

Recycling from global urban mines

The roles and responsibilities of the Mitsubishi Materials Group as we enter a new stage in resource recycling



We hold stakeholders' meetings in order to incorporate feedback from outside experts into our CSR activities from a long-term perspective. This year we held our sixth stakeholders' meeting. The meeting focused on "recycling from urban mines" as a key component in resource sustainability and reducing environmental impact. This is one of our top priorities in terms of "supporting recycling-oriented society," as outlined in the vision behind our long-term management policy. Having invited experts with specialist knowledge in this field to attend, the meeting started with a presentation on our home appliance and vehicle recycling operations, focusing particularly on our core E-scrap* recycling business. We then received invaluable feedback and recommendations on subjects such as the role that we need to play and issues for the future.

*Scrap containing gold and silver, consisting of crushed printed circuit boards from waste home appliances and electronic devices

Points identified as important comments

- In terms of expanding recycling businesses, it is important to provide national governments and official bodies with support to develop systems that will enable the effective use of urban mines, by providing information and policy recommendations for instance. It is also important to widely publicize the social value that such operations provide, using terms that are easy for consumers and members of the public to understand.
- An effective way to showcase the social and environmental value of recycling businesses would be to formulate a clear vision for the future, through "backcasting," and map out a strategy to achieve that vision.
- I would recommend strategically providing investors with information on the "unseen asset value" of outstanding technologies and processes as part of the Group's unique E-scrap recycling business.
- Advanced initiatives relating to recycling rare earth metals, solar panels and lithium ion batteries need to take into account economic viability, safety and the business environment, from a medium- to long-term perspective.



Akira Takeuchi
Executive Vice President
in charge of CSR
(currently President)



Osamu Iida
Managing Director
President, Metals Company



Hiroshi Kondo
Senior Executive Officer
General Manager, Mineral
Resources & Recycling Business Unit



- **Date** Thursday, February 26, 2015, 11:30-14:30
 - **Venue** Conference Room at MMC Headquarters (Chiyoda-ku, Tokyo)
 - **Participants from the Mitsubishi Materials Group**
 - Akira Takeuchi** Vice President (in charge of CSR)
 - Osamu Iida** Managing Director; President, Metals Company
 - Hiroshi Kondo** Senior Executive Officer, General Manager of Mineral Resources & Recycling Business Unit
 - Takao Kondo** General Manager, Recycling Business Department, Metals Company
 - Shogo Yamaguchi** General Manager, Eco-Business Division, Mineral Resources & Recycling Business Unit
 - Tetsuro Sakai** General Manager, Metallurgy Department, Metals Company
 - Tadakazu Kagami** General Manager, Occupational Safety & CSR Department, Metals Company
 - Shigehiko Iwahori** Deputy General Manager, Recycling Business Department, Metals Company
 - Yoshiaki Arai** General Manager, Recycling Systems Promotion Department, Eco-Business Division, Mineral Resources & Recycling Business Unit
 - Kenji Shimamura** Executive Officer, General Manager, General Affairs Dept.
 - Jun Nagano** General Manager, General Affairs & CSR Dept., General Affairs Dept.
 - **Facilitator**
 - Daisuke Goto** Representative Director, ideaship Inc.
- *The names of departments and titles are as of the date of the meeting.

High hopes for collaboration with governments and researchers, in a hugely important business with tangible potential for overseas expansion



Atsushi Terazono
Deputy Director, Center for Material Cycles and Waste Management
Research, National Institute for Environmental Studies

As a company that is committed to resource recycling, making the most of your wide-ranging business infrastructure from nonferrous smelting to cement, Mitsubishi Materials is a hugely reassuring presence within the so-called “venous” industry. This is a field in which you can make a real difference to tackling social issues above and beyond mere recycling activities, by assisting with the adequate disposal of illegally dumped industrial waste in Teshima (Kagawa prefecture) for instance (Naoshima Smelter & Refinery) or taking in waste left over from the Great East Japan Earthquake as part of your cement operations. I’d like to see you stepping up initiatives like that even further.

Last year, the Ministry of the Environment held a meeting for officials involved in the Basel Convention from countries throughout Asia. After the meeting, officials went on a tour of your Naoshima Smelter & Refinery, and were able to see facilities where E-scrap imported from Asian countries is processed. This was a crucial opportunity in terms of showcasing Japanese initiatives. As it stands, there are large volumes of waste home appliances and printed circuit boards being left unprocessed in countries across Asia. CFCs, which are used as a coolant, are one of the causes of damage to the ozone layer and global warming, but they are still not being adequately processed in some parts of Asia. If you make the most of your existing technologies and processes, I feel that there is real potential for you to expand your operations overseas.

While it is impressive that you are aiming to secure a leading share of the world market for processing E-scrap, looking further into the future, it will also be essential to support national governments and gain public understanding. As part of that process, it will be important to go about your business activities in an open manner, by providing information on negative aspects of your operations and risks, rather than focusing solely on the positive. As well as sharing your initiatives and vision with a broad section of the public and lobbying the industry as a whole, I hope that you will also do things like create opportunities to discuss current issues and strengthen collaboration with governments and researchers.

Viewing recycling operations from a global perspective and strengthening public information capabilities



Takashi Nakamura
Professor, Research Center for Sustainable Science & Engineering,
Institute of Multidisciplinary Research for Advanced Materials, Tohoku University

Existing methods of waste disposal have certain limitations when it comes to tackling concerns regarding E-scrap being taken out of the country by inappropriate means. Nonetheless, we are starting to see governments discussing compliance with the Basel Convention in relation to items such as waste electronic printed circuit boards.

Even from an expert standpoint, your E-scrap initiatives are fascinating and are having a real impact. That’s why it is important to provide information on the role that your operations play within society as a whole in a manner that is easier for general consumers to understand. Maybe you could make a broader contribution to society by visiting schools or producing teaching materials, for example, or you could look into different forms of disclosure and step up publicity activities, by showcasing the recycling process at your Naoshima Smelter & Refinery on TV.

When we think about Japanese society for the future, I think it’s absolutely crucial that we reassess recycling from a global perspective, taking into account factors such as resource protection and non-proliferation. Given the significant differences between Japan and the international community in terms of legislation, social systems and business practices, not least in the EU, it is important to keep a close eye on global trends at all times, and to continue building knowledge and expertise so that it can be fed back into your business strategy. There is much discussion in the EU regarding benchmarks based on “resource efficiency” (RE), from the standpoint of sustainability and growth strategies. If you want to promote your vision globally, it would be beneficial to take factors like that on board, and explore possibilities for collaboration with manufacturers of end products.

It is crucial to set out an ideal vision for the future, and to showcase your strengths and strategies



Mariko Kawaguchi
Chief Researcher, Research Division
Daiwa Institute of Research Ltd.

I wonder whether many people actually know about the significant environmental effects of your recycling businesses and processes, not least in terms of reducing CO₂ emissions. It seems a shame not to tell as many consumers as possible about the value you offer, from quantitative values such as processing volumes to qualitative values such as the efficiency and superior environmental credentials of the Mitsubishi Process.

I think you should also be engaging in more strategic communication activities with investors, who are starting to take a real interest in ESG (environmental, social and governance) investment. As well as your long-term vision, you should be telling investors about unseen value and assets not included on your balance sheet, such as your world-leading commitment to “urban mines.”

The need for a recycling-oriented society is going to keep on increasing in the future, on a global scale. The technique of “backcasting” has become commonplace in the world of CSR, based on envisioning an ideal future and working back. If you could set out a vision for your recycling businesses – such as “we will achieve a recycling rate of X% by 2050” for instance – you could showcase your strengths and strategies on the way to achieving that. I think that would make your sustainable business strategy all the more persuasive.

I used to take part in the Ministry of Economy, Trade and Industry’s committee on revising the Act on Recycling of Specified Kinds of Home Appliances, but the importance of adequately recycling metal did not come up for discussion, because it is already accepted as a given. As you have such a wealth of expertise in that respect, I would hope to see you playing a leading role within the industry, by actively lobbying government agencies and ministries regarding the social significance of recycling metal.