

StEP Task Force ReCycle - Terms of Reference (TOR)

1. Overall Aim

The aim of the Taskforce Recycling is to enhance global recycling infrastructures, systems and technologies realizing sustainable e-waste-recycling systems.

2. Guidelines for Developing Activities

Based on a) multi criteria objectives (e.g. environmental, economical and social) and b) on international, inter-stakeholder activities and dialogues on scientific and practical cooperation within a “neutral” arena, TF “Recycling” aims at:

- Setting up a publicly disclosed and political recognized network to conduct studies in Eastern Europe, Asia, Africa, South America and Oceania and provide solutions and training through the StEP Initiative;
- Focusing short-term on industrializing countries and e.g. the new EU member states and bordering countries;
- Focusing long-term on sustainable resource cycles globally;
- Designing interfaces to other approaches necessary to solve the e-waste problem dealt with in other Task Forces.

3. Specific Objectives

Gather and assess:

- To gather and assess the most relevant environmental, economic and social characteristics of e-waste recycling in the industrialized world, considering the main steps in the recycling chain: collection - dismantling - pre-processing - end processing of metal- and non-metal fractions (with all TF’s);
- To perform recycling system evaluations leading to recommendations for long term development of eco-efficient resource cycles (with TF “Policy” and TF “Redesign”);
- Transboundary shipments and logistics;
- To analyse the transboundary shipments and logistics of e-waste and its underlying driving forces, dynamics, regulations and the constraints for sustainable resource cycles (together with TF “Policy”).

Propose practices and standards:

- To describe best available and emerging technologies for large and small volume WEEE treatment in both industrializing and industrialized countries;
- To support together with TF “Policy” legislative and policy development bodies with roadmaps and strategies concerning recycling infrastructure adapted to local conditions to reduce environmental and social problems;
- To investigate on appropriate financing mechanisms for different countries and markets (with TF “Policy”).

Communicate recommendations:

- To provide timely information of environmental initiatives and possibilities to participate in Eastern Europe, Asia, Africa, South America and Oceania with regard to e-waste and its specific value chain (with TF “Knowledge Management”);
- To define the smallest throughputs of necessary material recycling process technology to work eco-efficient and describe the required cross boarder infrastructure needed including the possibilities to control safe treatment and corresponding policy implications;
- To enhance communication and transfer the implications of treatment technologies, environmental issues, economic possibilities and social dimensions into e-waste management strategies (with TF “Policy” and “Knowledge Management”);

Transfer technology:

- To enhance communications and development/ transfer of e-waste treatment technologies to facilitate growth in both capacity and environmental/ social quality of electronics recycling infrastructure (with TF “Knowledge Management”);

Monitoring and reporting standards:

- To enable, empower, improve and report on standards for monitoring and supervising relevant waste streams (with TF ”Policy”).

4. Proposed Sub-tasks

- To gather and analyze e-waste recycling methods in the context of a global economy: current trends and future consequences, provision of facts and transparency, definition of recycling standards;
- To assess the existing practices and gaps in recycling process technology, in accordance to the local and regional socio-economic framework and the respective actors involved;
- To characterize the scale of prerequisites (investment, new techniques, know-how etc.) per main step to process e-waste recycling in an environmentally sound way in industrializing countries, in a commercial and existing family business context;
- To evaluate recycling processing alternatives in the industrializing countries, given the digital divide, the local and regional framework conditions, and transforming the informal recycling market participants into parties which can be official contracted, etc.;
- To evaluate the best technical and economic ways of linking existing and emerging markets for e-waste recycling;
- To define the most suitable interfaces between the main steps of the recycling chain in the context of an industrializing country, but considering the special requirements for end processing (economies of scale, environmental infrastructure, investments etc.);
- To cooperate with universities for sponsoring a student’s contest to develop a small, innovative recycling technology suitable for developing countries;
- To recommend practices and recycling that is appropriate for transfer back to Europe to enhance WEEE implementation;
- To make policy recommendations for the future revision of WEEE(/ROHS) and multilateral frameworks.

5. Ongoing or Planned Projects

Project scopes and interrelations/ research sequence:

- 1) Gathering of basic environmental, economic and social e-waste facts and figures including description of the roles of all relevant actors in the chain;
- 2) Description of (potentially) best available large and small scale treatment processes adaptable for developing countries and the corresponding practical research needs;
- 3) Communication and knowledge transfer on treatment technologies enhancing the development of national and international recycling infrastructures;
- 4) Practical means for supervising and monitoring of environmentally and socially relevant e-waste streams and fractions, labelling, certification and control;
- 5) Technical knowledge transfer for policy and system development roadmaps to reduce long-term social and environmental problems.

6. Contact

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