Introduction

The Mitsubishi Materials Group publishes its Corporate Social Responsibility (CSR) report to provide stakeholders with information regarding its perspective on and activities in the area of CSR.

Metals Company, one of the in-house operating companies of Mitsubishi Materials, is a member of the ICMM†1 (related article: p.7), which has as one of its objectives promoting sustainable development in the mining and metals industry. In order to ensure accountability about our mining and metal sector operations, we aim to appropriately disclose and promote transparency in the information we provide. As part of our effort to meet this objective, we publish this Supplementary Data Book to provide additional information regarding our CSR activities to that contained in the Mitsubishi Materials “CSR Report 2012”.

Please also refer to the Mitsubishi Materials “CSR Report 2012”, as information regarding Metals Company is also included in the Report.

†1 ICMM: International Council on Mining and Metals is an organization formed by the world's leading mining and metals companies, which has a clear commitment to leading sustainable development in the mining and metals sector.
Period Covered by This Report
Fiscal 2012 (Mitsubishi Materials Corporation Fiscal Year: April 2011 to end of March 2012)

Reporting Boundary
Mitsubishi Materials’ Metals Company and its four affiliated smelting companies (Hosokura Metal Mining Co., Ltd. (Hosokura Smelter), Onahama Smelting and Refining Co., Ltd. (Onahama Smelter), Materials Eco-Refining Co., Ltd. (MERC), Indonesia PT. Smelting (PT. Smelting))

Release Date
January 2013

Referred Guideline
GRI (Global Reporting Initiative) Sustainability Reporting Guideline (the 2006 edition) (version 3.0)

Operations of Metals Company and affiliated smelting companies

This Data Book, along with the information covered in the Mitsubishi Materials “CSR Report 2012”, has been independently assured by KPMG AZSA Sustainability Co., Ltd., with all figures subject to external independent assurance marked with a star “★”. For more details regarding external independent assurance, please refer to p. 65 in the Mitsubishi Materials “CSR Report 2012”.

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Domestic Offices
(1) Akita Refinery (Akita Pref.)
(2) Materials Eco-Refining Co., Ltd. (Akita Pref.)
(3) Hosokura Metal Mining Co., Ltd. (Miyagi Pref.)
(4) Materials Eco-Refining Co., Ltd. (Miyagi Pref.)
(5) Onahama Smelting and Refining Co., Ltd. (Fukushima Pref.)
(6) Onahama Plant (Fukushima Pref.)
(7) Materials Eco-Refining Co., Ltd. (Fukushima Pref.)
(8) Ikuno Plant (Hyogo Pref.)
(9) Materials Eco-Refining Co., Ltd. (Hyogo Pref.)
(10) Sakai Plant (Osaka Pref.)
(11) Naoshima Smelting and Refining (Kagawa Pref.)

Indonesia Offices
(12) PT. Smelting Jakarta Office
(13) PT. Smelting Gresik Smelter and Refinery

* Group companies
The Linkage Between Business, People, Society and the Earth

Looking back over the last year, 2011 was a year where we made significant efforts to recover from the damage caused by the Great East Japan Earthquake in March. The Metals Company’s group Onahama Smelter suffered severe damage from the earthquake and tsunami, halting operations of both copper smelting and processing for six months while the necessary repairs were undertaken. During this period, the company made full use of its flexible value chain, utilizing smelting-processing-rolling, drawing and extruding facilities in eastern and western Japan, allowing us to fulfill our existing commitments to our customers.

The response by the Sakai Plant in western Japan provides a good example of our flexible value chain in practice. Sakai supported production of more than 5,000 tons from March to June, 2011 by increasing production capacity and switching production to various products not previously produced at the plant. Our strategy of diversifying the geographic location of production facilities in eastern and western Japan provided us with the flexibility in our copper and brass operations to continue supplying our customers.

The damage to the Onahama Smelter from the earthquake was sufficiently serious to create uncertainty around the future prospect of operations at the plant. Nonetheless, we pulled together as a group with the result that we were able to restore operations within three months. Particularly noteworthy were people’s efforts on site which allowed us to successfully implement repairs with no accidents. Following the re-start of operations, Onahama Smelter also contributed to the re-construction of disaster-affected local port facilities by providing copper slag, a byproduct of copper smelting. Our success in recovering from the Great East Japan Earthquake under the restricted power supply demonstrates the effectiveness of our business continuity plan (BCP), which is essential to ensure business functions continue to operate.

At Metals Company a key component of our growth strategy is strengthening the integrated value chain throughout our mine development, smelting and processing operations. There is no change in our strategy. Our company incorporates environmental considerations into our business management and operational activities for sustainable development and conserving limited resources for future generations.

Activities as an ICMM Member Company

The ICMM, as an international council of mining and metals industry, aims for industry-wide performance improvement through various activities including environmental conservation, human rights, safety and health, employment issues, local society and cultural preservation for sustainable mining development. Metals Company has been a member of the organization since 2002. Although Metals Company is not directly involved in the management and development of mines, we support the “10 Principles for Sustainable Development” advocated by the ICMM and are working to minimize our environmental and social impacts in the global supply chain. As an ICMM member company, we will proactively disclose information regarding our activities in this area.

Conservation of Biodiversity and Natural Resources

A key focus of our CSR activities has been ecosystem conservation. An example of our activities in this area (details are mentioned in the later section) is the restoration initiative at Naoshima Smelter & Refinery (Naoshima Smelter, Kagawa Prefecture) where we are working together with the local community to conserve biodiversity damaged by a mountain fire in 2004. Biodiversity conservation leads to the protection of the ecosystem services (fresh water and regulation of the climate, etc.) essential to our operations. We also actively promote the materials recycling business and continue to achieve the highest annual recycling volumes of automotive shredder residue in Japan. Metals Company is committed to continue its environmental preservation and resource conservation activities.

Through this Data Book, we hope our stakeholders gain a better understanding of Metals Company’s CSR activities.

Message from Company President

Kazumasa Hori
Senior Executive Officer/President of Metals Company,
Mitsubishi Materials Corporation

(Profile)

2009.6 General Manager of Copper & Copper Alloy Products Div. Metals Company
2010.6 Executive Officer/Vice President of Metals Company
2012.6 Senior Executive Officer/President of Metals Company (current)
With high electrical and thermal conductivity, good workability, high-strength properties, and relatively low-cost, copper is used in a wide range of applications and is essential to our daily life. These include electric cabling, copper tubing, electrical components, automobile components and construction materials. Copper is an indispensable material that is widely used in consumer products including automobiles, mobile phones, personal computers, and air conditioners. Recently, it has become an important component in hybrid and electric vehicles. Through our mass production technology for oxygen-free copper and copper alloys, with their high levels of electric conductivity, we have become the world’s leading manufacturer of oxygen-free copper in terms of market share.

**PHC Trolley Wire for High-Speed Shinkansen Bullet Trains**

As Japan’s high-speed Shinkansen bullet trains run at speeds upwards of 300km/h, they need trolley wires that combine high strength with superior conductivity and abrasion resistance. Making the most of our alloy manufacturing technologies, we have developed PHC† trolley wires (Cu-Cr-Zr alloy) which have the advantages of higher strength and higher conductivity. Our PHC trolley wires are already in use on the Tohoku Shinkansen line between Hachinohe and Shin-Aomori and the Kyushu Shinkansen line between Hakata and Shin-Yatsushiro. In addition, these trolley wires are being installed on the Hokkaido Shinkansen line between Shin-Aomori and Shin-Hakodate and the Hokuriku Shinkansen line between Nagano and Kanazawa, which will enter into operation from 2014 and 2015 respectively.

A significant difference between copper alloy PHC trolley wires and conventional iron-cored pure copper trolley wires is that the PHC wires are 100% recyclable, making them far more environmentally friendly.

† Precipitation-hardened copper

**Comprehensive Capabilities from Mining Development Investment to Copper Processing**

The metals business of Mitsubishi Materials has a long history of business transformation following the start of operation of Yoshioka Mines in Okayama Pref. in 1873. We have established a vertical value chain structure within our group companies that covers securing ore, smelting and copper-processing. As approximately 75% of electrolytic copper can be processed to nearly finished product through our downstream value chains, our vertical value chain structure combines efficient production whilst improving efficiency in material flow along the supply chain and in scrap processing. This contributes to higher total yield ratios and results in effective utilization and conservation of material resources.

**Vertical Value Chain from copper smelting to processing**

In April 2010, Metals Company acquired 100% ownership of Mitsubishi Cable Industries which, together with the acquisition of Mitsubishi Shindoh Co., Ltd., results in the incorporation of copper rolling and wire businesses into the Company. The acquisitions allow Metals Company to access to copper rolling and wire unique technologies and opportunities for operational synergies from integration of business processes.
Promotion of Recycling Business

In recent years, Metals Company has made significant efforts towards developing its recycling business to promote the sustainable use of resources. We recover valuable metals (copper, etc.) from shredder residues generated from end-of-life vehicles and electronic home appliances. In addition, we use the combustible fraction of shredder residue as fuel in our furnaces and recover waste heat generated for power generation contributing to reductions in our CO2 emissions. In fiscal (FY) 2010, we participated in a demonstration project on mobile phone recycling and worked on the potential for recycling compact household appliances, a project which is on-going. From July, 2011, we have started recovery of ruthenium to strive for recovery of rare elements.

Procurement of Raw Materials and Investment in Overseas Copper Mines

Currently, Metals Company participates in five mine operation and development projects; Los Pelambres Mine (Chile), La Escondida Mine (Chile), Huckleberry Mine (Canada), Copper Mountain Mine (Canada), and Batu Hijau Mine (Indonesia). At La Escondida Copper Mine, we secured an additional interest in the mine in May 2010. Mine development processes generally incorporate 1) site selection, 2) exploration, 3) feasibility study, 4) facility construction, and 5) operation stages. Historically we joined new projects from the feasibility study stage, but under our current strategy we are proactively promoting participation from the exploration stage. We have been participating in the exploration of copper and gold deposits at Namosi, Fiji, jointly with Nittetsu Mining Co., Ltd. since 2004, and participating in the successful re-development of the Copper Mountain Mine in Canada, which saw the resumption of operations in June 2011 following a shutdown of operations in 1996.

Earthquake Reconstruction

Caisson is a concrete based products commonly used in the construction of breakwaters at port facilities. The hollow interior parts of caisson are usually filled with sand to increase their weight. However, because of the magnitude of the Great East Japan Earthquake and tsunami, breakwaters constructed from sand filled caisson suffered significant damage. As part of our contribution to earthquake restoration, we launched a working group to start developing a caisson capable of withstanding stronger forces, drawing on the expertise of the cement and copper smelting units, in Mitsubishi Materials.

Copper slag is a byproduct of the copper smelting process. This is a granular material whose main component is iron with a greater specific gravity than soil and sand. By filling the caisson with copper slag and mixing copper slag in concrete used to make the caisson as aggregate, the caisson will be strengthened and able to withstand higher forces.

Despite half of the site of Onahama Smelter, in Fukushima Prefecture, being flooded by the tsunami and damaged by the earthquake, we were able to restore operations within three months and re-start the supply of copper slag. Being in the disaster-stricken area, the Onahama Smelter contributes to the caisson strengthening and port restoration projects in Onahama and other areas in Tohoku district.

Environmental Friendly Products from Mitsubishi Shindoh Co., Ltd.

One of our group companies Mitsubishi Shindoh Co., Ltd. has developed ECO BRASS, an environmentally friendly free-cutting copper alloy which uses silicon in place of the lead used in similar products.

Globally, we see a trend of stronger regulation restricting the use of lead in products. A recent example is the restrictions on lead in drinking water fittings in the United States that came into effect in 2012. ECO BRASS is already being used in drinking water fittings around the world and has been licensed to major copper and brass manufacturers in Europe and the US.

As many factories making products for export markets have been constructed in China, we constructed an ECO BRASS manufacturing plant in Qingdao in Shandong province which started commercial production in April 2012. This places us in a strong position to respond to growing worldwide demand for lead-free materials.

Copper slag filled caisson

Tetrapod made from concrete with copper slag aggregate
Material Issues
Mitsubishi Materials has reappraised the key material issues that we consider necessary to address in the future ("material issues"; factors that have the potential to have a significant impact on our corporate value) on a companywide basis. Nine material issues as shown below were identified. In this process, we took into consideration issues impacting the sustainability of society as a whole and the perspectives of our stakeholders. For the details and actions associated with these issues, please refer to "the 2012 CSR Report".

Mitsubishi Materials’ Nine Material Issues
① Promoting internal control
② Securing resources to guarantee the steady supply of products
③ Contributing to a recycling-oriented society through recycling initiatives
④ Striving to preserve the environment and combat global warming
⑤ Promoting environmental technology and products
⑥ Training and harnessing a diverse range of human resources
⑦ Creating safe and healthy working environments
⑧ Increasing social and environmental awareness throughout the supply chain
⑨ Promoting communication with stakeholders

Metals Company’s Business Characteristics and Material Issues
Securing a stable supply of raw materials is critical for our business operations. At the same time, we recognize a need to make procurement and investment decisions in an environmentally and socially responsible manner. We also consider it essential to obtain materials, not only by purchases of ore from mines, but also from recycled materials in order to preserve natural resources. Metals Company undertook action plans in FY 2012 in the following areas.

Metals Company: Fiscal 2012 Results and Future Tasks
② Securing resources to guarantee the steady supply of products
[Target] Increase the ratio of “self-sourced” ore by investing in mines
[FY 2012 results] Commenced operations at Copper Mountain Mine. Continued to implement joint exploration projects.
[Future tasks] Continued promotion of exploration and promotion of projects in development toward operation.

③ Contributing to a recycling-oriented society through recycling initiatives
[Target] Expansion of the recycling business
[FY 2012 results] Expanded the processing capacity and increased the volume of waste substrates collected from domestic and overseas sources.

④ Increasing social and environmental awareness throughout the supply chain
[Target] Achieve the targets set as an ICMM member
[FY 2012 results] Responded to new requirements regarding conflict minerals by revising CSR Procurement Standards and CSR Investment Standards and worked with the Japan Mining Industry Association on this issue.
[Future tasks] Continue to monitor and assess compliance. Establish an internal management system in order to carry out supply chain assessments and management.

In this Data Book, we will provide information relating to the followings out of the nine material issues, which we consider especially important to Metals Company.

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environment taking into account the nature of our operations.

Increasing social and environmental awareness throughout the supply chain

Environmental and social actions in copper ore procurement.

As an ICMM Member

As a member of the ICMM (International Council on Mining and Metals) we promote CSR initiatives within our operations. The ICMM is a global consultative body comprising of major global mining/smelting companies with a key objective of working to improve the environment, health and safety, and human rights performance in the mining and metals industry. The ICMM advocates 10 Principles for Sustainable Development, to which member companies are required to commit.

ICMM 10 Principles for Sustainable Development

01. Implement and maintain ethical business practices and sound systems of corporate governance.
02. Integrate sustainable development considerations within the corporate decision-making process.
03. Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities.
04. Implement risk management strategies based on valid data and sound science.
05. Seek continual improvement of our health and safety performance.
06. Seek continual improvement of our environmental performance.
07. Contribute to conservation of biodiversity and integrated approaches to land use planning.
08. Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products.
09. Contribute to the social, economic and institutional development of the communities in which we operate.
10. Implement effective transparent engagement, communication and independently verified reporting arrangements with our stakeholders.

In April 2011, reflecting changes in social awareness associated with our operations and to reflect the ICMM 10 Principles, we revised our Code of Conduct as Mitsubishi Materials as a whole, and added the following items:

Additions to Specific Details under the 10 Articles of Our Code of Conduct

- Taking into consideration the sustainable development of society
- Working to create a low-carbon society
- Taking into consideration biodiversity
- Implementing and maintaining sound corporate governance
- Prohibiting child labor and forced labor
- Striving to achieve a work-life balance
- Continually improving occupational health and safety performance
- Ensuring that products are designed, used, reused, recycled and disposed of responsibly

Moreover, ICMM defines the position statements for supplementing and embodying some of the ten essential principles.

ICMM Position Statements

1. Transparency of Mineral Revenues
   - Declare support for the Extractive Industries Transparency Initiative (EITI)
2. Policy on climate change
   - Work on the reduction of greenhouse gas emissions
3. Mercury Risk Management
   - Implement appropriate management of mercury
4. Mining and Protected Areas
   - Undertake not to explore or mine in World Heritage properties
5. Mining and Indigenous Peoples issues
   - Respect indigenous peoples and their rights
6. Mining: Partnerships for Development
   - Enhance mining’s social and economic contribution

Metals Company has for several years implemented measures supporting the ICMM position statements. Examples of our proactive approach include establishing a company-wide initiative in November 2008 regarding our greenhouse gas emissions (Statement 2).

Regarding statement 3, mercury is contained as an impurity in copper concentrate, a raw material in one of our core
businesses, copper smelting. As an ICMM member, we will continue our initiatives regarding the appropriate management of mercury. As part of our normal operating procedures, in accordance with the Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances, we notify the Ministry of Economy, Trade and Industry regarding the generation of mercury-containing substances resulting from mercury removal from copper concentrate.

Although we are not directly involved in the day-to-day operations of mines through our management systems and initiatives, as for example our CSR standards, we monitor the environmental and social compliance of mines in which we invest (Statement 4-6). In addition, as a member of ICMM we actively support the Extractive Industries Transparency Initiative (EITI) as described below (Statement 1).

**Support for the Extractive Industries Transparency Initiative (EITI)**

The Extractive Industries Transparency Initiative (EITI) increases transparency over payments by companies to host country governments. EITI also supports poverty reduction and promotes the creation of a sustainable society. Governance of EITI is shared equally between representatives of government, extractive industries and civil society. ICMM has supported the goals of EITI since its establishment in 2005. As a member company of ICMM and shareholder in the Indonesia based PT. Smelting, the Metals Company supports the objectives of EITI as an extractive company in responsible resources development and promoting growth and poverty reduction.

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**Message from ICMM**

~~ Mitsubishi Materials Corporation and Materials Stewardship ~~

In the past few years demand for metals may have reached unprecedented levels but the International Council on Mining and Metals (ICMM) believes that if the mining and metals sector is to contribute successfully to sustainable development we must adopt principles and practices which address the life cycle of the materials we produce. This is a key element of materials stewardship and one which Mitsubishi Materials Corporation is striving to promote through its integrated mineral resources and recycling business.

Materials stewardship is an evolving concept that has been developed with the support of member companies such as Mitsubishi Materials Corporation. Implementing the concept means responsibly providing materials and working to ensure that the production and use of materials creates maximum value to businesses and society while working to minimise the impact on humans and the environment. Mitsubishi Materials Corporation’s attention towards sustainable supply chains and the recycling of metals recovered from domestic waste demonstrates their commitment to implementing materials stewardship. Their integrated approach gives them the ability to target and address important social, environmental and economic impacts of the materials they produce. The joint recycling effort between Mitsubishi Materials Corporation’s nonferrous smelting and cement manufacturing operations is a good example of an integrated life cycle approach to materials management that should generate benefits through reduced energy consumption, reduced volumes of waste and conservation of natural resources while helping to promote a recycling-orientated society.

We look forward to continued collaboration with Mitsubishi Materials Corporation in the development and promotion of the materials stewardship concept. In the coming years ICMM aims to enhance its member’s actions towards increasing social and environmental awareness throughout their supply chains and Mitsubishi Materials Corporation’s experience in this area of activity will be an important contribution.

Dr. John Atherton
Director for Materials Stewardship,
ICMM
13 August 2012
Environment Management

Metals Company and Environment

Metals company’s operations include nonferrous smelting and copper processing which generate emissions that have a negative impact on the environment. To reduce our impact, we are taking measures including continuing to operate in compliance with environmental regulations, promotion of a more socially and environmentally concerned procurement process for raw materials, implementation of energy saving programs, recycling activities and measures for biodiversity preservation.

■ Energy and Material Balance

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<th>Output</th>
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<tbody>
<tr>
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<td></td>
<td>Products</td>
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<tr>
<td>Energy</td>
<td></td>
<td>Air Emissions</td>
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<tr>
<td>Water</td>
<td></td>
<td>Wastewater</td>
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</table>

Environment Regulatory Compliance

Metals Company’s sites in Japan have obtained ISO14001 certification to support environmental management and compliance. PT. Smelting has established an environmental management department working to ensure environmental compliance with local regulations, with actions including holding monthly environmental committee meetings and performing environmental monitoring in three shifts. As a result, Metals Company received no administrative measures, for example fines for environmental violations, operational stop orders or revocation of environmental permits in FY 2012.

Environment Accidents

Respect of the environmental and safety is considered as a key component in all our mid-term management and our basis for all management strategy. In FY 2012, no environmental incidents, for example chemical releases, occurred in Metals Company.

Emission into the Air

The generation of SOx and NOx atmospheric emissions is an un-avoidable result of fossil fuel combustion. To minimize atmospheric emissions, each site implements programs such as air emission concentration monitoring (SOx, dust, etc. from exhaust systems), regular equipment inspections and dust control at roads and storage facilities.

Effective Utilization of Water Resources

At sites performing smelting and copper processing operations, water is used for many purposes including cooling, production, and drinking. Total water consumption in FY 2012 was 299 million m³ of which more than 90% (281 million m³) was sourced from seawater. We promote the installation of closed systems at our wastewater treatment plants, and water re-use.

■ Water Use by Resources (Freshwater)*

Effective Utilization of Water Resources

At sites performing smelting and copper processing operations, water is used for many purposes including cooling, production, and drinking. Total water consumption in FY 2012 was 299 million m³ of which more than 90% (281 million m³) was sourced from seawater. We promote the installation of closed systems at our wastewater treatment plants, and water re-use.

■ Amount of Wastewater (1000 m³)*

Discharged Water Quality Control

Process wastewater from each site is discharged following on-site treatment. Each site has established its own internal emission standards that are more stringent than legal requirements and strictly control the concentrations of pollutants in discharged water. Sites are also working to protect the water environment through measures to reduce the usage of substances that cause pollution and strict management and inspection of wastewater treatment plants.
Amount of Chemical Substances Released/ Transferred Subject to the PRTR Act

The amount of chemical substances released and transferred by each facility is aggregated and reported annually based on Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Act). Our company’s released/ transferred amount for FY 2012 was 576t. This is a reduction of 25% compared to FY 2011 which was achieved through various initiatives including reducing the volume of material sent to landfill. In addition, reductions in the volume of wastewater generated and discharged were achieved by introducing a closed water system in the granulated slag from copper slag process.

Closed Water System for Granulated Slag Production at Onahama Smelter

As part of our efforts to reduce environmental impacts from chemical substances subject to the PRTR Act, Onahama Smelter introduced a closed water system at its granulated slag production process in February 2011. Under the former process, sea water was used to cool and solidify melted copper slag from the smelting furnace which was discharged back to the sea. Although discharged seawater was compliant with appropriate discharge standards, the amount of arsenic released into the sea was high.

By switching to a closed-water system which replaces seawater with industrial water and eliminates discharge of seawater, we have successfully lowered our chemical releases under the PRTR Act. Smelter operations were stopped as a result of the Great East Japan Earthquake, a month after the implementation of the closed water system. This means that the system implementation has not impacted FY 2012’s performance and we expect emissions of arsenic to water bodies to halve in FY2013.

† Excluding PT. Smelting.
Promotion of a Recycling-Oriented Society

Use of Recycled Material

Direct and indirect material consumption in FY 2012 was 3,295 thousand tons, of which approximately 377 thousand tons (approximately 11.4%) came from recycled materials, such as a shredder residue and waste substrates, etc., and approximately 192 thousand tons of the recycled materials came from industrial wastes that would otherwise have gone to landfill.

Metals Company’s operations consume a large amount of natural resources including ore. As part of our resource conservation activities, we are reducing the use of virgin raw materials, and promoting the use of secondary raw materials including scrap of various kinds. Because there are various sources of scraps, we are promoting measures for scrap collection as well as processing.

Reduction of Waste Generation

The total amount of waste generated was 2,393 t in FY 2012. Approximately 24% of this was waste plastics, followed by waste acid and alkali at approximately 21%, and wood wastes and waste oil respectively accounting for approximately 18% and 15%.

We confirmed from reviews of industrial waste manifests that approximately 87% of the total waste generated in FY 2012 was recycled by external waste treatment contractors. Scrap materials generated from our own production processes are reused on-site whenever possible. Scrap materials which cannot be reused are where possible treated at the Mitsubishi Material Group companies or transported to other smelting companies for recycling as necessary. In this way, we try to maximize collection of scrap materials by utilizing the network of companies that possess processes to recover substances from scrap. In cases where it is not possible to recycle scrap materials, materials will be transported to external contractors for landfill. Through this approach, we reduce the amount of industrial wastes going to landfill.
PT. Smelting is a subsidiary company based in Indonesia. The data on wastes generated by this subsidiary are excluded from that presented on Waste Generation by Types and Breakdown of Industrial Wastes by Disposal Method, since the waste classification system is different from that of Japan. We conduct separate monitoring of waste generation and management for these operations. For FY 2012, the amount of waste generated at PT. Smelting was 1,568 t.

**Promoting Recycling of Rare Metals**

Copper concentrate, the main raw material used in copper smelting, also contains rare and valuable resources in the form of platinum group metals (PGM). The process used at the Naoshima Smelter allows these to be concentrated to produce intermediate products. We also collect PGM containing scrap from electronic material manufacturers and other items such as scrap jewelry for resource recovery. These are sent to the Materials Eco-Refining's Onahama Plant where they are refined and recycled into finished products. At the Onahama Plant, we collect palladium and ruthenium in the form of metal and rhodium in the form of compounds.

We applied to become a registered brand on the London Platinum and Palladium Market (LPPM), reflecting the reliable quality of our platinum and palladium products. Our application was approved and we received certification in September, 2012.

![Recycled platinum](image)

**Combat Global Warming**

**Promoting Energy Saving**

In our smelting and copper processing operations, oil, gas and coal are used as primary energy sources, with electricity and steam used as secondary energy sources. Total energy consumption in FY 2012 was 13,526 terajoules, slightly reduced from 13,738 terajoules of the previous year.

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<thead>
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<td>1,451</td>
<td>2,277</td>
<td>4,734</td>
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Metals Company has set itself the target of achieving the “annual reduction of 1% in energy per unit” through the implementation of energy saving programs. In FY 2012, we reduced energy use by approximately 2,759 kiloliters of crude oil equivalent, which amounts to JPY123 million. The breakdown of the reduction is summarized below.

<table>
<thead>
<tr>
<th>Energy Saving Results of FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
</tr>
<tr>
<td><strong>Amount of Money (Million Yen)</strong></td>
</tr>
<tr>
<td><strong>Crude oil Equivalent (kl)</strong></td>
</tr>
</tbody>
</table>

| Fuel switching | Naoshima Smelter | 6.0 | 648 |
| Improvement of existing facilities/equipment or installation of efficient ones | Onahama Smelter | 46.3 | 761 |
| | Naoshima Smelter | 18.5 | 521 |
| | Akita Refinery | 0.5 | 10 |
| | Sakai Plant | 0.2 | 4 |
| Operation review and management reinforcement | Hosokura Smelter | 0.0 | 1 |
| | Onahama Smelter | 42.7 | 702 |
| | Hosokura Smelter | 8.4 | 112 |
| **Metals Company Total** | 122.6 | 2,759 |

† Excluding MERC and PT. Smelting.

Key examples of energy saving measures are:

1) Reduction of LNG consumption by installation of a coal dust injection system to the blast furnace. (Onahama Smelter)
2) Reduction of LNG consumption by changing from hot air to cool air used at the main burner of the reverberatory furnace. (Onahama Smelter)
3) Reduction of electricity consumption by modifications to the sulfuric acid main blower inverter and increasing utilization of the seawater pump inverter. (Naoshima Smelter)
4) Reduction of C heavy oil consumption by switching to recycled oil. (Naoshima Smelter)

5) Reduction of coal coke consumption by homogenization of raw material supply to the blast furnace. (Hosokura Smelter)

Energy Saving from Logistics Operations
In FY 2012 total energy use in logistics was approximately 204 terajoules*. Transportation includes ship, truck, and rail, with ships accounting for approximately 164 terajoules or approximately 80% of total logistics energy use. The greenhouse gas (GHG) emission from our logistics was 14,292 tons-CO₂.

One of the major steps that can be taken to improve unit energy consumption (energy consumption per t-km) is a modal shift in transport from truck to ship. Transport energy consumption statistics show that the unit energy consumption of ships is approximately a quarter of those of trucks. As we reach the maximum level of energy saving that can be achieved from this modal shift, we will continue our efforts in other areas to increase energy efficiency in our logistics operations. Examples of other measures we are adopting include the increased usage of larger vehicles. As a result of this initiative, unit energy consumption improved by 4% at Sakai Plant and 18% in Onahama Smelter in FY 2012.

Reducing GHG Emission
The FY 2012 GHG emissions of Metals Company were 1.17 million tons-CO₂ eq, an increase of approximately 8,200 tons compared to the previous fiscal year. Approximately 80% of which was emitted through energy use with the remainder coming from waste processing and industrial processes.

As the main source of GHG emission is energy use, Metals Company is working on energy saving activities to reduce GHG emissions. For example, the Onahama Smelter recycles automotive shredder residue (ASR) generated from end-of-life vehicles and used home appliances. The smelter initially treated SD by mixing it with ore in the existing reverberatory furnaces. In December 2008, as a part of implementing the Mitsubishi Process an S-Furnace was installed upstream of the reverberatory furnaces. This is used primarily for processing ore with the reverberatory furnaces treating SD.

The pulverized coal burner used at the reverberatory furnace, although suitable for ore processing, was not suitable for SD treatment as it required the use of heavy oil in combustion. To overcome this, the burner was changed from direct combustion to indirect combustion resulting in improvements in pulverized coal burner operations. Following a trial period of experimental operation from October 2009, the unit was brought into full operation from December 2009.

Conservation of Biodiversity
Preservation and Recovery of Biodiversity
Efforts at Hosokura Mine
As part of efforts to restore the natural environment impacted as a result of past mining and smelting operations, Hosokura Smelter has continued tree-planting activities since 2003.

As part of our efforts, we engaged Dr. Akira Miyawaki, a professor emeritus of Yokohama National University, to provide advice on tree planting activities from 2006 to 2007. Tree planting activities have covered a total area of 67,541 m² between 2003 to 2011, including surrounding land owned by the company and the grounds of the Hosokura Smelter.

In 2009, we participated in the "Miyagi Smile Road Program" and were certified as “Smile Supporter” by Miyagi Prefecture. This is a voluntary program involving the planting of azaleas and hydrangeas on the embankments of prefectural roads and supporting the maintenance (cleaning, planting, weeding and snow clearance) on the supporters’ own account. The planting area from September 2009 to June 2012 covers 3,390 m², with 1,525 trees planted by 119 participants from the company and 122 participants from the local community. We will continue

<table>
<thead>
<tr>
<th>GHG</th>
<th>FY 2012 Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂ Energy Use</td>
<td>906,151</td>
</tr>
<tr>
<td>CO₂ Non Energy Use</td>
<td>25</td>
</tr>
<tr>
<td>CO₂ Waste</td>
<td>258,749</td>
</tr>
<tr>
<td>Other GHG13</td>
<td>2,155</td>
</tr>
<tr>
<td>Total</td>
<td>1,167,080</td>
</tr>
</tbody>
</table>

†1 Excluding emission from logistics.
†2 The emissions were calculated in accordance with the “Manual for Calculating and Reporting Greenhouse Gas Emissions” (version 3)
†3 HFCs, PFCs, SF₆, CH₄, N₂O
this as part of program of actively contributing to the communities where we operate.

**Efforts at Naoshima Smelter**

Since natural reserves play a substantial role in biodiversity preservation, production sites nearby national parks are considered to play a key role in terms of biodiversity preservation. In Metals Company, only Naoshima Smelter (a plant area of 1,810 thousand m²) is located adjacent to a national park (Seta Inland Sea National Park). We have established environmental control targets for biodiversity preservation including developing and implementing annual afforestation plans. Afforestation activities started around 1950 which were initially intended for sediment control. However, as part of the rehabilitation process following a fire several years ago, we are promoting the preservation and recovery of the original ecosystem through recovery of onsite vegetation for example by planting endemic hardwoods.

A mountain fire in January, 2004, which took approximately a week to bring under control, destroyed 122 ha of forest area including 100ha owned by the company. To return the forest to its natural state, a tree planting initiative was implemented under the guidance of Dr. Akira Miyawaki, a professor emeritus of Yokohama National University. More than one thousand people participated in the program. Six and a half years have passed since the program was started with clear evidence of the recovery as can be seen in the photograph.

As part of our efforts to manage our environmental impacts, a reservoir owned by the company and used for the storage of industrial water is located in the recovered forest area which reduces our consumption of fresh water. To maintain water quality and control algal growth in the reservoir, we recently introduced 2,000 young carp to the reservoir.

To minimize ecological impacts by emissions from our operations, we obtained ISO 14001 certification and implement a thorough environmental management program.

**Effective Use of Biomass Energy**

Naoshima Smelter promotes afforestation activities and has been commissioned by Kagawa Prefecture to conduct a biomass energy project as a part of the "Eco Island Naoshima Plan". In this project, we grow sunflowers at fallow rice fields in the Tsumuura District, and extract cooking oil from those seeds. This is used by residents in the district and recycled into Bio Diesel Fuel for farm machines or soap. In addition, we created biotopes and planted cosmos to enhance the environment and landscape in the surrounding area. We promote these activities in conjunction with local communities.

Sunflowers cultivated in fallow fields. Food oil is extracted from the sunflower seeds and waste oil is used for fuel, etc.
Human Resources of Metals Company
We are engaged in measures to improve the value of our people, as we recognize that people are important management resources. This policy is declared in the Mitsubishi Material Group Policy. We are also promoting diversity in the workplace in response to the low birth rate and aging society in Japan.

■ Breakdown of numbers of employees at HQs and production sites of Metals Company* (number of people) (as of March 31, 2012)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>101</td>
<td>0</td>
<td>101</td>
</tr>
<tr>
<td>Full-Time Employees</td>
<td>422</td>
<td>28</td>
<td>450</td>
</tr>
<tr>
<td>Temporary Staff</td>
<td>103</td>
<td>29</td>
<td>132</td>
</tr>
<tr>
<td>Total</td>
<td>626</td>
<td>57</td>
<td>683</td>
</tr>
</tbody>
</table>

† Only Metals Company’s HQs and production sites directly managed by Metals Company

■ Employee Turnover (number of people) *

<table>
<thead>
<tr>
<th>Number of Turnover</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>0</td>
<td>23</td>
</tr>
</tbody>
</table>

† Only Metals Company’s HQs and production sites directly managed by Metals Company

Respect of Human Rights
We respect the basic human rights of all people, work to eliminate discrimination and contribute to the creation of a free, equal, and fair society.

PT. Smelting is working to prevent child and forced labor, which are sometimes encountered in the developing countries. The company hires employees from candidates who directly apply to the company and confirm ages of applicants by formal IDs or diplomas to ensure that the applicants are above the minimum legal working age in Indonesia.

Overseas Human Resource Development
PT. Smelting understands that localization is a key component for sustainable development and proactively recruits local people. In June 2012, 490* out of 506 total employees, i.e. 97%* of the workforce, were local employees. In addition, the company appoints local people to management positions to motivate employees and promote clear communication of management policies among employees. In June 2012, 30* out of 46 management people above assistant manager level i.e. 65%* were locally hired.

PT. Smelting is also implementing skills development activities; developing annual training plans and providing training in accordance with the plans. Key development areas for employees include corporate wide programs such as quality management, management strategy, finance and safety, as well as operation-related training such as environment / quality management and equipment maintenance, etc. Training programs are established so that employees can take training that corresponds to their job function. We also have various welfare packages including work injury insurance, health benefits, home benefits, and emergency loans, etc. for our employees.

In Indonesia, where PT. Smelting is located, there is a greater risk of restrictions on freedom of association for workers or conducting collective negotiations compared to Japan. Therefore additional measures are required to ensure the protection of workers' rights. In PT. Smelting, a labor union has been established in accordance with local regulations. Monthly meetings, in which the company’s management such as managers and above and representatives of the labor union participate, are held to report on operational status and exchange opinions. Additionally, negotiations to revise work agreements are conducted every two years. The Human Resource Division and executive team of the labor union hold discussions about the revision through the year. In FY 2012, there were no strikes or shutdown at the plant.

Resource Engineer Training Program
As part of our human resource development program, we have launched a trial scheme assigning resource engineers to overseas mines for extended periods. In this program, selected employees are dispatched to overseas copper mines where the company has an interest, after completing a one-year training program at the company’s limestone mine in Japan.

The purpose is to develop technical capability in mining, mineral processing and the geology of copper mines as well as to gain hands-on experience of understanding the CSR issues of our overseas operations. Currently under this program, two people have been dispatched to Huckleberry Mine, and several employees are planned to be dispatched to Copper Mountain Mine.
Occupational Health and Safety

Development of Health and Safety Management Systems

We are driving health and safety (HS) activities based on the policies addressing prevention of the occupational accidents and provision of a safe and healthy work environment, and making best efforts regarding the healthcare of our employees. The program to implement Occupational Safety and Health Management Systems (OSHMS) at all production sites of Metals Company was completed in March 2010 and the decision whether to obtain external certification or not, is delegated to each site, to be decided depending on their respective size and nature of operations. Naoshima Smelter obtained JISHA OSHMS certification in 2008 which was the first plant to obtain certification among the company.

HS Promotion Activities

Each production site of Metals Company implements safety management applicable to the site-specific safety risk and in line with the Corporate Safety and Health Management Policy. We believe that HS activities should be promoted in cooperation with the labor union and therefore hold a labor union and company management meeting once per year. Additionally, we participate in the Safety Committee of the Japan Mining Industry Association and share information on our occupational health and safety performance with our peers in the sector. The safety statistics report of the Metal mining industry is compiled by the association once a year in cooperation with the member companies. The report is helpful to understand the safety level of our company among of the industry. PT. Smelting in Indonesia established its OSH department in January, 2010, and has assigned five managers as safety officers responsible for health and safety management and implementation of programs to prevent industrial accidents. The safety officers are responsible for hazard and risk identification, and implementation of mitigation measures to prevent accidents. As an example of the success of this initiative, we have seen a significant reduction in the incidence of accidents during furnace repair work involving temporary workers, as a result of providing comprehensive safety training and twice daily safety patrols of the work area. Naoshima Smelter has a vision to create a smelter where employees can work safely for their children and grandchildren. As part of this vision, we are promoting three major safety initiatives. The first one is the implementation of a “point and call” system in which employees point to a defined safety indicator (100 have been selected) and call the status of the indicator. This initiative aims to create a “rule following” culture. The second one is “eradication of low frequency work”. This initiative aims to eradicate operations which are not performed frequently as these are a significant cause of industrial accidents. The third component is making an “accident calendar”. As there have been cases of similar types of accidents taking place, a “calendar” was made to remind of past accidents for the reference in weekly preventative checks. These steps have resulted in increased employee awareness in workplace safety. The number of reports on safety incidents reached 5,623 in FY 2012.

Regarding employee education, Naoshima Smelter is continuing with its training program for all employees and subcontractors working at the site using the installed imitative-risk-experience facility. This approach is very effective in building awareness of the risks and hazards that exist in daily workplace activities, such as working at heights, rotating parts and electrical shock. It allows trainees to experience situations close to real accident situations.

HS Performance Results

Each of our production sites is implementing risk assessment to prevent accidents. The safety performance in 2011 of Metals Company is summarized below. No incidents of occupational disease or explosions/fire occurred in 2011.

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

† Only Metals Company’s HQs and production sites directly managed by Metals Company

Consideration for the Local Community

Considering the health and safety of the local community and responding to local concerns is an essential component of sustainable development. PT. Smelting conducts its operation in industrial areas where the potential impacts to the community are considered to be low and is not located within the territory of indigenous people or in the adjacent areas where they live. However,
the General Affairs Section has established a contact point to respond to any requests or complaints from the local community. At a regional level, activities include making donations to the Sumatra Earthquake victims, support for local libraries (purchasing books and supporting administrative costs etc.), assistance for the expansion of local elementary school buildings and regional women’s organization. No requests or complaints from the local community were received, and no critical incidents / accidents which may impact the local community occurred in FY 2012.

Social Contributions and Communication Activities at Hosokura Smelter

Hosokura Smelter operates an internship program as part of its social contribution activities. High school and university students are provided with work experience intended to guide them in their future career decisions. 26 high school students (two of whom later joined the company) and 12 university students (one of whom joined the company) have participated in this program between 2004 and 2011. The plant also operates observation-tours for local elementary school students and their parents.

In addition, Hosokura Smelter produces drinking water for the nearby Ugusuzawa district using its water purification technology, alongside industrial water it uses for production. The company supplies 600 m³ per day which is equivalent to two thirds of water required in the district. Although the Company receives a subsidy from Kurihara city, this is part of the plant’s effort to contribute to the local community rather than a business function.

The company also organizes a ground golf tournament, which has been held three times a year for the last eight years. This provides an opportunity for communicating with local residents with 60 to 70 people participating in each tournament and their supporters with typically more than 150 people in attendance. The tournament is held at Irigamazawa site, a former landfill which was restored. Having lunch together after the tournament creates an opportunity for the Company to engage with the local community.

Social Contribution Activity at PT. Smelting

As part of its social contribution activities, PT. Smelting in Indonesia organized a training course on catering service as a scholarship program. This was held from June to July, 2011 and open to high school students graduating from the local village and surrounding area.

The course gave students the chance to learn catering skills to help them increase their opportunity of finding work in hotels, restaurants or similar establishments. Organized in conjunction with Sidoarjo Education Center, the course was attended by 22 high school graduates, 16 of whom are reported to have found jobs with local restaurants or catering service companies.
Investment Standards, Procurement Standards

Metals Company purchases about 1.9 million tons of copper ore annually from overseas mines for supply to our smelters. To secure a long term, stable supply, we have invested in five mines outside of Japan (Los Pelambres Mine and Escondida Mine in Chile, Huckleberry Mine and Copper Mountain Mine in Canada, Copper Mountain Mine in Canada and Batu Hijau Mine in Indonesia). With the start of operations at Copper Mountain Mine in Canada in 2011, the ratio of ore procured from invested mines reached 70%. We have a target of sourcing 75% of ore from mines in which we have invested. Though we do not have operational control and management of these mines as our investment is below 50%, from the perspective of CSR supply chain management, we are monitoring the compliance status with environment-related standards regulations, permits / licenses, and the working conditions at these mines as well as supporting the mine operations regarding environment and local community issues as a shareholder.

As part of our CSR supply chain management activities, in July 2009 we developed “CSR Investment Standards” to evaluate mines in case of investment and “CSR Procurement Standards” to evaluate external mines i.e. mines in which we don't invest, from which we purchase ore. The ICMM 10 Principles for Sustainable Development, especially mine related principles (Principles 3, 7 and 9) and various social & environmental guidelines for mine development were used in drafting of the standards. In October 2011, we revised the basic human rights sections of our Investment and CSR Procurement Standards, adding the requirement to forbid any involvement, either direct or indirect, with militia or other armed groups in areas of conflict where there are concerns regarding human rights violations. The outlines of both standards are summarized in the column on the right-hand side.

A questionnaire based on the standards is sent to both mines in which have an invested, and non-affiliated mines who are ore suppliers. The CSR aspects of their operations are evaluated based on their responses with further communications regarding CSR aspects of operations taken as required.

<table>
<thead>
<tr>
<th>Metals Company</th>
<th>Outline of CSR Investment Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protection of basic human rights</strong></td>
<td>Protect the basic human rights of people impacted by business operations. Consult with stakeholders regarding local community issues. Eliminate any involvement, either direct or indirect, with militia or other armed groups in areas of conflict where there are concerns regarding human rights violations.</td>
</tr>
<tr>
<td><strong>Mining and protected areas</strong></td>
<td>Identify and evaluate impacts to cultural heritage and protected areas, and risks to biodiversity at different stages of our business. Develop and implement mitigation measures.</td>
</tr>
<tr>
<td><strong>Mining and indigenous people</strong></td>
<td>Understand and respect the society, economy, environment, culture and rights of indigenous people. Conduct social impact evaluation of indigenous people for new mine investments and provide appropriate compensation.</td>
</tr>
<tr>
<td><strong>Relationship with local community</strong></td>
<td>Verify if there are any conflicts or lawsuits with local communities. Hold consultation or dialogue to explain business plans.</td>
</tr>
<tr>
<td><strong>Environmental Preservation</strong></td>
<td>Conduct Environmental Impact Assessments and obtain appropriate permits. Development of specific plans for reducing the negative environmental impacts of mine development and operation.</td>
</tr>
<tr>
<td><strong>Mineral resources and economic development</strong></td>
<td>Sustainable economic development at regional or national level.</td>
</tr>
</tbody>
</table>

Increasing Social and Environmental Awareness Throughout the Supply Chain
Metals Company:
Outline of CSR Procurement Standards

Continual improvement of environmental performance
- Implement environmental management systems focusing on continual improvement
- Reduce negative environmental impacts in mine development and operation
- Consider protection of natural areas and biodiversity
- Consultation with stakeholders on environmental issues

Continual improvement of occupational health and safety
- Implement HS management systems focusing on continual improvement
- Protection of employees and contractors from occupational disasters. Disease prevention measures including local communities

Protection of basic human rights
- Prevention of forced and child labor
- Elimination of harassment and discrimination
- Avoidance and compensation for forced resettlement
- Protection of indigenous people
- Management and record of complaints and conflicts from stakeholders
- Elimination of any involvement, either direct or indirect, with militia or other armed groups in areas of conflict where there are concerns regarding human rights violations.

Addressing the Issue of Conflict Minerals
In July 2010, the United States passed the Dodd-Frank Wall Street Reform and Consumer Protection Act. As a result, the US Securities and Exchange Commission (SEC) set out regulations requiring all companies listed in the US to disclose whether their products contain conflict minerals (tin, tantalum, tungsten and gold) and countries of origin. The aim is to prevent minerals from conflict-stricken Democratic Republic of Congo (DRC) or its neighboring countries being used to fund the activities of armed groups responsible for appalling human rights violations and other acts of violence. In June 2011, our Metals Company signed up to and announced its support for the Extractive Industries Transparency Initiative (EITI)*. Although we do not use any raw materials that are classed as conflict minerals originating from the DRC or adjoining countries, we strengthened our actions as a smelting plant operator that purchases ore and we issue non-use certificate in response to requests from the customers. The non-ferrous metal industry in Japan is as a whole closely monitoring the actions of the OECD, SEC, EICC, and LBMA related to conflict minerals. The Company is examining how to improve its supply chain management practices in corporation with the Japan Mining Industry Association, based on the recent developments in this area.

Social and Environmental Considerations in Overseas Mines
The mines in which Metals Company is involved include ones in operation and in exploration stage. In both cases, aside from verifying compliance with regulatory requirements, various voluntary activities relating to environmental and social aspects are conducted.

Examples of Environmental Protection Activities

Huckleberry Mine (operation stage)
- Water quality monitoring in the wastewater pit
- Acid drainage prevention measures
- Countermeasures for mine closure (maintenance of water quality, structural monitoring of a tailing dam)
- Monitoring of aquatic species living in nearby rivers and lakes
- Measures for sealing water into the tailing dam
- Tree planting around mine facilities

Namosi mining area (exploration stage)
- Water quality monitoring studies of rivers in the area
- Element analysis in sediment and soil
- Biodiversity baseline survey
- Archaeological research

Examples of Activities in Social Aspects

Los Pelambres Mine (operation stage)
- Prioritizing hiring of local people for on-site operations
- Enhancing education and medical care, contributing to the creation of new employment (e.g. construction of vocational training schools, expansion of existing hospital facilities and providing funding to vineyards)
- Enhancing infrastructure by direct funding (e.g. construction of university auditoriums, maintenance of roads, construction of irrigation facilities, conservation of archaeological resources and tree planting)
- Donation to national poverty eradication programs
**Namosi mining area (exploration stage)**
- Prioritizing hiring of local people
- Sponsorship contract for the local rugby team
- Scholarship system for university students
- Physical and material support for the renovation and relocation of local junior high and nursery schools
- Renovation of a local church
- Maintenance and urgent repairs to local roads
- Supporting emergency personnel from local NPO and donation of AED to the community

**Environmental and Social Action in Overseas Mines**
Periodic monitoring of water quality is conducted at Huckleberry Mine and Copper Mountain Mine with monitoring results reported to local regulatory agencies. Both mines also perform monitoring of impacts to the local ecosystem.

In addition, stakeholder meetings are held with the local community and government agencies as a way of developing good community relations. Mine tours were held on seven occasions in 2011 for elementary school students at Huckleberry Mine. A ceremony on the completion of machine installation was held at the Copper Mountain Mine with local students invited to the event.

**Monitoring impacts to the local ecosystem at Huckleberry Mine**

**Local Procurement**
Metals Company strategically locates production sites close to areas from where raw materials are sourced reducing the environmental impacts associated with the transport of ore. PT. Smelting in Indonesia purchases 100% copper ore from mines in Indonesia and 50% of auxiliary material and goods within Indonesia thereby contributing to the local economy. In Japan, Onahama Smelter purchases auxiliary material from suppliers located in the same city. About 15 thousand tons per month of calcium carbonate is used as raw material in the production of gypsum, a smelting by-product, all of which is purchased from a neighboring factory. About 2.4 thousand tons per month of silica is used as an auxiliary material in the copper smelting process, of which 100% is purchased locally.

**Striving for Materials Stewardship**
Materials stewardship is a concept which aims to maximize the value of resources in our society and minimize impacts to people and the environment through the complete life cycle of the resource, such as mining, processing, designing, using and disposing, which is beyond the bounds of an individual business. Put forward by the ICMM, of which we are a member, materials stewardship is attracting a great deal of attention as an essential new approach to CSR, particularly for global mining and metals companies.

**Figure Conceptual Framework of Material Flow**

Our company incorporates the concept of materials stewardship and undertakes various activities in each stage in the material flow.

**Mine Site Development and Procurement:** We strive to implement environmental conservation and contribute to regional development activities in our joint exploration areas (refer to the box on the left column for details). As
part of the procurement process, we assess social and environmental impacts of our invested mines using our CSR Investment Standards, and our CSR Procurement Standards for ore procured from mines with which we have no capital ties (refer to p.19 for details).

**Smelting:** Our proprietary smelting process, the Mitsubishi Process, enables energy saving and cost reductions in operations whilst minimizing emissions of pollutants and forms part of our goal to manufacture and supply our products with no pollution and high efficiency. In addition, through strict operational controls from smelting to processing within our groups, we can reuse scrap copper as part of our resources conservation approach.

**Product Design and Safety:** We develop products containing no heavy metals such as lead, and jointly research with our customers how to maximize the efficient use of copper. We have established the “hazardous chemical substance control rules” to control the heavy metal or hazardous substance content of our products, and check the compliance status through quality audits and compliance with the rules in daily operations. We will strive to deliver information on safety use to our customers for example, by attaching an SDS (Safety Data Sheet) to our products at the time of supply.

**Disposal:** Our recycling operations, one of our core operations driving our commitment toward materials stewardship, aims to create closed loop material flow cycles by extracting valuable metals from shredder residue from end-of-life vehicles and used home appliances. By minimizing the amount of waste going to landfill, we are aiming to reduce our environmental impact and promote the effective use of resources throughout the material cycle.

**Compliance with Chemical Substance Regulation**
In recent years there has been a marked trend towards stricter regulatory control over chemicals management, particularly in Europe with the introduction of the Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

As an exporter of copper alloy to European markets Metal Company is required to comply with requirements of REACH. We successfully completed our registration for copper, ahead of the required deadline, in November 2010. In addition, we are also in compliance with requirements of REACH regarding preparation of Safety Data Sheets (SDS) that are prepared in accordance with the CLP\(^1\) regulation, which provides the legal framework for introduction of GHS\(^2\) in Europe.

Outside of Europe, to support our product compliance we also closely monitor changes in chemical regulations as different countries are at different stages in reforming their chemicals management systems. In Japan, amendments to Kashinho (Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.) regarding notification came into effect in April 2011. Metals Company successfully completed appropriate notification for products and intermediates in June 2011. Metals Company worked closely with group companies in identifying applicable substances and data collection for notification purposes taking a leadership role in successfully completing notification for the whole group. Given the upstream position of the smelting industry in the metals supply chain, we will continue to implement appropriate chemical management practices to support compliance with changing regulatory requirements to minimize the potential for disruption to the supply chain.

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\(^1\) CLP: Abbreviation for Classification, Labeling and Packaging of substances and mixtures. CLP is a regulation issued by EU in 2008 regarding to classification, levelling and packaging of chemical substances applied GHS.

\(^2\) GHS: Abbreviation for Global Harmonized System. GHS is a system to classify and level etc., chemical substances in accordance with the worldwide unitary regulation. It is published by United Nations.
Contact for more information

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