

# The St. Petersburg Workshop on Enhancing Metals Recycling in Developing Countries: Outcomes From a Joint Study Group Initiative One Year On

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The International Non-Ferrous Metals Study Groups are three independent intergovernmental organizations set up within the UN system to exchange information between metals producing and consuming countries to ensure market transparency. They provide a continuous flow of information to the marketplace on supply and demand developments in copper, nickel, lead and zinc through the monthly publication of high-quality statistics and in-depth economic studies. The Study Groups also organize international sessions and special conferences, bringing together industry and governments to discuss matters of concern in the copper, nickel, lead and zinc sectors. The International Lead and Zinc Study Group (ILZSG) was founded in 1959 and has 28 member countries. The International Nickel Study Group (INSG) followed in 1990 and has 13 member countries. The International Copper Study Group (ICSG) began in 1992 and comprises 22 member countries.

In 2000, the member countries of the three Study Groups convened a Consultative Forum on Non-Ferrous Metals and their Contribution to Sustainable Development (NFMSD). The NFMSD was a multi-stakeholder process involving the member countries of the three Study Groups, other interested countries, industry, international organizations, and non-government organizations, including civil society. It was designed to address issues related to the mining, production, use and recycling of nonferrous metals. The Forum agreed to a common vision for the future that highlighted the actions necessary to enhance the contribution that nonferrous metals make to society (for more information, please visit [www.nfmsd.org](http://www.nfmsd.org)). Integral to this common vision was the desire to reduce barriers to recycling. With this purpose in mind, in September 2003, the Study Groups convened a recycling workshop in St. Petersburg, Russia, to examine the challenges and benefits of metals recycling, giving special attention to the needs of developing countries and economies in transition.

## **WORKSHOP THEMES**

The St. Petersburg workshop had three main themes:

- Recycling Policy and Practices – with emphasis on policy drivers, exploring different national approaches and the role of environmentally sound management;
- Recycling Markets and Information – with focus on scrap markets, examining case studies and assessing recycling rates;
- Recycling Technology and Innovation – including the concept of best available technology, and design for recycling and processing technologies for the developing world.

Break-out groups composed of government, industry and NGO participants were formed to tackle these issues and to make recommendations.

## **WORKSHOP FINDINGS**

The workshop highlighted that developing countries rely heavily on metal recyclables as essential resources and that these should be defined as input materials, not waste. It also recommended that international efforts to regulate and harmonize waste management should take into account the need to facilitate trade in recyclable materials.

Discussion on recycling markets resulted in agreement that metal/scrap prices and waste regulation (such as export bans and fiscal measures) were negatively affecting the recycling business in developing countries. Workshop participants recommended that existing recycling trade data should be developed. They agreed that the Study Groups' work on defining recycling rates was a precursor to properly describing the current recycling situation. In particular, the Study Groups' Recycling Efficiency Rate (RER), which identifies the proportion of metal recycled at the end of product life from the total supply available for recycling, was recognized as a good indicator of sustainability.

Rather than promote the idea of one best available technology, the workshop recommended the development of a framework to identify appropriate technology for developing countries that was affordable and economically and environmentally sustainable. It was suggested that environmentally sound management should be defined as a key element within every business plan.

## THE CHALLENGE

The findings of the workshop presented a number of challenges to the Study Groups and their member governments, including:

- The need to address and resolve trade distortions such as bans in cross-boundary movements of recyclable raw materials;
- The need to improve the quality of data collected on metals recycling;
- The need to increase technical proficiency and to exchange technical information on recycling between countries; and
- The need to improve and strengthen dialogue on recycling between all social partners and increase general awareness.

## FOLLOW-UP ACTIONS

In the year following the St. Petersburg workshop, the International Lead and Zinc Study Group has been responding actively to the challenges for action that were identified:

### 1. Trade Distortion

The most significant issue of concern for developing countries that rely on imported recyclable materials as a source of raw material is the possible adverse impact of the ban on trans-boundary movement in hazardous materials resulting from the Basel Convention. If ratified, the Basel ban amendment could, for example, severely restrict developing countries' access to secondary lead. To address this concern, in March 2004, the Secretary-General of ILZSG participated in a meeting of the Basel Convention's Technical Working Group, where he presented the findings of the workshop to signatory governments of the Convention.

### 2. Improvements in Recycling Data

Following the St. Petersburg workshop, the Study Groups have been collaborating with the international nonferrous

metals industry associations to standardize recycling indicators. Work has focussed on assessing scrap usage against theoretical availability, opening the way to estimating an end-of-life recycling efficiency for each metal. This has resulted in agreement on how to calculate an End-of-Life Recycling Efficiency Rate (EOL RER).

The EOL RER is defined as:

$$\frac{\text{Metal Recycled/Metal Available for Recycling (old scrap only)}}{100}$$

The Study Groups have also recognized that in cases such as zinc, where there is substantial recycling of new scrap such as drosses and galvanizing processing scrap, a recycling rate including new scrap is useful. This has resulted in agreement on an Overall Recycling Efficiency Rate (Overall RER).

The Overall RER is defined as:

$$\frac{\text{Metal Recycled/Metal Available for Recycling (old scrap + new scrap)}}{100}$$

An accurate estimation of recycling efficiency depends on tracking flows of recyclable material. The Study Groups and industry associations have therefore begun to look into collection and recovery processes for old scrap. This has resulted in agreed-upon definitions for collection and recovery rates. In the case of zinc, data on historical metal production, consumption and end uses have been gathered. An evaluation has been made of new scrap generation during metal processing and quantities of old scrap available at product end-of-life have been estimated. Collection rates have been assessed and assumptions regarding product life times have been agreed to by the Study Groups.

### 3. Improving Technical Efficiency and Exchanging Information

ILZSG has chosen to promote technical efficiency and information exchange on recycling in the developing world through participation in the development of the Green Lead Initiative. Green Lead is the vision of the mining, smelting, manufacturing and recycling sectors of the lead industry and is being designed to demonstrate environmentally sound management, competent occupational health care, and responsibility towards local populations. It will establish standards and procedures to minimize adverse impacts associated with the lead risk and will encourage new ways of thinking to increase productivity. The initial focus will be on the lead-acid battery recycling loop, with special reference to the battery industry located in the developing world. ILZSG will act as the administrator of the Green Lead development fund.

## 4. Strengthening Dialogue

The Study Groups have worked to strengthen dialogue on recycling through wide dissemination of the workshop's findings. In addition to distribution to the workshop participants, members, and United Nations observer organizations, the workshop findings have been publicized in the international recycling industry press and through Study Group newsletters. Agreement has also been reached with the Common Fund for Commodities (CFC) to distribute the findings to all of the CFC's 106 member governments.

For further information on the findings of the St. Petersburg workshop and the work of the International Lead and Zinc Study Group on recycling issues, please contact Ian Burrell via e-mail at [ian\\_burrell@ilzsg.org](mailto:ian_burrell@ilzsg.org).

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