

Environmental Preservation

Contribution to Society and Local Communities



Rehabilitation of Tailings Dams



Before rehabilitation

After rehabilitation

## Rehabilitation of Tailings Dams

The business in which SMM engages exerts an extremely large impact on surrounding regions. Earning the trust of local communities is a key prerequisite for the continuation of our business. At the former Besshi Copper Mine in Ehime Prefecture, we started reforestation in the Meiji Era. This spirit of co-existing with the global environment and society through our business, carried down ceaselessly from our predecessors in Sumitomo, is a spirit that even today we revere and put into practice in countries around the world.

Coral Bay Nickel Corporation (CBNC) produces mixed sulfide (MS) as an intermediate raw material for nickel and cobalt products at Palawan Island in the Philippines. The company is engaged in the rehabilitation of tailings dams, which are facilities for accumulating the neutralized and stabilized unneeded mineral solids resulting from mineral processing (the process of separating ores) and from metal smelting and refining, and separating the water from them. Currently at CBNC, the first tailings dam has reached capacity and a second is in use. Rehabilitation is the activity to return greenery to a tailings dam that has played out its role.

The objective of rehabilitation is to establish a self-supporting, sustainable ecosystem. We undertake a number of measures, such as improving the soil, and have restored an expanse of greenery to land that was barren, reddish-brown soil in 2010. However, we

go beyond simple greening to cultivating vegetables, fruit trees, and other plants to make the land usable for agriculture and other activities that support livelihoods. Rehabilitation also plays an important role in the creation of employment in the area of operation, with many members of local communities becoming involved in the work.

### Recipient of the Presidential Mineral Industry Environmental Award for three consecutive years

CBNC is working with Rio Tuba Nickel Mining Corporation (RTN), a supplier of raw material ore, in 22 villages (barangays), under the Social Development and Management Program (SDMP), a social contribution program established under the Philippine Mining Act.

Through the SDMP, we are undertaking infrastructure development, operation of schools and hospitals, establishment of educational programs, improvement of sanitation, and other initiatives, based on exchanges of ideas with local communities.

CBNC's work with tailings dams and other activities have received recognition, with the company receiving the Presidential Mineral Industry Environmental Award from the Department of Environment and Natural Resources of the Philippines for three consecutive years. The company has attracted attention worldwide through its activities, and has welcomed observation missions from many countries. CBNC further received an Outstanding Community Project Award for 2016 from the Philippine Economic Zone Authority. SMM's attitude of striving for sustainable growth in co-existence with local communities through its business has earned high regard in the Philippines.



Award ceremony for the 2016 Presidential Mineral Industry Environmental Award



Award ceremony for the Outstanding Community Project Award for 2016



Raising saplings, by the local community



Accompanying an economic mission in the Philippines in January 2017. In order, from second from left, are President Nakazato of SMM, Prime Minister Abe of Japan, and President Duterte of the Philippines.



Effective Use of Resources



Marine resource research vessel Hakurei



Test mining machinery



Sea-floor massive sulfide deposits

Photograph: Japan Oil, Gas and Metals National Corporation

### Developing the Hidden Potential of Sea-Floor Massive Sulfide Deposits

In oceans around the world, marine resource development projects are moving forward and movements to secure interests are heating up. With few natural resources, Japan sees great potential in the mineral resources that lie sleeping in its surrounding seas. Among such projects, SMM is taking an active part in sea-floor massive sulfide deposit development projects that are being advanced under public and private sector cooperation.

The world's attention has focused on sea-floor mineral resources in recent years. The resources in the vast seas surrounding Japan hold great promise for the country, which lacks mineral resources. On the basis of factors including area of distribution, formation and form, and component metallic elements, these sea-floor mineral resources can be divided into three types: sea-floor massive sulfide deposits, manganese nodules, and cobalt-rich ferromanganese crusts. None of these have been commercially produced, making them resources yet untouched by man.

One of these resources, sea-floor massive sulfide deposits, is formed from polymetallic sulfides created through the precipitation of metal components in hydrothermal seawater that vents from the sea-floor due to the action of the earth's crust. The deposits contain copper, lead, zinc, gold, and silver in differing ratios; some contain rare metals as well. At present, about 350 such locations have been discovered worldwide.

Multiple massive sulfide deposits have also been found at depths of 700 to 1,600 m within Japan's exclusive economic zone. In 2008, the Basic Plan on Ocean Policy was created by Cabinet decision, and national projects to explore and develop sea-floor massive sulfide deposits are now underway.

#### Participation in projects leveraging knowledge of exploration and mining

SMM formed a consortium with a number of private companies and, since 2008, has participated in a project to investigate fundamental technologies put forth by the Japan Oil, Gas and Metals National Corporation (JOGMEC), leveraging its long-nurtured technological capabilities and knowledge of exploration and mining. At present we are taking part in a pilot test project aimed at commercialization, and are responsible for evaluating the amount of resources and formulating a mining plan.

Respect for People and Human Rights

### Developing Executive Employees with a Global Perspective

The SMM Group has 74 group companies (32 in Japan and 42 overseas as of July 15, 2017) in 16 countries and regions. Overseas employees now account for approximately 25% of Group employees. In human resources development, we undertake initiatives that target all of these employees from a global perspective. The yearly overseas executive manager training that we launched in 2008 is one such initiative.

The SMM Group has set "Provide training opportunities to all employees" as a key performance indicator (KPI) under Vision for 2020. The overseas executive manager training is a human resource development program conducted globally under such KPIs.

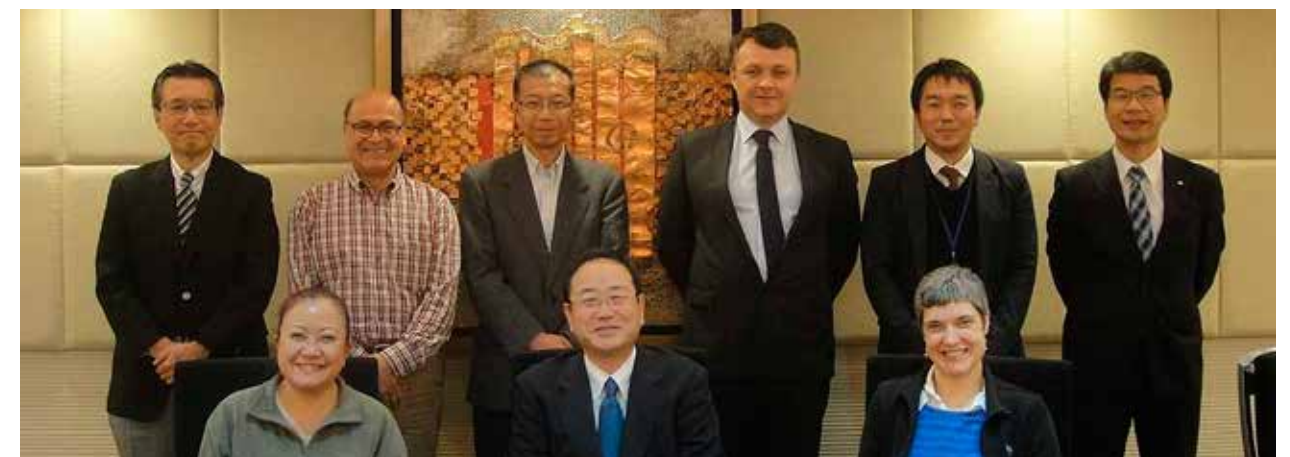
This overseas executive manager training is aimed at local employees who manage our Group's overseas sites. Every year, we invite these employees to Japan for CSR-related training and to share the Sumitomo Business Spirit and history, while increasing loyalty and motivation through discussions and tours of domestic business sites.

#### Discussion by all participants gathering in Japan

In FY2016, the training was held over five days from November 14. Five employees from diverse countries—China, the Philippines, the U.S., Peru, and Australia—took part.

At Tokyo headquarters, the trainees learned about topics including the history and business spirit of SMM and our basic stance on CSR. Following this, they visited the Besshi-Niihama District Division to tour the former Besshi Copper Mine where SMM began, and the Isoura Plant where the development and production of new materials takes place. To cap the training on the final day, SMM held a discussion among the trainees to exchange ideas and gain insights, and set a theme of "How to motivate employees." Comments from the participants included "I was able to better understand the history and business of SMM, and found the environmental restoration initiatives at the former Besshi Copper Mine particularly interesting," and "I think the knowledge I gained in discussions will be of use in educating subordinates."

The training in 2016 marked the sixth time we have held overseas executive manager training, and have now had a total of 33 participants from 9 countries. We will continue this training, with the aim of participation by all executive manager employees at or above the level of managers of operational divisions at overseas business sites.



Training and tour at the former Besshi Copper Mine (top), and training participants (bottom)



Occupational Health and Safety

### Safety Initiatives by the SMM Group to Nurture a Safety Culture

SMM's CSR Policy states, "According safety the highest priority, SMM shall provide safe, comfortable working environments and seek to eliminate occupational accidents." We engage in a variety of initiatives aimed at realizing this goal.

Reflecting seriously upon the criticality accident that occurred at JCO Co., Ltd. in 1999, we established the SMM Corporate Restructuring Plan to Improve Safety Management, to "nurture a safety culture" within our corporate atmosphere across the Group.

Under this plan, we began strengthening safety management through the line of command at and below the level of general managers of divisions, with the goal of halving occupational accidents. Subsequently, we implemented a variety of measures, and as a part of our Vision for 2020 continue to perform daily under concrete numerical targets (see p. 70).

#### Strengthening our management framework

In accordance with the SMM Corporate Restructuring Plan to Improve Safety Management that we established in 2000, and under the recognition that business management and safety management are inseparable, we re-implemented education to improve safety awareness for executives (including the President), division general managers, heads of business sites, and employees, through content matched to the level of the recipients. In addition, we conducted a general inspection of legal compliance status and rectified problem areas while deepening understanding of laws and ordinances.

At the same time, we made the decision to reflect the safety management-related performance of business division general managers and heads of business sites in scores and compensation under our performance-based compensation system, and revised the system to further emphasize safety performance in personnel evaluations.

We also increased opportunities for directly contributing to safety initiatives, such as by having division general managers inspect the business sites under their control at least once a year. At the same time we stipulated the duties and activities of each job position with regard to safety in the various regulations, and strengthened safety management through the line of command.

Since 2006, we have appointed an executive officer as the General Manager of the Safety and

Environment Control Department, the company-wide division that manages occupational health and safety.

#### Making facilities safer

Since 2002, we have worked to strengthen facility safety. Taking serious occupational accidents within our Group as case studies for learning, we have clarified facility safety issues that can lead to serious occupational accidents and have worked toward general inspections and greater safety in facilities. Subsequently, we systemized methods for evaluating and mitigating facility- and task-specific risk levels through risk assessments, and enhanced safety with a priority on facilities and tasks that involve greater risks.

#### Strengthening employee's awareness of risk

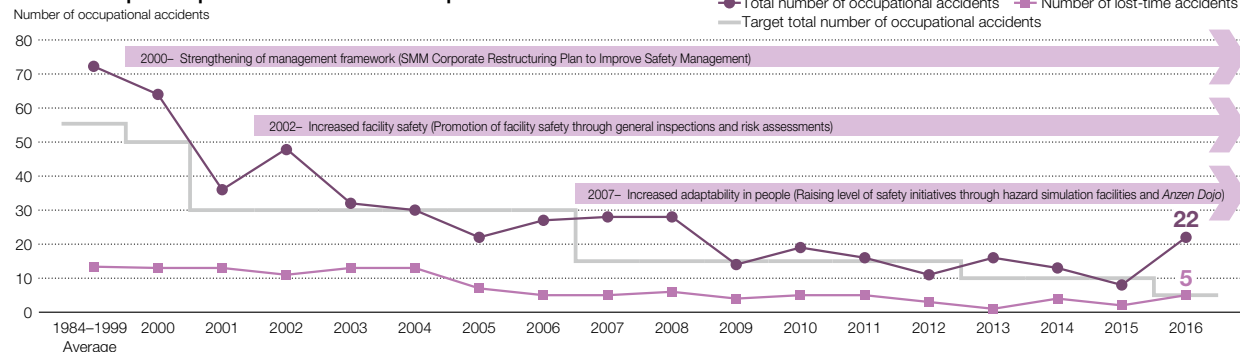
From 2007, we have worked to strengthen employee's awareness of risk. As occupational accidents have decreased, employees who know the danger and tragedy of such accidents have also decreased. Accordingly, occupational accident simulations and education aimed at strengthening sensitivity are even more important. To reinforce education at Oji-kan, our hazard simulation facility and participation by all employees in safety initiatives, we launched the *Anzen Dojo* (see p. 95) as we further work to raise the level of our safety initiatives.

#### Status from 2016 onward

Thought and action concerning safety failed to take root in all employees in 2016, and a number of occupational accidents occurred.

We pursued Group initiatives to instill awareness of safety in each and every employee from the last month of 2016 to the first month of 2017, and the trend toward a large number of accidents has subsided since the beginning of 2017. However, inadequate facility safety measures led to a fatal accident at Hyuga Smelting Co., Ltd. in May. We will solemnly assimilate the lessons of this incident and will further endeavor to strengthen awareness in our people and enhance facility safety.

#### SMM Group occupational accidents in Japan

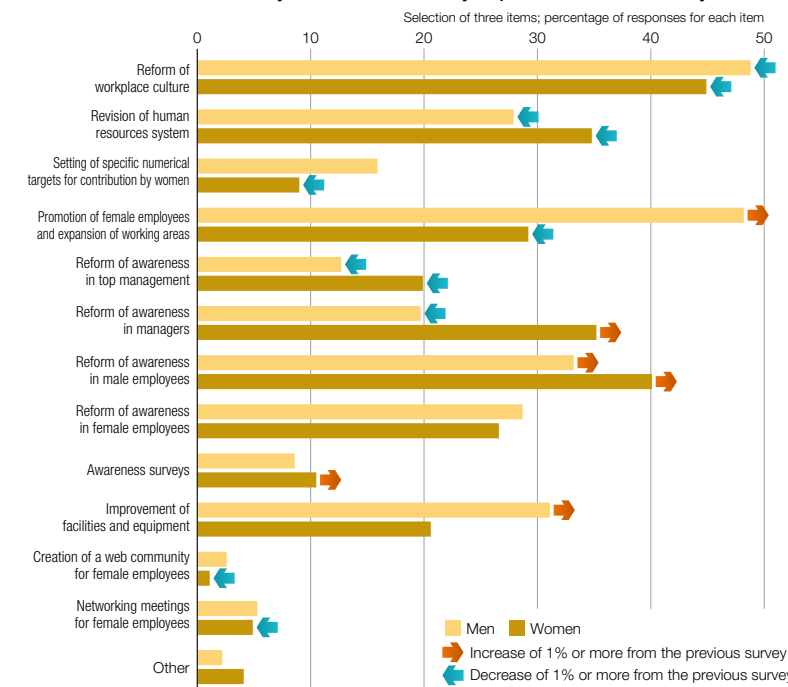


Stakeholder Communication

### Continuous Management Improvements that Take in the Voices of Employees

In order for a company to grow sustainably, it must raise the morale and loyalty of employees and must promptly reflect the real voices of employees in its management. SMM surveys ongoing changes in employees' awareness toward the company and the workplace, engages in PDCA based on analysis of the surveys, and works to make continuous improvements in management.

#### Q. What sort of measures do you feel are necessary to promote contribution by women?

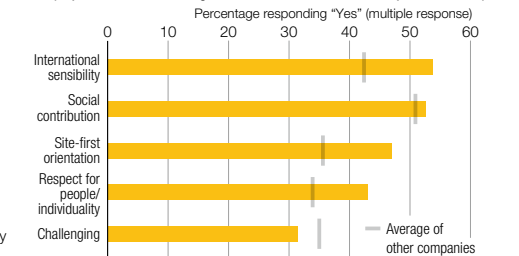


Example of results of FY2016 survey on support for contribution by women: Assessment of progress in measures, the male-female gap in awareness, etc.



Workshop for management positions (Besshi district)

#### Q. What sort of corporate culture applies to the company? (Top 5 items from among items defined as desirable corporate culture)



Example of results of FY2016 survey on current corporate culture: Assessment of culture that should be kept and culture that should be changed

SMM has conducted an employee awareness survey every three years since 2010, doing so for the third time in September 2016.

The survey presents about 140 diverse questions covering both the company and the workplace. This lets the company learn about both the current state of employees' awareness and, through comparison with data from the previous two surveys, quantitatively assess ongoing changes. We also compare the results with averaged data from similar surveys by other companies, conducting analysis from a relative perspective.

This time, we further adapted the content of the survey to address changes in society, such as by adding questions concerning diversity. Moreover, to make the survey useful in improving Group management, we enlarged the scope of the survey to cover a portion of Group companies, not only SMM. The survey has grown to a considerably large scale, being given to about 4,000 employees.

#### Promptly feeding survey results back into management measures

We analyze the results of the survey from two broad approaches: corporate culture, encompassing the values, norms, customs, ambience, and other aspects

of the company; and morale, encompassing mood, attitude, vitality, and other aspects of employees. We also perform analyses of compliance, diversity, contribution by women, and other specific issues, as well as detailed analyses that include comparisons by business and by division.

These survey results are reported to management, and serve as an aid when necessary in reviews of management measures. With regard to certain issues, we put survey results to use at all sites and reflect them in necessary measures in the Legal & General Affairs Department and Human Resources Development Department. Extending the results across the company, we work to effect improvements.

We also hold briefings on survey results at each site and hold workshops aimed at improvement for management positions, putting the results to good use at every workplace. In this way, the employee awareness survey plays an important role as a check on management measures. Using the results as data to corroborate measures and conduct reviews, we are working toward continuous improvement.