

**IR-Day 2022**

# **Sustainability Briefing**

December 22, 2022



**MINING THE FUTURE**

# Contents

## I SMM Group Corporate Philosophy

Takahiro Kanayama  
Director & Managing Executive Officer

## II Sustainability of the SMM Group

## III Actions for Carbon Neutrality

Shigeru Tsunekawa  
General Manager, Sustainability  
Department

## IV Actions for Business and Human Rights

## V Topics

Takanori Shimizu  
General Manager, Public Relations  
& Investor Relations Department

# SMM Group Corporate Philosophy

## I SMM Group Corporate Philosophy

Takahiro Kanayama  
Director & Managing Executive Officer

## II Sustainability of the SMM Group

## III Actions for Carbon Neutrality

Shigeru Tsunekawa  
General Manager, Sustainability  
Department

## IV Actions for Business and Human Rights

## V Topics

Takanori Shimizu  
General Manager, Public Relations  
& Investor Relations Department

# Corporate Philosophy and Sustainability Policy

## Corporate Philosophy

- Sumitomo Metal Mining Co., Ltd. (SMM), in accordance with the Sumitomo Business Spirit, shall, through the performance of sound corporate activities and the promotion of **sustainable co-existence with the global environment**, seek to make positive contributions to society and to fulfill its responsibilities to its stakeholders, in order to win ever greater trust.
- SMM shall, based on **respect for all individuals** and recognizing each person's dignity and value, seek to be a forward-minded and vibrant company.

## Sustainability Policy

- The Sumitomo Metal Mining Group is engaging in the resolution of business issues that will **contribute to the development of a sustainable society**, and is working to **improve both our sustainable growth as a business and our corporate value**.

## The Sumitomo Business Spirit

- **Sumitomo shall achieve strength and prosperity by placing prime importance on integrity and sound management in the conduct of its business.**

This means that we must value public trust and trusting relationships with others, and pursue the steady growth of business by making sincere effort and reliably delivering on whatever challenges we may face.

- **Sumitomo shall manage its activities with foresight and flexibility in order to cope effectively with the changing times. Under no circumstances, however, shall it pursue easy gains or act imprudently.**

Underlining the importance of being proactive and progressive, this calls for keeping a shrewd eye to catch the changing trends of society's needs with the changing times and take action—starting new businesses, scrapping old ones, or else—instead of resting on our existing business and falling into routine. It also means that we must, in all circumstances, refrain from unethically pursuing profits for immediate gains without thorough examination and consideration.

# Sumitomo DNA (2/3)

## Embodiment of Sumitomo's Corporate DNA

- **Technology:** Developed *Nanban-buki*, a novel smelting technique to separate silver from copper, and made it available to others in the same trade
- **Co-existence and mutual prosperity with local communities:**
  - Built trusting relationships with and contributed to the local community through the 283 years (1691-1973) of operation of the Besshi Copper Mine
  - Relocated smelting facilities to an uninhabited island in the Seto Inland Sea to alleviate damage caused by expanding air pollution in the time of modernization
  - Achieved zero emission of sulfur dioxide, putting an end to the 47 year-long air pollution problem ahead of the rest of the world



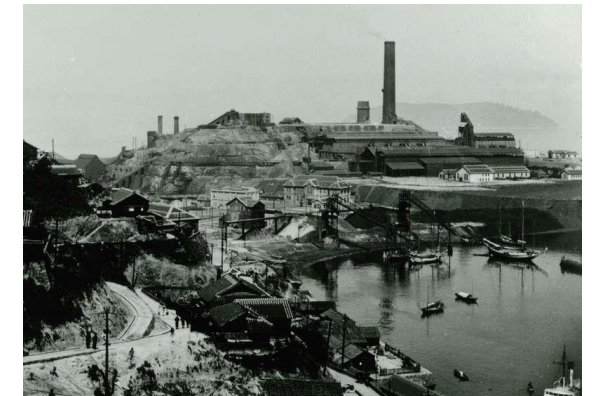
Nanban-buki (Kodo Zuroku)



Sumitomo Tonaru Private  
Elementary School



Sumitomo Besshi Hospital,  
Tonaru Branch



Shisaka Island  
Smelter



# Sumitomo DNA (3/3)

## Embodiment of Sumitomo DNA

- The forest once devastated by mining has been restored at the site of the Besshi Copper Mine with up to 2 million trees planted per year over some 40 years from 1899.



Besshi Copper Mine in 1881  
Photo courtesy of Sumitomo Historical Archives



Site of the Besshi Copper Mine viewed from the same angle today

# Sustainability of the SMM Group

I SMM Group Corporate Philosophy

Takahiro Kanayama  
Director & Managing Executive Officer

II Sustainability of the SMM Group

III Actions for Carbon Neutrality

Shigeru Tsunekawa  
General Manager, Sustainability  
Department

IV Actions for Business and Human Rights

V Topics

Takanori Shimizu  
General Manager, Public Relations  
& Investor Relations Department



# Long-term Vision

**As the world leader in the non-ferrous metals industry we are aiming to:**

- Have a global presence in terms of mineral resource interests and metal production volumes (= be in the global top five)
- Have leading technology and a unique business model that cannot be easily emulated by other major mineral resource companies
- Grow sustainably and stably produce a certain amount of profit
- Actively tackle social issues such as the SDGs
- Have employees work with spirit

**Long-term vision**

**World leader in the non-ferrous metals industry**

**Vision for 2030**  
(Business management challenges)

**Vision for 2020**  
(ESG challenges)

**Corporate value**

**Growth potential**

**Sustainability**

**SMM Group Corporate Philosophy**

**SMM Group Management Vision**

# Material Issues in Achieving Our Vision for 2030

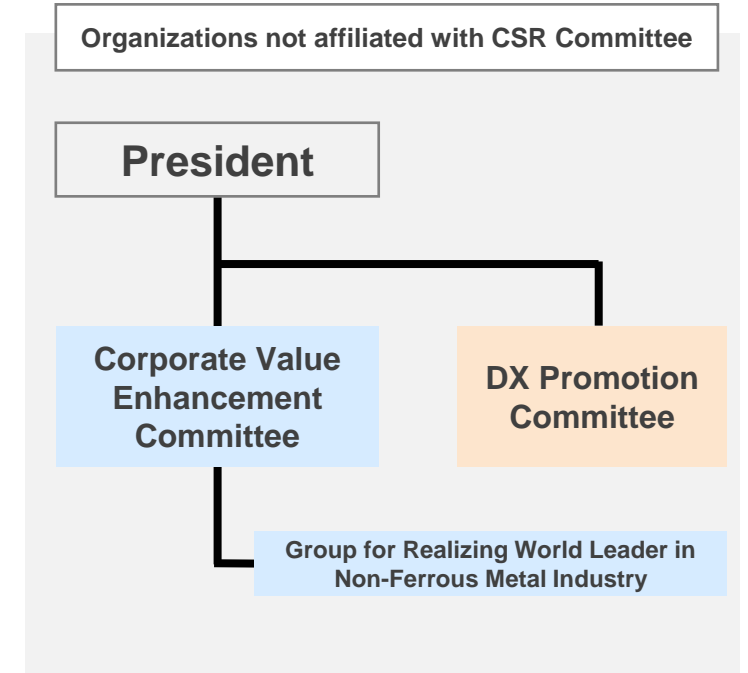
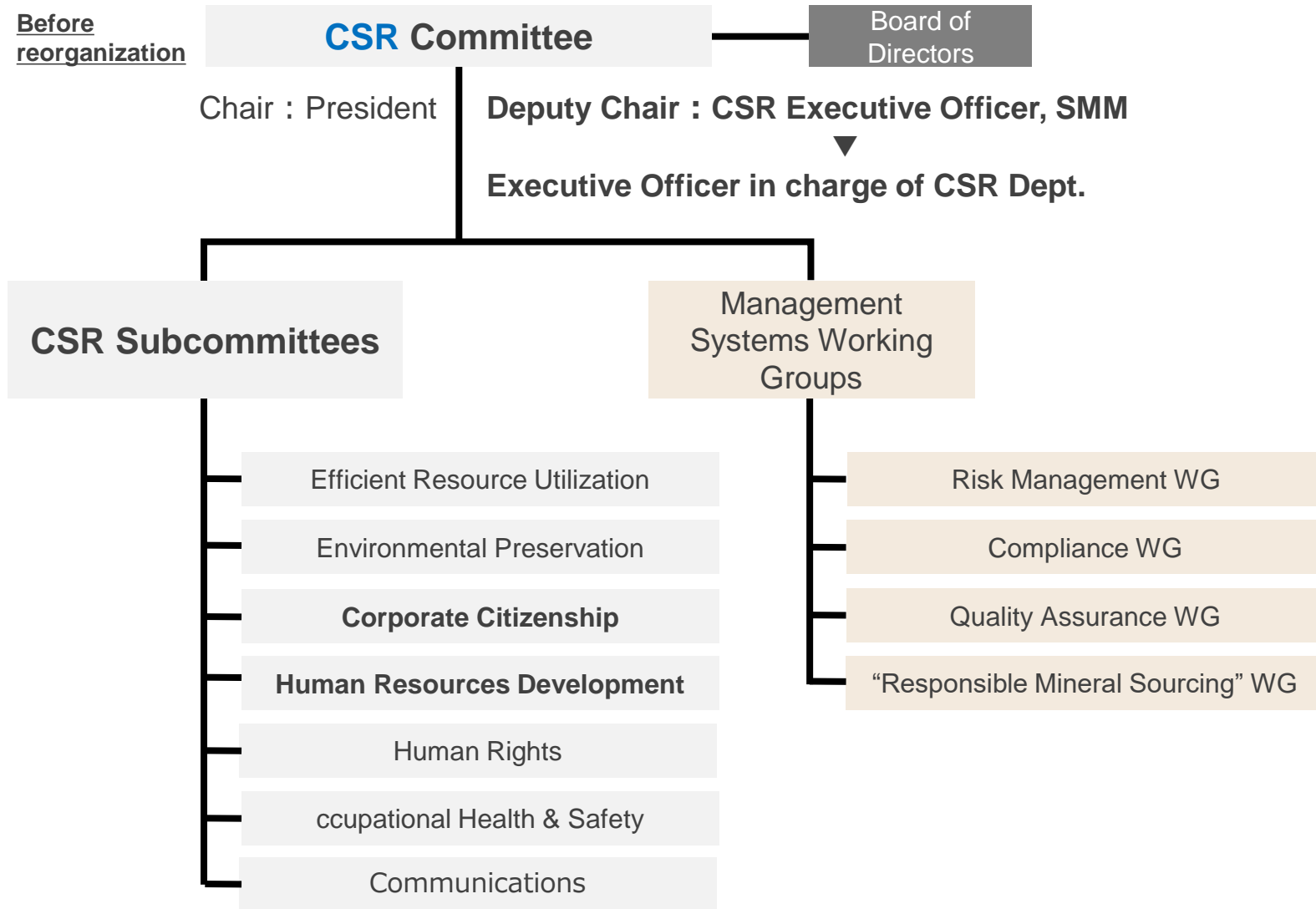
## Material issues for the SMM Group

Issues with a potentially material impact on both society and our business

1	Effective use of non-ferrous metal resources	7	Development and participation of human resources
2	<b>Climate change</b>	8	Engagement with stakeholders
3	Significant environmental accidents	9	Co-existence and mutual prosperity with local communities
4	Biodiversity	10	Rights of indigenous peoples
5	Employees' occupational health and safety	11	<b>Human rights in the supply chain</b>
6	Diverse human resources		

# Changes to the Organizational Structure for Sustainability

Before reorganization



# Changes to the Organizational Structure for Sustainability

After reorganization

## Sustainability Committee

Board of Directors

Chair : President

Deputy Chair : Sustainability Executive Officer, SMM

Executive Officer in charge of Corporate Planning Dept.



Newly established committees and subcommittees

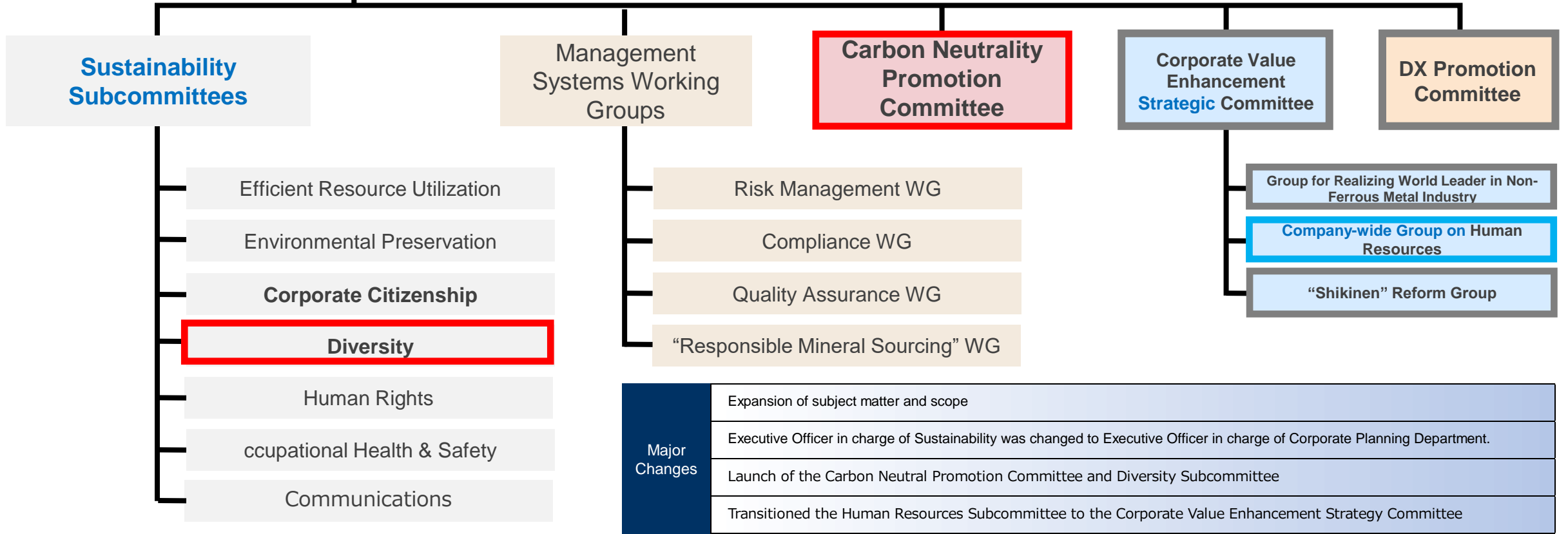


Transition to Corporate Value Enhancement Strategic Committee



Transition to Sustainability Committee

Note : The names in blue have been changed.



Major Changes	Expansion of subject matter and scope
	Executive Officer in charge of Sustainability was changed to Executive Officer in charge of Corporate Planning Department.
	Launch of the Carbon Neutral Promotion Committee and Diversity Subcommittee
	Transitioned the Human Resources Subcommittee to the Corporate Value Enhancement Strategy Committee

# Actions for Carbon Neutrality

I SMM Group Corporate Philosophy

Takahiro Kanayama  
Director & Managing Executive Officer

II Sustainability of the SMM Group

**III Actions for Carbon Neutrality**

Shigeru Tsunekawa  
General Manager, Sustainability  
Department

IV Actions for Business and Human Rights

V Topics

Takanori Shimizu  
General Manager, Public Relations  
& Investor Relations Department



# Initiatives for Carbon Neutrality (1/2)

## Vision for 2030 and KPIs

- **Climate change**

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 (Targets to be achieved in FY2030 (April 2030 – March 2031))**

1. Keep GHG emissions at or below the FY2013 level, develop a roadmap to reach net zero by 2050, and implement relevant measures
2. Reduce GHG emission intensity by at least 26% compared to FY2013
3. Make a greater contribution to reducing GHG emissions through low-carbon products: 600,000 ton-CO<sub>2</sub> or more

➤ See “Integrated Report 2022 (P92-P93)” for disclosure in line with TCFD recommendations.

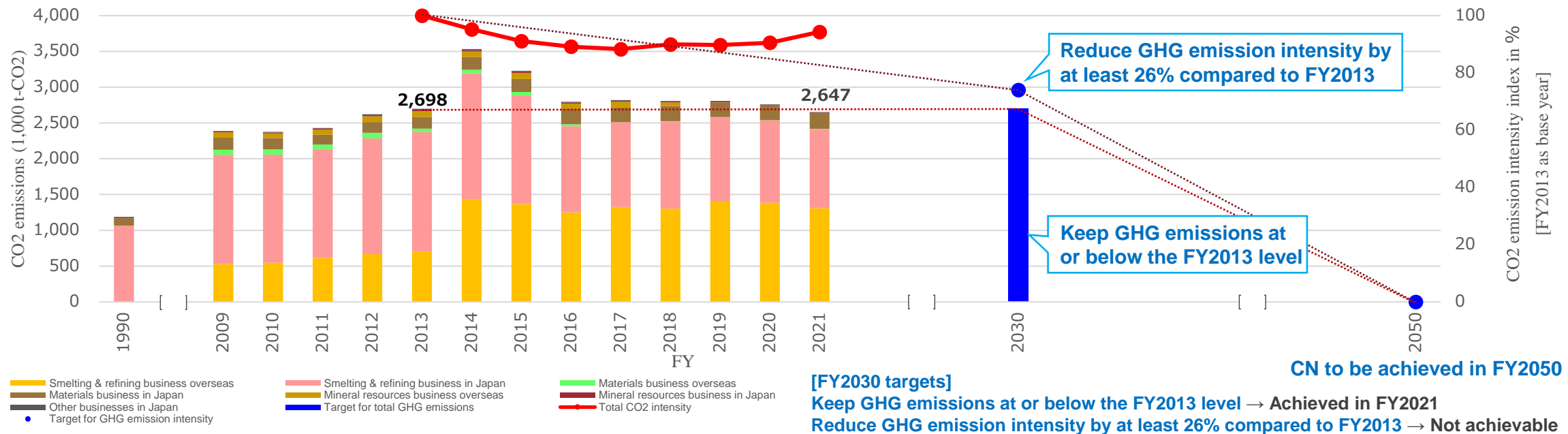
# Initiatives for Carbon Neutrality (2/2)

- Scope 1 & 2 targets: Difficult to achieve on a business-as-usual trajectory
- Make an active effort to contribute to reducing society-wide GHG emissions through the provision of low-carbon products, etc.



- Launch of the Carbon Neutrality Promotion Committee
- Accelerate GHG emissions reduction efforts through four approaches
- Disclose Scope 3 emissions starting from this year

CO2 Emissions and Emission Intensity: Changes over time and targets



# Four Approaches to Carbon Neutrality (1/6)

## Approach 1: Reduce CO2 emissions from production processes

- Energy conservation: Replacing existing facilities with highly efficient ones and improving production processes
- Energy transition: ex) Shift to LNG, electrification, hydrogenation, methanation
- Utilization of external technology, business, and policy programs: ex) Use of renewable energy as a main energy source

## Take full advantage of the internal carbon pricing (ICP) scheme to accelerate CO2 emissions reduction efforts

### [Examples of applicable projects using the ICP scheme]

- Toyo Smelter & Refinery: Switch fuel for some heat supply facilities from heavy oil to LNG (Slated for completion in sequence from FY2023 through FY2025)
- Niihama Nickel Refinery: Switch boiler fuel from heavy oil to LNG (Commenced in FY2021 and slated for completion in FY2023)
- Harima Refinery: Switch 100% of purchased electricity to renewable electricity (Completed in FY2022)
- Coral Bay Nickel Corporation (CBNC): Shift to coal and woody biomass cofiring for boilers (Under trial operation)

# Four Approaches to Carbon Neutrality (2/6)

- Reductions achieved and planned by our smelting & refinery business (at 8 locations), which accounts for some 90% of our total Scope1 and 2 emissions

	Number of projects	CO2 emissions reduction effect*	
Applicable projects with ICP	21	70,000 t-CO2/year	129,000 t-CO2/year
Applicable projects without ICP	55	59,000 t-CO2/year	

\* CO2 emissions reductions expected to be ultimately achieved by projects completed in FY2021 and those with **definitive plans** for implementation before FY2023. For some projects, the expected reduction effects will fully materialized in FY2024 or later.



Toyo Smelter & Refinery



Niihama Nickel Refinery



Harima Refinery



CBNC

We will continue to make vigorous efforts to further reduce CO2 emissions by exploring potential projects, fleshing out plans, and incorporating them into investment and improvement projects for implementation in FY2023 onward.

# Four Approaches to Carbon Neutrality (3/6)

## Approach 2: Develop low-carbon products (600,000+ t-CO<sub>2</sub>/year in FY2030)

- Battery cathode materials for vehicles
- Near infrared ray absorbing materials (For automotive glass) >> **Contributed to reduce 420,000 t-CO<sub>2</sub>/year in FY2021**



Cathode material: Nickel-Cobalt-Aluminum Oxide (NCA)



Cathode material: Nickel Hydroxide



Near infrared ray absorbing materials



Electric vehicle (EV)



# (Reference) Our Low-Carbon Products

## Near infrared ray absorbing materials (CWO and LaB6)

- Materials with an excellent ability to selectively absorb near infrared rays while allowing high transmission of visible light
- Their use as materials for windows effectively can block energy from the near infrared rays of sunlight while keeping sufficient brightness, having an effect of significantly preventing a rise in the room temperature



## Application examples

- Prevent a rise in the temperature inside a **greenhouse for farming**
- Keep a comfortable room temperature inside a **large-glass-windowed building**
- Block heat rays while letting light into a **roof of football stadium**
- Enabling the development of fiber with various functions—such as generating heat from sunlight, preventing voyeurism by blocking near infrared rays—for use in **clothing**

## X-MINING (cross-mining)

“X-Mining (cross-mining)” refers to a new form of co-creation derived from SMM’s corporate DNA with an eye to the future. We aim to “mine” new values that have an impact on society by “crossing” our products with your ideas (co-creation) . See the website below for details.

**WEB**

<https://crossmining.smm.co.jp/>

# Four Approaches to Carbon Neutrality (4/6)

## Approach 3: Ensure a stable supply of non-ferrous metals

- A stable supply of non-ferrous metals, which are indispensable in some leading edge industries manufacturing renewable energy equipment, electric vehicles, etc., is becoming ever more important in moving toward carbon neutrality.
- Non-ferrous metal smelters and refiners are playing a critical role in supply chains, supplying high quality metal as well as recovering and recycling rare metals.

<u>Systems / fundamental technologies</u>		<u>Key mineral resources required</u>	
<b>Renewable energy unit</b>	Power generation and rechargeable batteries	Wind power	<b>Copper</b> , aluminium, rare earths
		Photovoltaic	Indium, gallium, <b>selenium</b> , <b>copper</b>
		Geothermal	Titanium
		High-capacity rechargeable batteries	Vanadium, lithium, <b>cobalt</b> , manganese, <b>copper</b>
<b>Automotive unit</b>	Rechargeable batteries, motors, etc.	Lithium-ion batteries	Lithium, <b>cobalt</b> , <b>nickel</b> , manganese, <b>copper</b>
		All-solid-state batteries	Lithium, <b>nickel</b> , manganese, <b>copper</b>
		High-performance magnets	Rare earths
		Fuel cells (electrodes, catalyst)	<b>Platinum</b> , <b>nickel</b> , rare earths ( <b>scandium</b> )
		Hydrogen tanks	Titanium, niobium, <b>zinc</b> , magnesium, vanadium

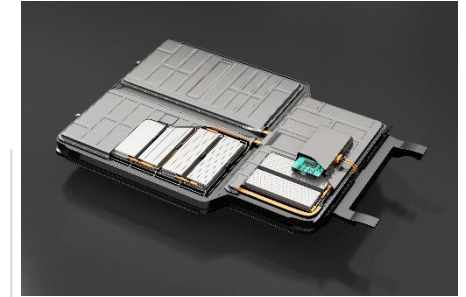
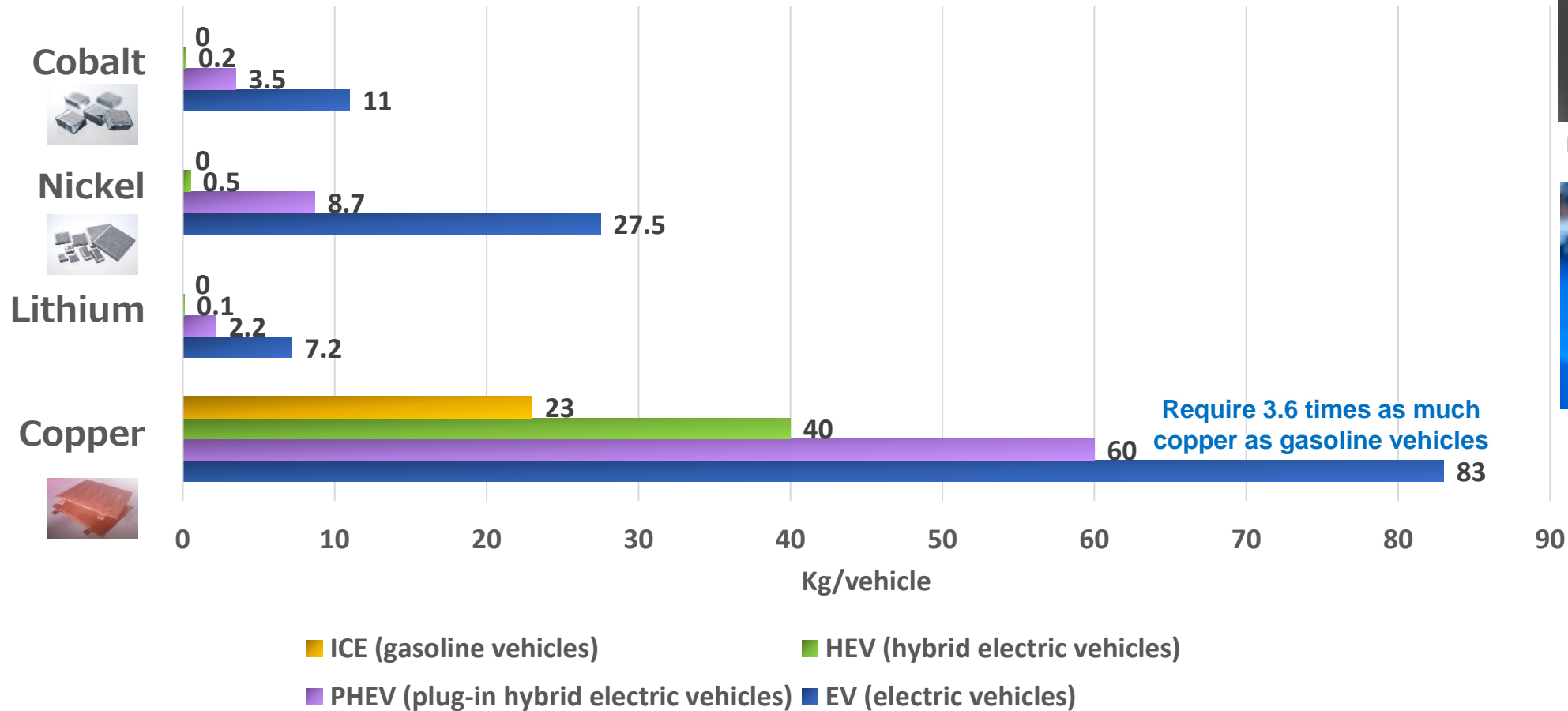


Source: Agency for Natural Resources and Energy, "2050-nen Kabon Nyutoraru Shakai Jitsugen ni Muketa Kobutsu Shigen Seisaku [Mineral Resources Policy Toward Achieving Carbon Neutrality by 2050]"  
[https://www.meti.go.jp/shingikai/enecho/shigen\\_nenryo/kogyo/pdf/007\\_03\\_00.pdf](https://www.meti.go.jp/shingikai/enecho/shigen_nenryo/kogyo/pdf/007_03_00.pdf)

**Materials indicated in blue are produced by the SMM Group**

# Four Approaches to Carbon Neutrality (5/6)

## Use of metals in vehicles (kg/vehicle)



Recharge batteries for vehicles



Wire harnesses



Automotive motors

Source: Agency for Natural Resources and Energy, "2050-nen Kabon Nyutoraru Shakai Jitsugen ni Muketa Kobutsu Shigen Seisaku [Mineral Resources Policy Toward Achieving Carbon Neutrality by 2050]"  
[https://www.meti.go.jp/shingikai/enecho/shigen\\_nenryo/kogyo/pdf/007\\_03\\_00.pdf](https://www.meti.go.jp/shingikai/enecho/shigen_nenryo/kogyo/pdf/007_03_00.pdf)

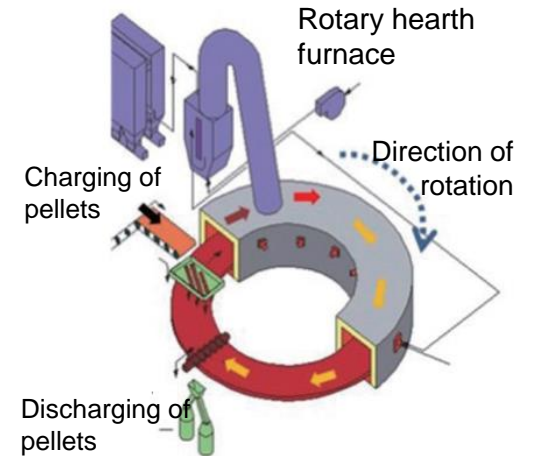
# Four Approaches to Carbon Neutrality (6/6)

## Approach 4: Develop innovative technology to support decarbonization

- Develop smelting technology that can help reduce GHG emissions

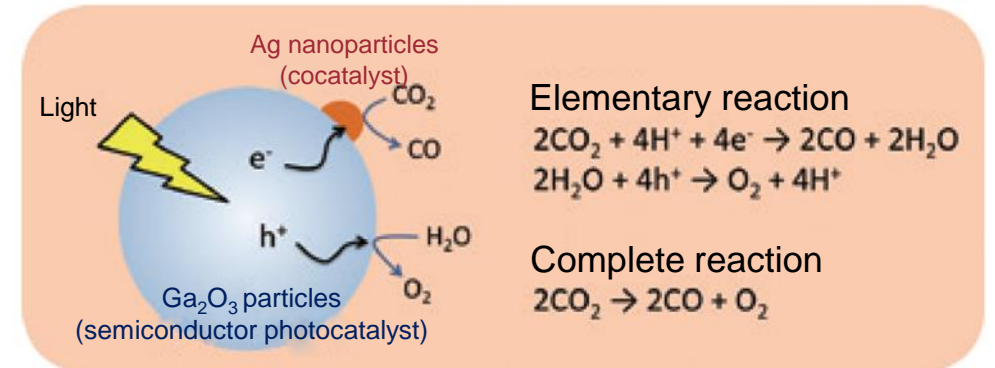
[Copper] e.g. Hydrogen reduction technology (reduction in coke use)

[Nickel] e.g. Next-generation nickel smelting process  
(rotary hearth furnace)  
Hydrogen reduction technology  
CO<sub>2</sub> fixation technology



- Develop novel materials and technologies that can help reduce GHG emissions

- Photocatalyst materials for CO<sub>2</sub> reduction
- Photocatalyst materials for water splitting to produce hydrogen
- Cathode materials for all-solid-state batteries
- Lithium extraction (direct extraction from salt lake brine)
- Tohoku University GX Materials Science Co-Creation Research Center is also utilized



Mechanism of photocatalytic CO<sub>2</sub> reduction

# Actions for Business and Human Rights

I SMM Group Corporate Philosophy

Takahiro Kanayama  
Director & Managing Executive Officer

II Sustainability of the SMM Group

III Actions for Carbon Neutrality

**IV** Actions for Business and Human Rights

Shigeru Tsunekawa  
General Manager, Sustainability  
Department

V Topics

Takanori Shimizu  
General Manager, Public Relations  
& Investor Relations Department

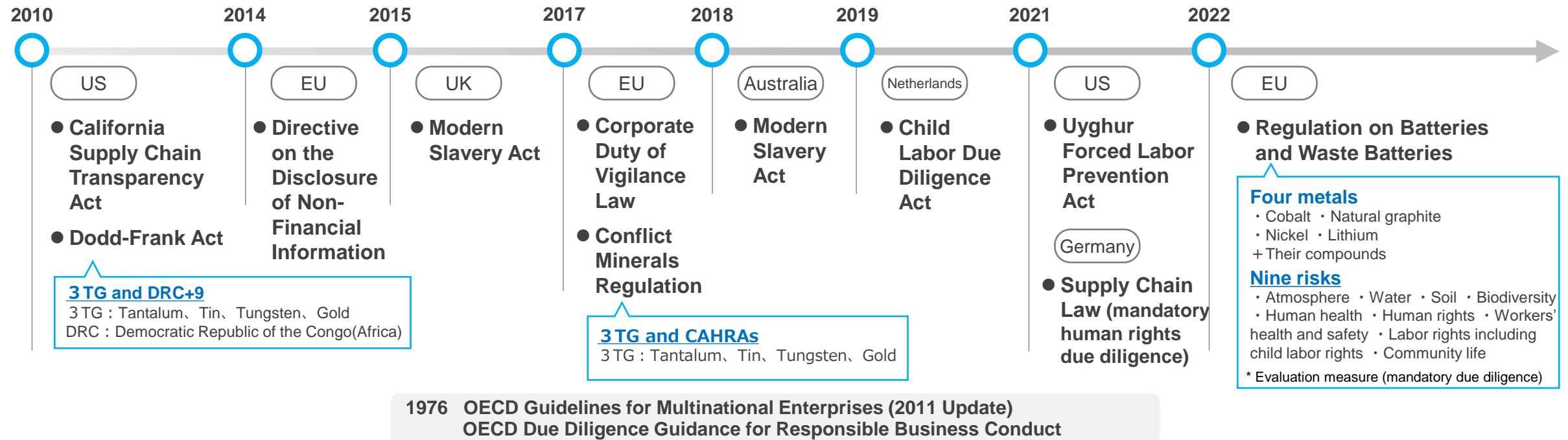


# Revision of the SMM Group Human Rights Policy

Need to make a clear commitment to human rights and respond to developments in international rules and regulations from the viewpoint of business and risk management

Human rights policy revised in June 2022 in line with the UN Guiding Principles on Business and Human Rights

## Regulatory developments on human rights in the US and Europe



# Human Rights in Supply Chains (1/5)

## Conflict affected and high-risk areas (CAHRAs):

Companies are required to identify CAHRAs based on objective measurements, and carry out intensive due diligence in importing minerals from those areas. The EU published a global map of CAHRAs in 2020.

**GLOBAL MAP**

**Mexico**

- Baja California
- Chihuahua
- México
- Michoacán de Ocampo

**MEXICO**

<b>REGION(S)</b>	Baja California
<b>AREA STATUS</b>	Conflict-affected area
<b>RELEVANT COMMODITIES</b>	Gold, Tantalum and Niobium, Tungsten

**Overview of assessment**

Mexico is characterised by the presence of conflict-affected areas relevant to Regulation 2017/821. These include Baja California, Chihuahua, Colima, Guanajuato, Jalisco, México, Michoacán de Ocampo, San Luis Potosí, Sinaloa, and Zacatecas.

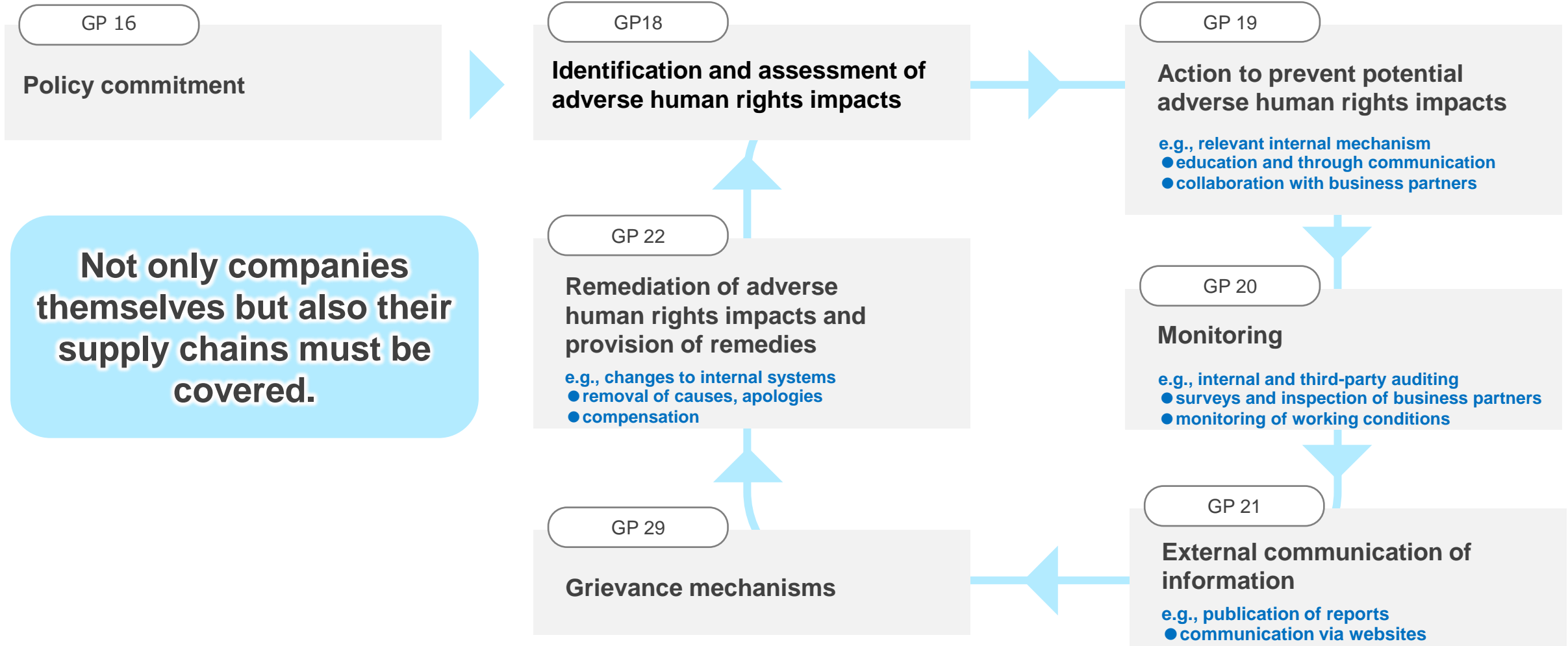
Violence in Mexico is primarily connected to drug-trafficking organisations (DTOs) and cartels. A variety of

The boundaries, names and designations on this website's maps do not imply endorsement or acceptance by RAND Europe or the European Commission.

<https://www.cahaslist.net/>

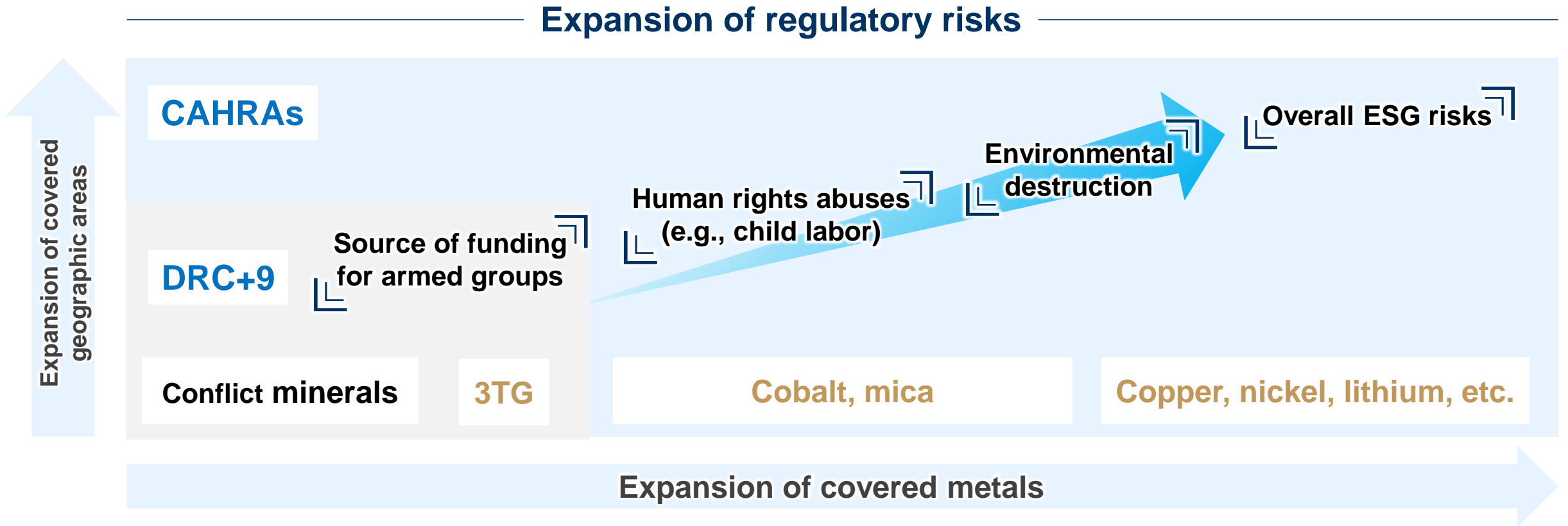
# Human Rights in Supply Chains (2/5)

## Due diligence structure and examples of measures under the UN Guiding Principles on Business and Human Rights



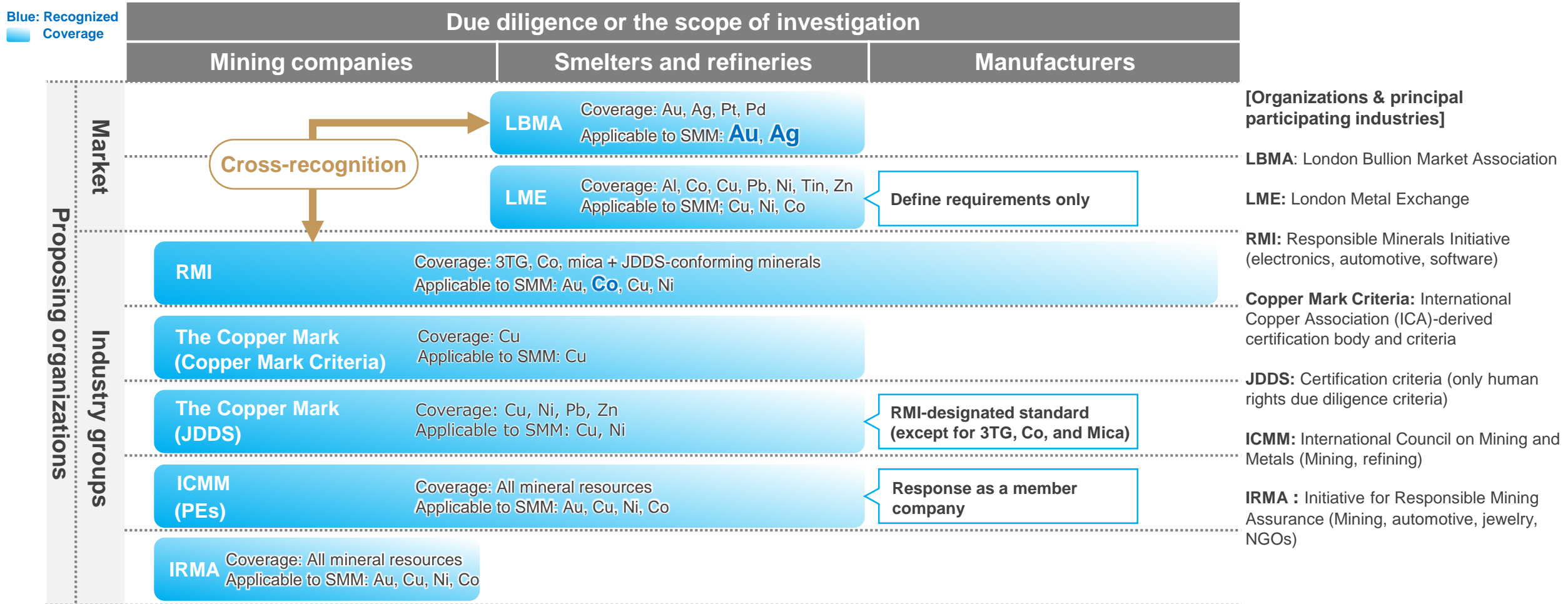
# Human Rights in Supply Chains (3/5)

Regulatory risks are expected to continue to grow as the scope of covered geographic areas and metals expands



# Human Rights in Supply Chain (4/5)

Rules of human rights due diligence are in a transitional stage to standardization with various organizations proposing criteria and guidelines





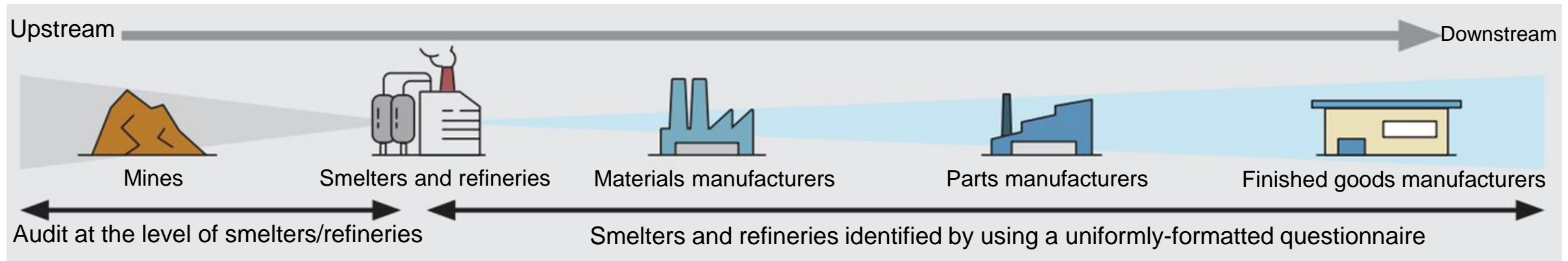
# Human Rights in Supply Chains (5/5)

## Participation in international initiatives

Growing calls on companies to comply with the Responsible Minerals Assurance Process (RMAP) established by the Responsible Minerals Initiative (RMI)\*

**Split a supply chain into two segments (upstream and downstream) at smelters/refineries, which are relatively small in number, to enable efficient assessment**

Audits of smelters/refineries must be performed based on RMI-approved standards (RMI, JDDS)



### Note: Responsible Minerals Initiative (RMI)

An international initiative on the responsible sourcing of minerals, founded in 2008 by members of the Responsible Business Alliance (RBA), an industry coalition promoting a common code of conduct in the world's electronics industry. Currently, some **400 companies** from diverse industries—including electronics, automotive, aviation, and software—are participating in the initiative.

**I** SMM Group Corporate Philosophy

Takahiro Kanayama  
Director & Managing Executive Officer

**II** Sustainability of the SMM Group

**III** Actions for Carbon Neutrality

Shigeru Tsunekawa  
General Manager, Sustainability  
Department

**IV** Actions for Business and Human Rights

**V** Topics

Takanori Shimizu  
General Manager, Public Relations  
& Investor Relations Department

# Renewal of the Head Office

## A work environment that facilitates innovation

- Following the renewal of the sixth floor of the Head Office building completed in November 2021, **the renewal of the entire office areas is slated for completion by March 2023**
- In a bid to realize new ways of working, the renewed office will be equipped with various features and functions designed to enable employees to work in a safe, secure, and healthy environment, enhance communication and productivity, and promote diverse and self-disciplined ways of working.
- We will develop a mechanism for facilitating innovation by promoting cross-boundary communication and collaboration among employees, and thereby increasing opportunities for them to fuse various pieces of knowledge, discover new values, and run into insightful ideas.
- As exemplified by “DX Salon\*1” and “ACROSS\*2,” **cross-boundary communication is already beginning to take place.**
- In addition to enhancing the physical working environment, we are also **working to foster and instill an open and freewheeling organizational culture.**

### \*1 DX Salon:

A forum for information sharing launched with the renewal of the Head Office to promote productivity, self-disciplined ways of working, and active communication.

### \*2 ACROSS:

Coined word, derived from the acronym of “Accelerate Co-creation Roundly Over the Sections in Sumitomo Metal Mining,” referring to a forum for employees to better understand each other



Multi-purpose community area



Open meeting space



Space for concentration



Online meeting / phone booths

# A New Company Dormitory at Besshi (Niihama/Saijo, Ehime Prefecture)

**Foster and secure young manpower by facilitating the growth of employees and co-creation at our core manufacturing base**

- Construction of a new company dormitory with 259 rooms completed in September 2022
- A studio apartment style dormitory to accommodate comfortable private time
- Equipped with communal spaces to facilitate communication among employees
- Offer an environment where new employees can spend their critical onboarding period with a sense of security
- Featured in various local media (including TV programs)
- Expected to help improve the general impression of working for a local employer



# New Corporate Advertising and Brand Promotion

Aim to attract more employee candidates by raising the profile of our company through advertising on TV, newspaper, transportation, online media, etc.

ずっとやるんだ。

- Feature Toma Ikuta as a corporate image character (SMM's first ever attempt to use an actor for corporate advertising)
- Key advertising message: “*Zutto Yarunda*” (Our history continues)  
This expresses our commitment, as a company with more than 430 years of history, to continuing to move forward with an eye to the future.

# Disclaimer

---

The materials provided herein are not intended as disclosure materials under the Financial Instruments and Exchange Act of Japan. We provide no guarantee as to their completeness or accuracy.

Any projections included in these materials are based solely on information available at the time of this briefing, and are subject to change based on market conditions, competition conditions, and a number of other factors.

We therefore ask you not to make any investment decisions based on these materials alone. We will not be held responsible in any way for any losses that may arise as a result of the use of these materials.

All copyrights, trademarks, and intellectual property rights attached to these materials are the sole property of Sumitomo Metal Mining Co., Ltd.

Sumitomo Metal Mining Co., Ltd.





<https://www.smm.co.jp/en/>

