colombia, Peru, South Africa, Ghana and Egypt. So far, the program enabled the above-mentioned focus countries to obtain and develop appropriate instruments and guidance for environmentally and socially responsible e-waste management systems. This has



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led to very tangible and substantial results, such as the adoption of Extended Producer Responsibility (EPR) and the formation of take back schemes in Colombia and Peru. In Peru, SRI has achieved the formalization of several hundred informal workers, ensuring safe and decent working conditions. The formalization of the workers included trainings in best practices, reducing environmental impact and CO2 emitted by prevention of worst-practices. In Egypt, SRI activities supported the initiation of a legislative process, the development of technical standards and the training of auditors. Furthermore, the activities contributed to the development of an e-waste management ecosystem. In Ghana, SRI contributed to the adoption of mandatory technical guidelines, as well as to the introduction of a conformity assessment and monitoring system. Through strong governmental and non-governmental partnerships ensuring monitoring and continuation, the programme will have long term impact.

## Sustainability and Scalability

To achieve long term impact and speed up the process of project implementation, governmental support is key. In countries where the local government is not interested in the development of sustainable recycling of e-waste, it is difficult to advance quickly, and efforts are likely not having a long-term impact. In many countries, the waste volumes are enormous which results in a need for sustainable recycling in basically every country. For some fractions, due to lower abundance the export can make sense but for the bulk of waste material, local recycling would be the most efficient and sustainable. Best-suited candidates are large cities in developing countries, where pollution of e-waste is particularly problematic and large number of informal workers are present. Key takeaways are clearly: - Local governmental willingness is key - Private industry willingness is also immensely helpful - The holistic approach can have several beneficial side-effects - Multilateral partnerships boost implementation speed and innovation

## Innovative Initiative

As mentioned before, being inclusive is one of the pillars of the SRI programme. To ensure long-lasting effects and the highest impact among wide-spread population groups a holistic approach is crucial. This is also part of the innovative way the SRI programme is organized, diligently looking for the highest level of inclusiveness is something few other initiatives can say for themselves. Through this strategy, SRI can achieve higher impact with fewer funds, by maximizing the impact the invested money has on the local communities.

## Resources devoted to delivery

The SRI programme is funded by the Swiss State Secretariat for Economic Affairs. The SRI core team based in Switzerland involves e-waste experts, which focus on project management, fund allocation, and exchange with local partners. In the project countries, more people are involved within different organizations and governmental branches assisting the SRI initiative. Technology wise, Online sharing platforms, cloud storage, conference call applications and other digital solutions enable efficient global communication and coordination between the countries and the initiative lead coordinators.

## Conclusion

To ensure sustainability of actions the following strategies are applied: • Trigger stakeholder commitment, acceptance and trust through institutionalized multistakeholder processes. • Establish a level playing field by supporting the development, implementation and enforcement of national policies and legislation. This includes the development of mandatory and voluntary normative requirements, as well as appropriate financing mechanisms. • Embed capacity building activities in self-sustaining processes and institutions such as national industrial training institutions and international training academies. • Develop consistent and transparent project results through scientifically sound metrics and methods allowing to measure and monitor induced changes. • To ensure long-lasting effects, SRI partners up with local organizations to implement monitoring and auditing of recycling efforts resulting of the SRI initiative. The ISO/IWA 2017: 19, which clearly outlines the best practices for inclusive recycling give the local partners an easy and effective framework to ensure effective monitoring.