

Review of Vision for 2020

* Achievement Level, O=achieved, Δ=portion remaining unachieved, X=Difficulty in achieving

Effective Use of Resources

Vision for 2020: A company that generates resources using innovative technology

Goals and KPIs	Achievement Level*	Results	Future Issues
1. Develop and implement technologies to efficiently recover resources (low-grade/hard-to-process ores)			
1) Promote rational use of low-grade nickel ore (make nickel produced from low-grade ores 2/3 of nickel production overall)	Δ	Our ratio of nickel produced from low-grade ores to total nickel produced stayed at 57% in FY2019 due to the impact of lower production at CBNC and THPAL. We made advances with our technology for efficient recovery, but did not achieve our target volume.	Make progress with preparations for starting production for the Pomalaa Project and, from the perspective of extending the life of the CBNC plant, continue pursuing development of low-grade nickel ore processing technology.
2) Achieve profitability in our copper business by developing processing technologies for low-grade/hard-to-process ores	O	Developed Cu/Mo separation technology, supported operation of the Sierra Gorda Copper Mine, and carried out new process development. Maintained suitable operating conditions, improved the recovery rate on site, and contributed to lowering molybdenum content in copper concentrate.	With regard to Cu/As separation technology, push forward technological development with the consortium of 3 non-ferrous metals companies and carry out demonstration tests using mineral processing pilot facilities. Continue joint research with Hokkaido University on the development of recovery technology using fine-particle agglomeration and aggregation.
3) Develop efficient gold mining technologies	O	Continued development of optimal mining methods at the Hishikari Mine and Pogo Mine (for the latter, interests sold in 2018).	Survey and proceed to adopt the newest automation and remote-operation technology for achieving efficient and streamlined operations at the Hishikari Mine.
4) Participate in sea-floor resource development projects (contribute to the development of mining technologies and processing solutions)	O	Participated in an 8-company consortium for a pilot test excavating and lifting sea-floor massive sulfide deposits. In 2017, achieved the world's first successful excavating and ore lifting of sea-floor sulfides. Completed development of basic technology for cobalt-rich ferromanganese crust mineral processing by combining primary concentrating (using mineral processing technology) and secondary concentrating (using smelting and refining technology).	Devote effort to enable on-going participation and contribution to projects by JOGMEC on sea-floor massive sulfide deposits and cobalt-rich ferromanganese crust.
2. Develop new and effective uses for by-products			
1) Recover and market scandium from nickel oxide ore	O	Started construction in FY2017 of commercial facilities at THPAL and started commercial production in July 2018 of scandium oxide at the Harima Refinery.	Continue to increase production through operational improvements, and further boost the recovery rate. Strive to unlock demand as well.
2) Recover raw material for iron and steel manufacturing from nickel oxide ore (commercialize chromite and hematite)	X	Implemented hematite filtration pilot trials at THPAL; however, had to halt recovery of raw material for iron and steel manufacturing, due to problems with composite ingredients. Started on a chromite recovery project instead.	Although we gave up on attempts to use hematite as a raw material for iron and steel manufacturing, we are pursuing development of other applications, for example as a building material.
3. Promote recycling			
Improve our effective use of recycled resources	Δ	Developed a process for the generation of battery raw materials by creating alloy from detoxified battery scrap, using a pyrometallurgical process, and recovering nickel and cobalt, using a hydrometallurgical process.	Test and verify the developed LIB recycling process in a pilot plant, then aim for commercialization.

Environmental Preservation

Vision for 2020: A company that uses advanced technologies to reduce environmental burden and contributes to preserving the global environment

Goals and KPIs	Achievement Level*	Results	Future Issues
1. Advance biodiversity preservation initiatives			
1) Implement global warming countermeasures	O	Continued steady growth in sales of products contributing to a low-carbon society, such as battery materials (for EV/HEV batteries) and ink materials (for infrared absorbing films for buildings and car windows).	Set new definitions and adopt a certification system for low-carbon products. Consider a method for calculating our contribution to reducing GHGs. Expand production and supply of low-carbon products, such as battery materials, and pursue development of new products.
① Expand materials business for products contributing to a low carbon society (creating, storing, and saving energy) Achieve a 5-fold expansion of net sales (measured against FY2011) from materials for products contributing to a low carbon society	O	FY2019 net sales of ¥129.0 billion, up 10.4-fold compared to FY2011.	
② Reduce CO ₂ emissions from operations	O	Made progress at each business site switching to LED lighting, high-efficiency ventilation systems, and inverters. Cut annual CO ₂ emissions by 20 kt, meeting the FY2019 target. Also, cut annual CO ₂ emissions by 230 kt (compared to FY2014) through operational changes (zinc → nickel sulfate) at the Harima Refinery.	Set major, Group-wide CO ₂ emissions reduction targets and encourage investment (climate change scenario analysis, TCFD, internal carbon pricing, and other initiatives). Initiatives to cut GHG emissions intensity (stabilize operations, prevent equipment trouble, increase production, adopt new technology).

Goals and KPIs	Achievement Level*	Results	Future Issues
Contribute to CO ₂ emission reductions by constructing a plant using HPAL, etc., which has significant energy saving advantages over other technologies such as nickel pig iron	O	Gathered basic test data on the construction of the HPAL plant under consideration in Indonesia (Pomalaa).	Consider construction of an HPAL plant in Indonesia and elsewhere. Extend the life and increase the efficiency of the HPAL plant in the Philippines.
③ Utilize positively renewable energy to contribute to CO ₂ emission reductions	O	Built an approx. 2-MW solar power plant (operations commenced in August 2016) on SMM property in Kashima, Ibaraki Prefecture. After operations commenced, the expanded plant generated 3,600 MWh in FY2019. This solar power generation helped cut FY2019 CO ₂ emissions by 1,760 t. From April 2017, started buying and using biomass-generated steam at the Tochigi Plant of Sumitomo Metal Mining Siporex Co., Ltd. This helped cut FY2019 CO ₂ emissions by 4,100 t (nearly 0.2% of the Group's overall emissions volume).	Promote power generation from renewable energy within the Group. Purchase electricity generated from renewable energy sources. Make indirect contributions to cuts, such as expanding renewable energy generation in country. Combine these initiatives and continue efforts to cut CO ₂ emissions going forward.
2) Steadily develop and adopt technologies for reducing environmental impacts	Δ	With regard to the release of harmful chemical substances into the air and water, formulated and pursued a reduction plan. Total Group release volume of flue gas was at the same level as FY2016. Achieved an approx. 10% cut (compared to the FY2014 peak level) in the release and transfer volume of PRTR substances.	Continue cutting PRTR substance release and transfer volume. Aim for major release and transfer volume cuts through operational and process changes. Support and continue efforts to respond to strengthening regulations in each location where we do business.
① Implement a planned approach for reducing the emission of chemical substances	O	Carried out greening of 391 hectares to date (41 hectares in FY2019) at CBNC and THPAL.	Continue greening projects going forward, such as tree planting in areas of the Philippines where we do business.
② Promote to environmental preservation through forestation, etc.	O	At CBNC, managed wastewater and local river water quality with our suppliers who own mines. At THPAL, integrated three systems releasing wastewater into rivers and worked toward more efficient wastewater management.	Continue encouraging ore supplying companies in the Philippines and South America to engage in environmental preservation. Continue providing detailed explanations of environmental improvement initiatives to local residents and other parties involved.
③ Verify the environmental impacts in our portfolio companies and supply chain companies, and implement measures to reduce risks	O	From FY2014–2018, we checked 11 accumulation sites and other such areas at domestic closed mines and, using the results, carried out earthquake stabilization and post-construction greening, all of which was completed without incident.	Accumulation sites at closed mines met earthquake resistance standards. Strive to strengthen management going forward in order to ensure stable accumulation sites.
2) Prevent significant environmental accidents by strengthening environmental risk management	O	Renewed pipes for hot spring water inside and outside Hishikari Mine. At smelting and refining business sites inside and outside Japan, monitored exhaust, carried out exhaust leakage prevention, boosted capacity for handling exhaust, and also improved dust control and other equipment.	Effectively improve infrastructure at each business site while leveraging RMS & EMS frameworks.

Contribution to Society and Local Communities

Vision for 2020: A company that earns trust and contributes to regional development through our business and social contribution activities rooted in each region

Goals and KPIs	Achievement Level*	Results	Future Issues
1. Communicate with local communities to recognize social issues in regions where we do business, and implement programs to support solutions to those issues			
	O	In activities to contribute to society, CBNC and THPAL used communication with local government bodies and communities to conduct diverse activities that range from improvement of social infrastructure to other projects involved with maintaining people's livelihoods.	Take further steps toward dialog and collaboration with NPOs and NGOs engaged in social issues, while linking those efforts to supporting development of the next generation, and supporting the elderly and people with disabilities. Also, with regard to initiatives currently being carried out, we must execute measures, such as publicizing them in our in-house bulletins, to further increase participation and sustain the initiatives going forward.
2. Provide support for the improvement of educational infrastructure and the maintenance and development of academic activities, culture, tradition, and art in the countries where we do business			
	O	Communicated with local government bodies about maintaining and preserving historical structures in the Besshi district and, where necessary, appropriately carried out efforts in cooperation with Sumitomo companies. Provided support for educational and other facilities through Social Development Management Program and CSR activities at CBNC and THPAL.	Continue scholarship programs in areas where we have overseas mines and continue advancing plans to set up and implement a domestic scholarship program in 2023.

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Goals and KPIs	Achievement Level*	Results	Future Issues
3. Provide support for recovery and reconstruction after large-scale disasters 1) Provide support taking into consideration the relationship between the affected area and SMM Group's business	O	<ul style="list-style-type: none"> Implemented suitable support in Japan for disasters according to disaster conditions and areas designated as serious disaster areas. Overseas, implemented disaster support mainly for serious natural disasters around areas where we do business. 	<ul style="list-style-type: none"> Natural disasters due to climate change are increasing in frequency and severity. We must assess our criteria, etc. related to disaster support. Current SMM disaster support is focused on donations; however, we also need to consider support through programs that involve employee participation.
2) Provide continuous support for the people and areas affected by the Great East Japan Earthquake	O	<ul style="list-style-type: none"> Continued to provide donations to scholarship funds for orphans in the three disaster-affected prefectures (Miyagi, Iwate, and Fukushima). At Sumiko Energy Materials Co., Ltd., in Naraha, Fukushima Prefecture, which started operating in April 2016, we contributed to the creation of employment in an area affected by the Great East Japan Earthquake. 	<ul style="list-style-type: none"> Continue to provide donations to scholarship funds in the three disaster-affected prefectures until 2031 (when children born during the disaster will reach age 20). Continue SMM support, mainly provided by Sumiko Energy Materials Co., Ltd., to help recovery in Naraha.

Respect for People and Human Rights

Vision for 2020: A company where diverse human resources exercise their ability sufficiently and take a vibrant and active part in each field
 A company that works with its stakeholders to strive for a society that actively respects human rights

Goals and KPIs	Achievement Level*	Results	Future Issues
1. A company where employees can take a vibrant and active part 1) Work satisfaction Make continual improvements based on the results of employee satisfaction surveys	O	We carried out the following measures based on results of the employee awareness survey. <ul style="list-style-type: none"> Expanded training on coaching, which started with business division heads and presidents of Group companies, to now include section managers. Provided feedback on employment environment surveys (employee interviews, etc.) conducted at 17 of 24 business sites in Japan by FY2019. 	<ul style="list-style-type: none"> Support employee activity by reassessing human resource-related programs. Switch to in-house implementation of training on coaching and provide the training to each business site. Review the current state of harassment incidents and communication challenges (as indicated in the employment environment survey) and assess the gap with our Vision for 2030, then consider and implement necessary measures.
2) Mental health ① Optimize the work environment through training and the reduction of overly long working hours	Δ	<ul style="list-style-type: none"> Since FY2016, total actual working hours have trended between 1,950 – 1,980 hr/year. Pushed forward various work-style measures (work-from-home program, flextime, expansion of optional staggered working hours, establishment of satellite offices, etc.). 	<ul style="list-style-type: none"> Further reduce long work hours. Eradicate harassment by further improving human rights awareness. Continue promoting initiatives such as enhanced support for life events, including child raising, nursing care, and receiving medical treatment.
② Reduce mental health afflictions in employees	Δ	<ul style="list-style-type: none"> Continued to offer employee stress checks by specialized institutions, as well as education from those institutions; however, the number of employees with mental health issues remained flat. 	<ul style="list-style-type: none"> Through initiatives to improve the aforementioned employment environment, continue countermeasures to steadily cut the number of employees struggling with mental health issues.
2. Respect diversity 1) Female employees promoted at SMM (domestically) ① Target number of female managers: 10 or more	O	<ul style="list-style-type: none"> Achieved the KPI with 11 female managers as of April 1, 2020. 	<ul style="list-style-type: none"> Continue support through training and exchange with women in different industries, as well as individual counseling. Continue to further enhance the awareness of supervisors and support growth for female employees.
② Target proportion of female employees in the recruitment of management track employees: 1/3	Δ	<ul style="list-style-type: none"> Number and ratio of new female graduates employed in 2020: 7 women, 22%. Employed 4 women in technology-related positions and, for the first time, exceeded a 20% ratio of female employees; however, we did not reach our target. 	<ul style="list-style-type: none"> Aim to increase hiring numbers through the following measures: <ul style="list-style-type: none"> Employment branding Roll out internships targeting women Evaluate and reassess measures for the active participation of female employees
2) Promote non-Japanese employees as key personnel	Δ	<ul style="list-style-type: none"> In accord with changes to corporate strategies, the globalization needs for each business division diverged, necessitating changes to hiring strategies. 	<ul style="list-style-type: none"> Each business division is addressing globalization in its own way; however, going forward, the response by the Head Office's Human Resources Development Department must be strengthened.
3) Employ people with disabilities Establish and achieve an internal target for the number of employees with disabilities in the Group domestically	O	<ul style="list-style-type: none"> Each business site and Group company in Japan created a 2020 action plan and SMM's employment rate for people with disabilities as of April 1, 2020 was 2.41%. 	<ul style="list-style-type: none"> Continue hiring activities and engage in efforts to normalize the employment of people with disabilities in the SMM Group by, for example, encouraging understanding of "reasonable accommodation" among supervisors and co-workers.
4) Establish a strategy and supportive framework as a means to facilitate initiatives 1 to 3 above	O	<ul style="list-style-type: none"> Established a framework for promoting diversity, strengthened support for each workplace and Group company, strove for an awareness transformation (through training seminars, workshops, etc.), and endeavored to improve the workplace environment. 	<ul style="list-style-type: none"> Continue strengthening and enhancing individual support tailored to the different knowledge, experience, and know-how of each site, Group company, and division.

Goals and KPIs	Achievement Level*	Results	Future Issues
3. Develop human resources 1) Continue the program for select employees after confirming the effectiveness of selective training initiatives	O	<ul style="list-style-type: none"> Continued implementing selective training, including the Executive Management Program for the general manager level and the Middle Management Program for section managers, and continued sending employees to outside training seminars. 	<ul style="list-style-type: none"> Reassess our programs for developing the next generation of management and clarify the positioning of selective training. Strengthen encouragement of supervisor involvement, effective placement of employees after training, and the like.
2) Develop broad-based training to boost the level of our workforce Provide training opportunities to all employees: 100% participation in training courses	O	<ul style="list-style-type: none"> Offered training for each group business site, established e-learning, set up web-based language learning, and reassessed correspondence education programs. 	<ul style="list-style-type: none"> Continue providing education and self-development programs that are user-friendly and popular with employees, while also using IT to enhance program formats.
3) Enhance training for locally hired executive managers overseas	O	<ul style="list-style-type: none"> Invited to Japan the upper management of Group overseas sites and continued annual Head Office training and training/observation tours in the Besshi district, Kyoto, and elsewhere. 	<ul style="list-style-type: none"> Enhance the content of training from the perspective of overseas sites and continue to provide training tailored to the needs of participants.
4) Conduct training to promote further support for female employees	O	<ul style="list-style-type: none"> Endeavored to create a transformation in awareness through training and exchange with women in different industries, in addition to offering the Career Coaching School for women, and other measures. Continued offering support by providing individual counseling, creating programs for employees on maternity/childcare leave, and other measures. 	<ul style="list-style-type: none"> Further engender awareness of fostering female employees by educating managers. Engender in female managers an awareness of becoming role models and fostering the next class of female managers. Continue discovering roles for female workers at production worksites.
4. Human rights Prevent major human rights infringements ① Hold regular education on the SMM Group Human Rights Policy: applicable to all workplaces in Japan and overseas	O	<ul style="list-style-type: none"> Adopted the SMM Group Policy on Human Rights at all Group companies and carried out human rights education every year at all sites. 	<ul style="list-style-type: none"> Enhance activities at each Group company and business site for the SMM Group Human Rights Month (December), which we started in FY2019.
② Establish human rights hotline (Speak Up System) (offering multiple means for reporting): applicable to all workplaces in Japan and overseas	O	<ul style="list-style-type: none"> Established a human rights and harassment hotline and the SMM Group direct hotline (Speak Up System). Every other year, carried out training for individuals in charge of the human rights and harassment hotline. 	<ul style="list-style-type: none"> In an easy-to-understand manner, communicate how to use the hotlines and what procedures follow a consultation; continue to build a framework that facilitates more user-friendliness for all Group employees.
③ Make employees aware of the SMM direct hotline (Speak Up System): applicable to all workplaces in Japan and overseas	O	<ul style="list-style-type: none"> Publicized the hotlines through electronic bulletin board postings and various training sessions. 	
④ Implement regular human rights due diligence (human rights DD) in three categories (employees, supply chain, local communities): once every 3 years	O	<ul style="list-style-type: none"> With regard to employees, we surveyed the human rights support structure at each business site through questionnaires (FY2016). With regard to local communities, we carried out a survey in the Hishikari district (FY2017). With regard to the supply chain, we conducted on-site interviews at four companies every year. 	<ul style="list-style-type: none"> Strengthen initiatives for the human rights of indigenous peoples. Enhance our human rights initiatives in our supply chain.

Occupational Health and Safety

Vision for 2020: A company that accords safety the highest priority and provides comfortable working environments

Goals and KPIs	Achievement Level*	Results	Future Issues
1. Ensure safety 1) Make our final target zero occupational accidents overall	X	<ul style="list-style-type: none"> The number of accidents in recent years has been about 15 per year (with one fatal accident each in 2017 and 2019). Made progress with reforms of safety consciousness in top management at sites through safety patrols and instruction for newly appointed site managers. Created supervisor guidelines and started following them in practice. Used the Anzen Dojo to promote safety activities involving frontline workers. 	<ul style="list-style-type: none"> Measures for promoting safer equipment that prevents severe accidents Promote equipment improvements through appropriate risk assessments. After improving equipment, strengthen our approach to "check, act, and follow-up."
2) Reduce occupational accidents to three or fewer per year by 2020 and establish frameworks for achieving this target (Applicable to all domestic Group employees)	Δ		<ul style="list-style-type: none"> Measures for engraining safer procedures in order to mitigate unsafe behavior Until full-fledged safety changes can be made, establish and thoroughly follow concrete rules addressing residual risks. Carefully observe workplaces using the "three realities principle" and keenly monitor work tasks. Thoroughly follow basic movements. Improve cumbersome work tasks.
3) Halve the frequency rate of occupational accidents by 2020 (Applicable to all domestic and overseas Group employees) Reduce the frequency rate from 1.28 (CY2011) to 0.60 (CY2020)	Δ	<ul style="list-style-type: none"> Occupational accident frequency rate (see p. 116) Sent safety officers to some overseas business sites and built frameworks for quickly gathering occupational accident information (on par with systems in Japan). Adopted hazard prediction training matching the on-site conditions at some overseas business sites. 	<ul style="list-style-type: none"> Voluntary initiatives in consideration of the unique problems and focus issues at each site

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Goals and KPIs	Achievement Level*	Results	Future Issues
2. Provide comfortable working environments 1) Provide healthy working environments ① Achieve zero new cases of employees with occupational disease (requiring treatment) (Applicable to all domestic and overseas Group employees)	O	<ul style="list-style-type: none"> In recent years, there have been no new cases of employees with abnormal findings (requiring treatment) indicated in health checkups. Every year, we survey employees with abnormal findings and continue to monitor any changes. 	<ul style="list-style-type: none"> Continue monitoring employees with abnormal findings indicated in health checkups. Continue to proactively improve Control Class 2 and 3 workplaces.
② Achieve zero Control Class 3 workplaces (excluding locations stipulated in guidelines, etc.) and reduce Control Class 2 workplaces (Applicable to all domestic business sites)	O	<ul style="list-style-type: none"> Control Class 3 workplaces In work areas with dust at Toyo Smelter & Refinery, equipment improvements are difficult; however, we achieved unmanned operations by installing cameras that monitor work processes. Control Class 2 workplaces We set management targets for each business site and started efforts to reduce the number of Control Class 2 workplaces. 	<ul style="list-style-type: none"> As with safety issues, clarify the matters indispensable to operations and continue acquiring the necessary environmentally friendly equipment. When increasing production or starting new production, establish countermeasures ahead of time in order to ensure a safe work environment. Continue gathering and sharing examples of best practices and improvement measures at business sites.

Stakeholder Communication

Vision for 2020: A company that works to communicate transparently with all worldwide stakeholders to deepen mutual understanding

Goals and KPIs	Achievement Level*	Results	Future Issues
1. Encourage deeper mutual understanding with employees 1) Continue conducting employee awareness surveys	O	<ul style="list-style-type: none"> Conducted 4 employee awareness surveys. Reviewed the target subjects of each survey and assessed the need for additional questions. 	<ul style="list-style-type: none"> Continue conducting surveys while reassessing targets and questions as needed in order to accurately understand trends in employee awareness.
2) Hold regular dialogues with workers' unions or representatives from employees	O	<ul style="list-style-type: none"> Surveyed the status of regular labor-management discussions in the SMM Group and confirmed that regular communication is taking place. 	<ul style="list-style-type: none"> Continue discussions and constructively giving feedback on business conditions and challenges when there are opportunities to meet employees, such as during briefings at the Head Office and at business sites.
2. Encourage mutual understanding with local communities and citizen groups 1) Continue regular meetings with local communities and participate in community activities	O	<ul style="list-style-type: none"> Although there are differences between each business site in the Group, we confirmed that the channels of daily communication are being maintained at each site. 	<ul style="list-style-type: none"> With regard to predicting emergencies and building frameworks for risk communication with local residents, we will consider and support approaches to communication focusing on model business sites.
2) Carry out cooperative activities with NGOs/NPOs	O	<ul style="list-style-type: none"> Met (twice a year) with environment and human rights NGO Friends of the Earth Japan (FOEJ) and, with regard to issues where we do business in the Philippines, as well as SMM Group initiatives, we continued dialogues that exchanged data and interpretations on both sides. 	<ul style="list-style-type: none"> Continue explaining Company initiatives through regular dialogues with FOEJ. Share FOEJ suggestions and advice not only with relevant internal departments, but also with suppliers; use that advice for activities including environmental protection, preventing human rights infringements, etc.
3. Encourage mutual understanding with shareholders and investors 1) Publish integrated reports and improve their content	O	<ul style="list-style-type: none"> Starting in 2015, we formed working groups in related departments to make preparations for publishing an integrated report, and in October 2016 we published our first integrated report on schedule. Incorporating revisions based on opinions received inside and outside the Company, the report has received a degree of acclaim, including commendations from outside the Company. 	<ul style="list-style-type: none"> The information disclosure demands on integrated reports, such as information on ESG investing and connections to the SDGs, are becoming more sophisticated and wide-ranging. Going forward, we will strengthen our editing structure and polish the content of our reports with a commitment to continuous improvement.
2) Promote dialogue with investors	O	<ul style="list-style-type: none"> The IR commitment of top management received a degree of acclaim from outside the Company. (2016: IR Grand Prix, Japan Investor Relations Association; 2019: selected for the 9th year in a row for Excellence in Corporate Disclosure, ranked number one in the Steel/Non Ferrous Metal category, The Securities Analysts Association of Japan) 	<ul style="list-style-type: none"> Continue to follow fair disclosure rules; continue to deepen dialogue on our initiatives and non-financial information—primarily with investors with medium- to long-term perspectives—focusing on our Vision for 2030 and SMM's sustainable growth story.
4. Encourage mutual understanding with other stakeholders	Δ	<ul style="list-style-type: none"> Publicized the Company to students and business people with corporate ads in newspapers and on bullet trains, through support for SDG-related forums, and through active PR efforts; however, SMM's low level of recognition and other factors meant that we did not communicate our true size to society. 	<ul style="list-style-type: none"> In FY2019, we established basic designs for the new brand image we will promote. In order to ensure that it is not a one-off initiative, we must roll out and share the brand-related PR tools to employees, as well as outside the Company, in a steady, impactful manner.

Vision for 2030

Effective Use of Non-Ferrous Metal Resources

Vision for 2030: A company that generates resources through high technological capabilities

Indicators	KPIs		Current Status	FY2020 Plans
	Goals	Goals		
1. 1) Advance copper mine projects	<ul style="list-style-type: none"> Strengthen production structure at JV mines to achieve and maintain copper production level of 300 kt/year from interests. Achieve steady copper production level by reinforcing exploration of surrounding and deep areas in JV mines, expanding mineral processing technology, and improving operations leveraging IoT and AI. 	<ul style="list-style-type: none"> Advance Phase 2 and later projects at the Quebrada Blanca Copper Mine 	<ul style="list-style-type: none"> Gathering information on the activities of JV mines through management committees and technical meetings. JV mine companies are thoroughly implementing COVID-19 countermeasures and preventing the spread of infection within mine areas. Expect to be able to keep the impact on copper production levels to a minimum. Construction of Phase 2 of the Quebrada Blanca Copper Mine is at 20% completion and has been suspended since March 31, 2020 due to COVID-19 pandemic response. 	<ul style="list-style-type: none"> Continue gathering information through management committees and technical meetings. Appropriately monitor the impact of the COVID-19 pandemic and decide on restarting the project. Even after restarting the project, taking appropriate risk measures due to fears of reoccurrence of the social unrest that broke out in October 2019.
	2) Acquire new superior copper and gold resources	<ul style="list-style-type: none"> Develop new mines for which we have operatorship 	<ul style="list-style-type: none"> Despite ongoing project appraisals, no projects have been unearthed that have reached the business evaluation stage. 	<ul style="list-style-type: none"> Aim to acquire additional copper interests while watching the progress of the three major resource projects (Cote Gold Mine, Phase 2 of the Quebrada Blanca Copper Mine, Sierra Gorda Copper Mine)
3) Improve productivity by introducing new technology	<ul style="list-style-type: none"> Promote remote operation and unmanned operation of heavy machinery and information infrastructure equipment inside and outside of the Hishikari Mine 	<ul style="list-style-type: none"> Surveyed applicable technology for Hishikari Mine and produced a road-map for equipment adoption. Determined area within the mine for developing communications infrastructure and tested adoption of Wi-Fi equipment. 	<ul style="list-style-type: none"> Consider and implement work improvements and increased efficiency by leveraging IoT and AI such as expanding communications infrastructure to cover the entire mine, introducing a remote monitoring system for mine wastewater treatment facilities, and adopting image recognition equipment utilizing AI in ore processing facilities outside of Hishikari Mine. 	
4) Advance nickel ore projects and improve productivity	① Nickel production: 150 kt/year ② Recovery rate compared to FY2018: +2%	<ul style="list-style-type: none"> Investment in Pomalaa Project was planned to be decided by the end of FY2019, however, due to various circumstances no decision on investment has been made. Yield at CBNC and THPAL remained mostly flat compared to FY 2018. 	<ul style="list-style-type: none"> Obtain permissions for Pomalaa Project, continue business negotiations with partners, and finalize the decision on investment. Aim to further increase yield at CBNC and THPAL by raising the leaching rate and improving processes. 	
2. 1) Develop technology to separate, stabilize and bleed off, and create value from impurities generated by smelting processes and mines	<ul style="list-style-type: none"> Develop technology to stabilize and bleed off impurities: Develop and demonstrate the process 	<ul style="list-style-type: none"> Participating in JOGMEC research since 2017 to reduce arsenic compounds brought into Japan as copper concentrate impurities. Within a consortium of 3 non-ferrous metals companies, we are advancing development of technology to separate arsenic. 	<ul style="list-style-type: none"> Summarize 3 years of JOGMEC research and implement a demonstration experiment using a pilot mineral processing facility at our Company based on arsenic separation technology obtained as a result of research. 	
	2) Develop technology to create value from unused non-ferrous metal resources	<ul style="list-style-type: none"> Contribute to existing (e.g. marine resource development) and new development projects) 	<ul style="list-style-type: none"> Participating in and achieving results in JOGMEC sea-floor resource development projects, such as a pilot test of excavating and ore lifting of sea-floor massive sulfide deposits and development cobalt-rich ferromanganese crust (CRC). 	<ul style="list-style-type: none"> Continue improving mechanisms for excavating and ore lifting of sea-floor massive sulfide deposits. Proceed with development of test equipment for excavating and ore lifting, and further improving mineral processing and smelting and refining technology of cobalt-rich ferromanganese crusts.
3) Recover non-ferrous metals from hard-to-process resources	<ul style="list-style-type: none"> Participate in business and technology for recovery of lithium from salt-lake water in the presence of high levels of impurities 	<ul style="list-style-type: none"> Developing a refining process for recovering lithium from salt-lake water using an inorganic adsorbent. 	<ul style="list-style-type: none"> Further improve performance of the adsorbent through a pilot test of lithium refining technology, and review and demonstrate the refining process. 	
3. Demonstrate and commercialize automobile secondary battery recycling technology	<ul style="list-style-type: none"> Demonstrate, commercialize, and expand scale of recycling technology that recovers cobalt from automotive lithium-ion batteries Commercialization: 2022 	<ul style="list-style-type: none"> Process development has been completed and a demonstration experiment at a plant is underway. 	<ul style="list-style-type: none"> Continue the demonstration experiment and obtain engineering data for designing a battery recycling unit. 	
4. 1) Leverage our strengths to create new products and new businesses that contribute to society	<ul style="list-style-type: none"> Research, develop, and commercialize new advanced materials in the fields of energy, automobiles, and information communications 	<ul style="list-style-type: none"> Advancing systems for creating new products and businesses in the Technology Division, Advanced Materials Division, and Battery Materials Division. 	<ul style="list-style-type: none"> Use new systems to advance: ① exploration of new themes, ② commercialization proposals of research and development themes, and ③ Vision Co-Creation Partnership with Tohoku University. 	
	2) Hold raw materials in-house for favorable and stable procurement	<ul style="list-style-type: none"> Commercialize NiO for fuel cells following demonstration project 	<ul style="list-style-type: none"> Started operation of pilot facilities in preparation for mass production of NiO for fuel cells in FY2019. 	<ul style="list-style-type: none"> Continue technological development and verification of equipment at the pilot facilities in preparation for mass production of NiO for fuel cells.
3) Expand sales of low-cost battery cathode materials through favorable, stable procurement of our own nickel raw materials	<ul style="list-style-type: none"> Maintain top class global share in the expanding cathode materials market 	<ul style="list-style-type: none"> Currently SMM has a top-class global share in battery materials, primarily NCA, and sales, mainly for electric vehicles, are growing every year. 	<ul style="list-style-type: none"> Aim to maintain a top-class global share by expanding sales of low-cost battery cathode materials through collaboration with the Non-Ferrous Metals Division, which has achieved cost reductions. 	

Climate Change

Vision for 2030: A company that actively undertakes climate change countermeasures, by reducing emissions and stably supplying products contributing to a low-carbon society, a future with zero greenhouse gases (GHGs)

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
Reduce GHG emissions	1. Keep total GHG emissions below that of FY2013 and formulate a plan to reduce our emissions to zero in the second half of the century	<ul style="list-style-type: none"> Total GHG emissions decreased in Japan as a result of converting the business structure of Harima Refinery (halting smelting and refining of zinc) but increased overseas due to THPAL becoming operational in 2014. Became TCFD supporter (February 2020). 	<ol style="list-style-type: none"> Promote projects investing in GHG emissions reductions <ul style="list-style-type: none"> Follow up on projects investing in GHG emissions reductions. Consider an internal carbon pricing framework. Consider awareness-raising activities at business divisions and sites. Gather and consider information on reducing GHG emissions (hydrogen, Carbon Capture, Utilization, and Storage, business conversion, innovative smelting and refining processes, etc.).
	2. Cut GHG emissions intensity by at least 26% compared to FY2013	<ul style="list-style-type: none"> With FY2013 set as 1, the GHG emissions intensity index for FY2018 was 0.92 (8% reduction). 	<ol style="list-style-type: none"> Advance GHG emissions intensity reductions through stable operations and increased production <ul style="list-style-type: none"> Strengthen operations management, prevent trouble, and increase production at divisions. Study and support adoption of technologies such as IoT, AI, and the Factory Energy Management System. Advance use of low-carbon energy <ul style="list-style-type: none"> Survey information on low-carbon energy technologies. Adopt renewable energy generation, storage batteries, LNG at divisions.
	3. Expand contribution of GHG reduction by products contributing to a low-carbon society: 600 kt-CO ₂ or more	<ul style="list-style-type: none"> In-house calculations show the amount of GHG reduction in society by our products increased from 3,800 t-CO₂ in FY2013 to 72,000 t-CO₂ in FY2018. 	<ol style="list-style-type: none"> Look into the definitions, certification systems, and standards of products contributing to a low-carbon society (examples of products contributing to a low-carbon society: battery materials, ink materials, copper metals). Look into and evaluate the methods of calculating contribution to reducing GHG emissions in society. Advance increased production of products contributing to a low-carbon society and the development of new products in divisions.

Significant Environmental Accidents Biodiversity

Vision for 2030: A company that values water resources and biodiversity, and protects the richness of the sea and land

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
1. Zero significant environmental accidents	1) Promote improvements through the use of risk management and environmental management systems	<ul style="list-style-type: none"> Improved facilities according to issues at business sites. In FY2019 we had zero significant environmental accidents, but we did have minor accidents. 	<ul style="list-style-type: none"> Smooth implementation of facility improvements to deal with issues at divisions. Strengthen the risk management system by registering risks and the environmental management system for items of environmental significance.
	2) Reinforce and improve equipment and infrastructure to address increases in sources of natural hazard	<ul style="list-style-type: none"> The following facilities and infrastructure have been reinforced or improved: <ul style="list-style-type: none"> Seismic strengthening and greening of tailings dams at closed mines. Reinforced mountainside waterways at THPAL. Reinforced the Hadeba, Niihama City wastewater treatment facility. 	<ul style="list-style-type: none"> Evaluate risks using scenario analysis and consider matters needing addressing. Strengthen and improve facilities and infrastructure for dealing with increased sources of natural hazards at divisions (tailing dams, mine wastewater treatment facilities, etc.).
2. Reduce emissions of hazardous substances (year-on-year)	1) Optimize water use; reduce emissions of hazardous substances to the atmosphere and water.	<ul style="list-style-type: none"> Various initiatives underway such as preventing excessive water withdrawal by promoting and strengthening management of recycling and reuse. 	<ul style="list-style-type: none"> Consider and set Group policy on optimizing water use. Strengthen measures to reduce emissions of hazardous substances to the atmosphere and water.
	2) Promote various environmental preservation and biodiversity preservation activities, such as regular reforestation	<ul style="list-style-type: none"> In the Philippines (CBNC, THPAL), regular reforestation is ongoing and the environmental impact in our portfolio companies and supply chain companies is being verified and risk mitigation measures undertaken. 	<ul style="list-style-type: none"> Continue to implement greening measures at CBNC and THPAL, and promote various environmental preservation and biodiversity preservation activities through communication with mine companies.

Employees' Occupational Health and Safety

Vision for 2030: A company where all employees work together with safety first the priority in a comfortable working environment as well as safe facilities and operations

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
1. Prevent occupational accidents	Serious accidents: zero (in Japan and overseas, including contractors). All accidents: reduce year-on-year, with aim of eventually zero.	<ul style="list-style-type: none"> Among all Group employees (in Japan and overseas), the number of injuries that resulted in absence from work was 11 in 2018 and 6 in 2019. These were serious accidents from facilities in an unsafe state and similar serious accidents from unsafe behaviors. 	<ul style="list-style-type: none"> Increase safety of facilities to prevent serious accidents (develop and use risk assessment guidelines, research and consider adoption of advanced technologies). Establish safer procedures through educating about, and giving instruction in, work observation methods. Thoroughly adopt basic and safe behaviors through education and instruction at the Ojikan Facility. Safety initiatives that capitalize on the unique character of each site.

Diverse Human Resources Development and Participation of Human Resources

Vision for 2030: A company where all employees can take a vibrant and active part

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
1. Promote working style reform and create workplaces that make use of digital technology, enabling diverse human resources to play vibrant and active roles	1) Improve scores for "Management by managers and superiors," "Appeal of job," and "Work environment" in employee awareness survey	<ul style="list-style-type: none"> The following issues were revealed by the 2019 employee awareness survey. Management by managers and superiors: indirect support; Appeal of job: sense of achievement in work; and Work environment: ambitious attitude. 	<ul style="list-style-type: none"> Consider and implement review of human resource-related systems from the perspective of supporting employees in playing vibrant and active roles.
	2) ① Number of female managers: 50 (SMM employees) ② Increase workplaces open to women and improve ratio of female employees (20% or higher at Japanese sites)	<ul style="list-style-type: none"> As of March 31, 2020, there were: ① 11 female managers, and ② 15.9% female employees. 	<ul style="list-style-type: none"> ① Dispatch females for training and exchange with women in different industries, conduct training for management track female employees. ② Conduct a survey into the range of workplaces open to women, particularly in production-side roles.
	3) Expand number of managerial track employees of foreign nationality	<ul style="list-style-type: none"> Considering directly employing Philippine management track employees. 	<ul style="list-style-type: none"> Establish a scheme for and try directly employing Philippine management track employees.
	4) Percentage of employees with disabilities: 3% or higher	<ul style="list-style-type: none"> Percentage of employees with disabilities was 2.4% as of March 31, 2020. 	<ul style="list-style-type: none"> Aim to promote understanding related to employing people with disabilities and to improve retention rates.
	5) Assign jobs and provide support matched to employees' life stages	<ul style="list-style-type: none"> Continued supporting childcare and nursing care. Support for employees undergoing medical treatment for illness to be considered in the future. 	<ul style="list-style-type: none"> Make childcare and nursing care support initiatives available to both male and female employees and ascertain the situation of employees undergoing medical treatment for illness and work to support them.
2. Support employees' mental and physical health	1) Halve the number of people found to require support in stress checks	<ul style="list-style-type: none"> 1) The number of people found to require support in stress checks in FY2019 remains within the standard range for data from all companies handled by the organization specializing in stress checks, however, the number is trending slightly upward. 2) Percentage of employees in our Group with abnormal findings indicated in health checkups was 60.6% in FY2018. 	<ul style="list-style-type: none"> 1) Analyze the causes of stress at each workplace based on the results of the FY2020 stress checks and consider measures for each. 2) Start health and productivity management initiatives.
	2) Percentage of employees with abnormal findings indicated in health checkups: 50% or lower		
3. Diversify opportunities to enhance the abilities of employees according to employee needs and work needs	1) Utilize one-on-one meetings that bring out the motivation and potential of every employee and boost the growth of subordinates through regular dialogues between superiors and subordinates	<ul style="list-style-type: none"> Started considering methods of implementing one-on-one meetings. 	<ul style="list-style-type: none"> Select business sites to test implementation, and look for best practices.

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
	2) Reconstruct the human resources development program (in-house education, external education, etc.) to provide opportunities to employees to enhance their abilities in line with their roles	• Considering revision of the development program for the next generation of management and seminars for newly promoted employees.	• Consider the timing and content of training in line with the restructuring of the human resource systems.
	3) Provide opportunities for self-development matched to each employee's life plans and needs (correspondence courses, online training, etc.)	• Analyze employee needs based on the status of applications for correspondence education and the like, and work to improve the content.	• Work to diversify employee self-development opportunities.

Engagement with Stakeholders

Vision for 2030: A company that is appreciated and understood to be the world leader in non-ferrous metals

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
1. Further penetrate our Group brand among employees	• Improve results of employee awareness survey (increase ratio of employees who feel pride in working at the Company)	• Establish a brand message, and, to embody this branding, revise the Company logotype and develop a brand tagline and logo. • Ratio of employees who responded in the 2019 employee awareness survey that they felt pride in working at the Company was 62%.	Development of basic branding approach • Thoroughly explain branding to those responsible for communication of Group policies. • Establish plan to roll out a basic branding design at business sites. • Register trademarks in Japan and overseas for basic branding designs. • Raise brand profile within the Group. • Establish plan of action to penetrate brand within the Group.
2. Ensure quality and quantity in communication of information at the level of "world leader in the non-ferrous metals industry"	• Earn a high reputation for the integrated report from outside the Company (including hearings with shareholders and investors, and improvements in questionnaire and evaluation results)	• Edit the integrated report with the aim of taking it to the next level, and ensuring it is easy to understand and highlights the unique character, strengths, and competitive advantages of the SMM Group. • SMM Group integrated report is ranked in the top 10 in Japan of the approximately 514 companies publishing integrated reports.	Strict selection of contents and reflection of recent trends • Rigorously narrow down content to that related to the 11 ESG-related material issues newly established in Vision for 2030. • Strengthen explanations of management strategies from a medium- to long-term perspective—from the past to the future. • Clearly define our Group value creation model. • Declare our commitment to our Vision for 2030 as a management issue.
3. Increase in recognition and understanding of our goal of "world leader in the non-ferrous metals industry"	Improvement in findings of surveys by external bodies (degree of recognition and understanding, etc.)	• Actively work to improve Company recognition via visual advertisements—in media such as The Nikkei newspaper—and via sponsorship of events. • Brand Japan 2019 recognition rankings: 28th of 30 companies in the Materials and Machinery category.	• Mass media advertising: year-round advertising in bullet trains, newspapers, and magazines; and short-term focused advertising, such as television advertisements, targeting business people. • Active public relations: propose themes related to topics of social interest and work to get effective articles published in the media.

Co-Existence and Mutual Prosperity with Local Communities

Vision for 2030: A company that contributes to regional development and earns trust as a member of the local community

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
Participate in local communities through dialogue and collaboration.	Accurately identify local issues through dialogues with local communities, and execute the following measures.	• While various proactive initiatives that contribute to society are implemented at Group business sites in Japan and overseas, the Head Office is not sufficiently aware of their content.	• Make progress recording examples of initiatives at business sites into a database and share the social issues of each location with the Head Office and each business site in Japan.
1. Support the local community via employee participation	• Implement employee participation programs (from 2023)	• Business sites are conducting clean up events and participating in events in their local communities, and many employees participate in disaster volunteer activities as individuals. No Group-wide initiatives are being implemented.	• Gather information on initiatives of other companies and consider programs suitable to the SMM Group. • Take actions to increase participation and ensure continuity of currently ongoing initiatives such as publicizing in in-house bulletins and so on.
2. Hire and procure locally	• Continually implement and assess of performance	• Employment and procurement situations at major business sites that impact local communities are being ascertained in a timely manner.	• Continue local hiring and local procurement that is currently ongoing and continue to confirm the details of these.
3. Support for nurturing of the next generation	1) Implement programs to nurture the next generation in collaboration with government, local bodies, NPOs, etc. (one or more times/year)	• Specific programs for nurturing of the next generation are currently being considered.	• Collaborate with government, local bodies, and NPOs, and ascertain the relevant issues and needs. • Gather information on initiatives of other companies and consider programs suitable to the SMM Group.

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
	2) Establish and award scholarships in Japan and maintain existing overseas scholarships (from 2023)	• Meetings are being held with trust banks and other companies about how to establish scholarships in Japan, and an appropriate way forward for the Group is being considered.	• Make progress with considering scholarships in Japan and with necessary steps towards establishment.
4. Support for people with disabilities and the elderly	• Implement programs to support people with disabilities and the elderly in collaboration with government, local bodies, NPOs, etc. (one or more times/year)	• Specific programs to support people with disabilities and the elderly are being considered.	• Collaborate with government, local bodies, and NPOs, and ascertain the relevant issues and needs. • Gather information on initiatives of other companies and consider programs suitable to the SMM Group.
5. Support during disasters	• Support regions affected by large-scale disasters	• Providing suitable support to disaster affected areas based on the disaster situation and whether it has been classified by the government as a major disaster. • Providing support to areas affected by major disasters overseas, particularly in the areas around our business sites.	• When a disaster occurs in the future we will continue with currently ongoing initiatives.

Rights of Indigenous Peoples

Vision for 2030: A company that understands and respects the traditions and culture of indigenous peoples

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
1. Understand indigenous peoples and their traditions and culture	• Percentage of SMM Group sites implementing in-house education: 100% by the end of FY2023	• July 2016 Invited Keiichi Omoto, emeritus professor of anthropology at the University of Tokyo, to give an in-house lecture on the Mamanwa tribe in the Philippines. • October 2018 Held in-house lecture on the initiative to support indigenous peoples by employees of the Community Relations Section of THPAL.	• Prepare for planned publication in FY2021 of pamphlets to educate Group employees on indigenous peoples.
2. Support initiatives that lead to respect for the traditions and cultures of indigenous peoples	1) Provide scholarships for indigenous peoples (continue existing initiatives) 2) Support indigenous people-related initiatives by NGOs, academic societies, etc.: one initiative or more each year	• While the Group runs scholarship programs for local residents of our overseas resource and non-ferrous metals sites, we have no scholarships targeting only indigenous peoples. • Receiving instruction and advice as appropriate from Keiichi Omoto, University of Tokyo emeritus professor, and other experts from a research group investigating the problems of indigenous peoples.	• Continue existing scholarship programs at overseas sites and gather information such as on the operational status of scholarship programs. • Gather information on appropriate initiatives related to indigenous peoples from experts on indigenous peoples and Group overseas business sites, and consider supporting initiatives where support is possible.

Human Rights in the Supply Chain

Vision for 2030: A company that undertakes responsible sourcing across the supply chain

KPIs		Current Status	FY2020 Plans
Indicators	Goals		
Promote responsible sourcing, particularly responsible mineral sourcing	1. Responsible mineral sourcing 1) Establish a responsible mineral sourcing management system in line with international standards by the end of FY2021 2) Zero mines or smelters and refineries complicit in child labor or other infringements of human rights in the supply chain	Advancing the following initiatives through collaboration between the CSR Department and business divisions. • Responding to LME position paper (copper and nickel). • Started work toward establishing systems for receiving third-party audits for cobalt. • Establishing and implementing a framework for rapid and accurate responses to responsible mineral sourcing templates (Conflict Minerals Reporting Template and Cobalt Reporting Template).	• Rapidly establish management systems related to responsible mineral sourcing and establish a framework to receive third-party audits, particularly for cobalt, through collaboration between the CSR Department and business divisions (Non-Ferrous Metals, Battery Materials, Advanced Materials). • Maintain a framework for rapid and accurate responses to responsible mineral sourcing templates (CMRT and CRT).
	2. Responsible sourcing 1) Business partners that have received and agreed with the SMM Group Responsible Sourcing Policy: 100% by the end of FY2030 2) Establish a responsible sourcing management system in line with international standards by the end of FY2024 3) Continue implementing due diligence (DD)	• Established Human Rights Subcommittee in August 2019. • After significant consideration by the Human Rights Subcommittee the SMM Group Responsible Sourcing Policy was established and launched on April 1, 2020.	• Complete adoption of the SMM Group Responsible Sourcing Policy at all Group subsidiaries. • Complete selection of business partners to roll out the Responsible Sourcing Policy in FY2020. • Hold lectures by experts for management-level staff related to responsible sourcing and in-house training for those responsible for sourcing. • Deploy the Responsible Sourcing Policy to selected business partners.