

Expectations and Prospects for Sustainable Chemistry: Exploring Future Directions Together in EU and Japan

Thursday 19 February 2026, 16:30–18:00 Tokyo (8:30–10:00 Brussels)

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Opening remarks by Manuel Hubert, EU-side Managing Director, EU-Japan Centre for Industrial Cooperation:

This webinar, part of Japan-EU Competitiveness Alliance, focuses on enhancing the sustainability and competitiveness of the chemical sector. It examines policy measures and initiatives by both regions to support the transition toward carbon neutrality by 2050, including Japan's GX initiatives and the EU's Green Agenda. Experts from the public and private sectors discuss key challenges, particularly maintaining competitiveness while advancing sustainability. The session also highlights technological innovations for carbon reduction and features industry perspectives on achieving sustainable chemistry.

Presentation by Hiroshi Tsuchiya, Director, Materials Industry Division, Ministry of Economy, Trade and Industry:

Japan's materials industry (including chemicals) is a core sector, ranking second only to the automotive industry in terms of number of establishments, employees, and shipment value. Strengthening international competitiveness is therefore a key priority. Against the backdrop of expanding markets such as ethylene and semiconductors, further growth in high-value functional materials—where Japan has strong advantages—is expected, alongside the need to enhance competitiveness in basic materials and reinforce the resilience of the overall supply chain. At the same time, the chemical industry accounts for a significant share of CO₂ emissions within the manufacturing sector, making it essential to pursue emission reductions while maintaining competitiveness.

To address these challenges, under the GX (Green Transformation) Basic Policy, Japan is advancing measures such as the introduction of an emissions trading system, the formulation of sector-specific investment strategies, and support for technological development. Through initiatives such as the Green Innovation Fund and large-scale investment support, efforts are underway to promote chemical recycling, biorefineries, and the development of CO₂-derived products, while facilitating fuel switching and transformation of production processes. In addition, institutional reforms are being implemented to encourage inter-company collaboration, including revisions to antitrust guidelines, visualization of carbon footprints, and expansion of green procurement.

Furthermore, GX is being promoted at the regional level through initiatives such as industrial complex revitalization and the use of decarbonized power sources. Concrete support measures for companies—including fuel and feedstock switching and plant consolidation—are also being implemented, with the aim of creating added value through green premiums and expanding markets.

Presentation by Jérémy Pinte, Policy Officer, Unit for Bioeconomy, Chemicals and Cosmetics, DG GROW, European Commission:

The European Commission defines sustainable chemistry as the integration of economic, environmental, and social dimensions, and has advanced policies under the European Green Deal and the 2020 Chemicals Strategy for Sustainability. In response to changing geopolitical conditions, the EU now also emphasizes maintaining industrial competitiveness and simplifying regulatory frameworks. Across the chemical value chain, efforts focus on reducing waste, increasing by-product recovery, integrating renewable energy, and promoting industrial symbiosis, with the long-term goal of achieving a circular system based on biomass and decarbonized energy.

Policy measures combine regulatory obligations and incentives. Key regulations include the EU Emissions Trading System (ETS), the Renewable Energy Directive, the Industrial Emissions Directive, and packaging and waste rules, all aimed at reducing emissions and promoting recycling. Additional requirements, such as chemical safety regulations and biodegradability criteria, ensure environmental and health protection. On the incentive side, initiatives such as the EU Bioeconomy Strategy, public-private partnerships, Safe and Sustainable by Design guidance, and the Ecodesign Regulation support innovation and market uptake of sustainable products.

Furthermore, the EU Taxonomy guides sustainable investment, while the Carbon Border Adjustment Mechanism (CBAM) ensures fair competition by aligning carbon costs for imports. Looking ahead, the EU plans to strengthen its policy framework through initiatives such as a Circular Economy Act and expanded biotechnology policies. However, challenges remain, including higher costs of sustainable products and potential competition for resources, which must be carefully managed.

Presentation by Noriyuki Mita, Executive Officer & Chief Sustainability Officer, Mitsubishi Chemical Group Corporation:

Sustainability is not stagnating globally; rather, regional disparities are widening and uncertainty is increasing. The United States and Europe remain committed to advancing sustainability despite being in a phase of adjustment, while China is rapidly expanding investment in carbon neutrality and the circular economy, emerging as a central supplier of recycled materials. As a result, there is a growing structural dependence on China, particularly as European green policies advance. In this context, the driving force behind sustainability is shifting from goodwill to priorities such as resource and energy security, supply chain resilience, and competitiveness.

In the chemical industry, amid intensifying competition and global oversupply, sustainability has become a key source of competitive advantage. Responding to customer demand for decarbonization and circularity, along with feedstock transformation, is essential. However, given the uncertainty of the future, companies must adopt three key principles: maintaining a long-term vision, executing initiatives in a phased manner based on timing and feasibility, and emphasizing economic rationality. In addition, value creation across the entire supply chain and data sharing are critical.

Specifically, efforts to reduce greenhouse gas emissions should focus on three main approaches: energy transition, feedstock transformation through recycling, bio-based materials, and CCU, and environmentally conscious product design. These initiatives require a long-term commitment, with optimal combinations evolving alongside technological and market developments. Furthermore, from



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a policy perspective, it is important to foster market creation, establish incentives, ensure access to waste and resources, and maintain international competitiveness.

Presentation by Eric de Deckere, Dr., Executive Director Innovation, the European Chemical Industry Council (CEFIC):

CEFIC's IC2050 model identifies cost-efficient pathways to net-zero emissions across 18 key chemicals. Currently, of 120 million tons of feedstock in the chemical sector, only about 9 million tons come from bio-based or recycled sources. To achieve climate neutrality by 2050, this must increase to around 60 million tons of bio-based feedstock and 20 million tons of recycled polymers.

Progress remains slow. Bio-based chemical production has grown only modestly, and in plastics recycling, mechanical methods dominate (95%) while chemical recycling is underdeveloped (<5%). Additionally, roughly half of plastic and bio-waste in the EU is still incinerated or landfilled, highlighting inefficiencies in collection, sorting, and utilization systems. CEFIC emphasizes priorities to enhance circularity: establishing a single EU market for secondary raw materials, ensuring coherent and investment-friendly regulations, promoting diverse recycling technologies, and strengthening the business case for circular products. Tools like green public procurement can help stimulate demand.

Policy frameworks, such as the bioeconomy strategy and biotech regulations, should encourage biomass use for chemicals beyond fuels. Sustainable product regulations (e.g., ESPR) will require transparent environmental and performance data shared via digital product passports, increasing information flow across value chains. Achieving sustainability while maintaining competitiveness also requires lower energy and carbon costs, fair trade, and improved access to finance.

Moderator Yasuo Tanabe, Japan-side Managing Director of EU-Japan Centre for Industrial Cooperation, raised the following questions in the Q&A session:

- (To Mr. Tsuchiya) With regards to pathways to achieve carbon neutral by 2050, there have been models developed by CEFIC and ICCA respectively as mentioned in the earlier presentations. I am wondering if the Japanese government have come up with similar ideas. I would also like to hear your thoughts on demand creation.
- (To Mr. Mita and Dr. Deckere) I would like to learn if the scenarios for 2050 net zero emission developed by CEFIC or ICCA include a sort of negative emission. Is the understanding correct that the bio-based feedstock or recycled secondary feedstock is not enough so that the chemical industry must think of negative emission reduction?
- (To Dr. Deckere) I would like to touch upon the demand side issue and market creation. Eric talked about the demand creation and listed some items e.g. green public procurement or VAT cuts and some other NACE codes for circular production and feedstocks. Could you elaborate a little bit more about those items for demand creation?
- (To Dr. Deckere) May I know if NACE code is the European standard? Does it define what is circular or what is green? Are there any shared, confirmed methodologies to measure how circular or how green they are?

- (To Dr. Pinte) Could you touch upon what the digital passport would be like; what kind of data should be incorporated in it, e.g. carbon footprint, material, composition for chemical products? Could you explain a little bit more about data issues?
- (To Dr. Pinte and Dr. Deckere) I understand plastics or chemicals are not being covered by the CBAM while the announcement was made for the expansion of the coverage of the CBAM to metal and heavy metal products. I also understand that there has been discussion about whether or how to cover chemicals or plastics for the CBAM. Is there any information at this moment of the possibility of coverage of chemical products?

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