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CASE STUDY

Benchmarks in Materiality Assessments

How Mitsubishi Chemical
Group Strengthened Double
Materiality through Sector
Intensity Benchmarks

value
balancing
alliance



mitsubishi
chemical
group

About

The Value Balancing Alliance (VBA) is a coalition of around 25 multinational companies committed to driving sustainability by measuring and valuing corporate impacts on nature and society. Our world has been running through the most significant structural change in the last 250 years. We experience the environmental credit crunch: The paradigm of economic growth building on infinite resources is over. We enter the impact economy – requiring a new understanding of value creation¹. VBA's mission as a not-for-profit alliance is to jointly create a globally applicable and comprehensive methodology together with the International Foundation for Valuing Impacts, Inc. (IFVI) and Capitals Coalition for measuring sustainable value creation – impact measurement and valuation (IMV). IMV has been successfully tested over the last fifteen years by leading companies across regions and industries. It gains more and more traction as a solution to translate ESG metrics into the language of business (monetization) and turning the sustainability reporting challenge into a force for enterprise value creation. The VBA is pioneering impact accounting in various collaborations, which contextualizes sustainability data and translates it into comparable monetary values, reflecting corporate impacts across the entire value chain.

Mitsubishi Chemical Group (MCG) is a leading global provider of integrated materials and solutions, operating across industries such as automotive, electronics, healthcare, and infrastructure. Sustainability is ingrained in the company's strategy through its KAITEKI philosophy, which promotes the long-term well-being of people, society, and the planet. The company has set targets to reduce greenhouse gas emissions, advance circularity through chemical recycling and product design, and promote the responsible use of resources.

Impact Measurement and Valuation (IMV) – Impact Monetization

IMV is an approach that places a monetary value on the impact of companies in non-financial areas across the whole value chain. Many leading companies already apply this approach to transparently evaluate their sustainability performance and embed ESG considerations in their business steering and decision-making.

IMV is applied in practice to integrate sustainability into core business, promote decisions on trade-offs among varied impacts, identify material topics and contextualize information (VBA, 2023). Beyond financial value creation, IMV links corporate activities to human well-being by measuring changes in four capitals: Natural, Social, Human, and Economic. Aligned with frameworks like the OECD Well-Being Framework (2020) and Capitals Coalition (2021), this structure captures both direct and indirect effects on people and the environment.

Authors

Gaia Cimbro, ESG Reporting Specialist, Mitsubishi Chemical Group (MCG)

Magdalena Wottke, Manager Member Projects, Value Balancing Alliance (VBA)

¹ UBS – The Rise of the Impact Economy, 2023

For further insights:

Organisation for Economic Co-operation and Development (OECD). (2020). *How's Life? 2020: Measuring Well-being*. OECD Publishing. <https://doi.org/10.1787/9870c393-en>

Capitals Coalition. (2021). *The Capitals Approach: Integrating Natural, Social, Human, and Economic Capital into Decision-Making*. Capitals Coalition. <https://capitalscoalition.org/capitals-approach/>

1. Introduction

As companies prepare for CSRD-compliant reporting, the Double Materiality Assessment (DMA) is evolving from a formal compliance requirement into a central instrument for structuring sustainability-related decision-making. In practice, however, many DMA processes still rely heavily on qualitative stakeholder input. While these approaches are essential, they often struggle to provide a clear external reference point, **especially for upstream value chain impacts**. Without comparability and context, materiality results remain difficult to interpret, even with quantitative impact data added. Companies may identify impacts as 'high' or 'low', but lack a clear understanding of how these assessments relate to sector peers. To address this gap, Mitsubishi Chemical Group (MCG) explored the integration of sector intensity benchmarks into its DMA for the upstream value chain, with the explicit objective of strengthening context, comparability, and interpretability, particularly when combined with impact monetization. Sector intensity benchmarks² quantify the average environmental and social impacts of an economic sector in monetary terms per unit of output, covering own operations and upstream value chain tiers.

2. Case Study: Integrating Benchmarks to Inform DMA and Enable Strategic Use

Step 1 – Introducing Benchmarks to Strengthen Materiality Identification: MCG's DMA initially followed a structured qualitative approach. Relevant sustainability topics were identified based on ESRS requirements, sector standards, and desktop research, and subsequently assessed through internal stakeholder workshops. Second, these insights were complemented by a quantitative impact assessment, providing a data-driven view of impact distribution across the value chain. In a third step, sector intensity benchmarks were applied to contextualize and validate the qualitative and quantitative results. Impacts could



Our impact assessments were largely qualitative and focused on our own operations, often lacking an external reference. Benchmarks changed how we discuss materiality and made these conversations resonate better internally.

Gaia Cimbro

ESG Reporting Specialist, MCG

now be assessed not only inward-looking and in absolute terms, but relative to typical impact intensities within the sector. This proved particularly important for upstream value chain topics such as human rights, waste, or biodiversity, where internal data availability and expertise are often limited.

Step 2 – Refining Materiality Judgements through Triangulation: Rather than

treating benchmarks as standalone fix-points, MCG embedded them into a triangulated assessment logic. Qualitative stakeholder input, quantitative Input-Output modelling based on spend data, and external benchmarks were systematically compared on the level of ESRS sub-topics. This triangulation enabled a more nuanced refinement of materiality judgements. In some cases, qualitative perceptions were confirmed. In others, benchmark results highlighted divergences that prompted reassessment. Importantly, these divergences were not treated as contradictions, but as signals for deeper analysis. For instance, topics that were perceived as material internally or by stakeholders but viewed as not significant against sector-wide patterns. By combining internal perspectives with sector intensity benchmarks, MCG was able to justify materiality decisions more robustly, also for topics ultimately classified as material, since credibility and auditability for this

² VBA & WifOR institute, [Impact Intensity Benchmarks – Resource Transformation](#), 2025

decision has been enhanced. One example for this triangulation (see illustrative example below on sub-topic 4), where stakeholders evaluated the sub-topic 'Borderline Topic' and the results of impact valuation also indicated 'Borderline Topic' relative to MCG's other impacts. However, when comparing it with sector peers, MCG could see a significant divergence to the sector average and therefore deemed the sub-topic 'Material'.

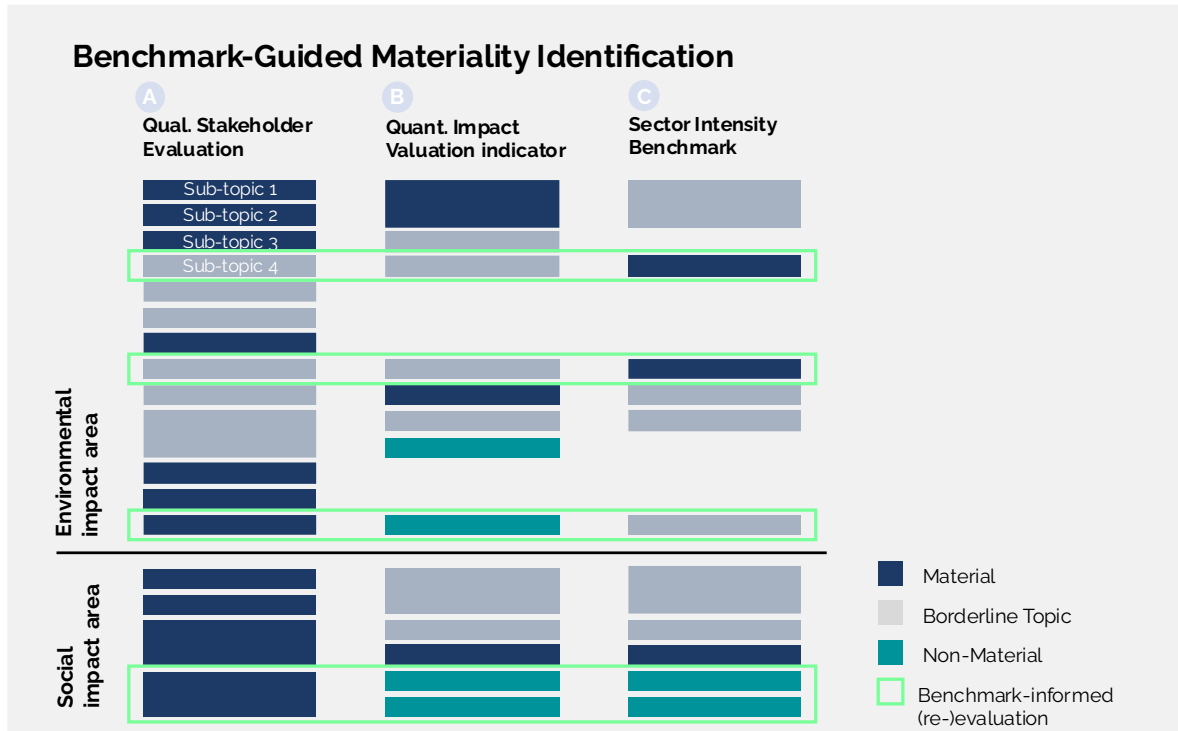


Figure 1 Triangulation for ESRS Sub-Topics

Step 3 – Informing Contextualization and Strategic Use: The most significant strategic value of sector intensity benchmarks lies in their ability to create comparability and thereby context. Comparison transforms isolated data points into meaningful information. Without benchmarks, even quantified or monetized impacts can remain abstract. With sector benchmarks, they become interpretable. By expressing impacts relative to sector intensities, MCG could contextualize its DMA results in a way that is intuitively understandable for internal and external stakeholders.

This contextualization becomes even more powerful through monetization. Monetized impact values translate heterogeneous environmental and social topics into a common unit, enabling direct comparison **across impact categories**. When combined with sector benchmarks, monetization allows different topics to be assessed on a like-for-like basis and visualized coherently within the same analytical framework. In this sense, benchmarks do not make the DMA 'strategic' by themselves. Rather, they provide the missing contextual layer that allows DMA results to be understood, compared, and communicated in a decision-relevant way.



We needed a more data-driven perspective to challenge qualitative assessments. Benchmarks brought objectivity, especially for value chain topics with limited internal expertise, and placed results into an industry and societal context.

Gaia Cimbro
ESG Reporting Specialist, MCG

Step 4 – Outlook: Towards More Monetization of Impacts: While MCG's initial application focused on the corporate DMA and upstream value chain, the logic of benchmark-based contextualization points clearly toward additional future use cases as the approach is intended to evolve as CSRD implementation progresses. A key next step lies in expanding impact monetization once more granular, ESRS-aligned quantitative data becomes available. As companies begin to systematically collect and disclose quantitative data on own operations and upstream activities, this data can be used to move beyond modelled estimates and toward company-specific impact monetization. In this context, sector intensity benchmarks will continue to play a critical role by providing a consistent reference point against which monetized impacts can be interpreted and validated. At the same time, the case highlights key prerequisites for scaling this approach: Broader availability of standardized and ESRS-topic-aligned impact benchmarks and improved data quality and continued internal capacity-building around impact valuation and monetization. Developing a shared understanding of these methodologies also internally is essential to fully leverage the potential of benchmarks and impact valuation overall beyond the DMA.



Looking ahead, we aim to further develop our impact assessment in line with CSRD and expand the use of benchmarks. This demands stronger internal understanding of impact valuation and more standardized, CSRD-aligned benchmarks externally.

Gaia Cimbro
ESG Reporting Specialist, MCG

3. Conclusion

This case illustrates how sector intensity benchmarks fundamentally enhance the interpretability and robustness of the Double Materiality Assessment. Their core value lies in creating context, something that qualitative assessments combined with quantitative monetized results already attempt to deliver. When combined with benchmarks, monetization can turn the DMA into a context-rich analytical exercise. Benchmarks help companies understand not only which topics are material, but how material they are relative to peers and societal expectations. In doing so, impact benchmarks strengthen the DMA as a credible foundation for CSRD reporting and as a stepping stone toward more decision-relevant applications of impact valuation in the future.

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Visit us at www.value-balancing.com
Contact us at info@value-balancing.com

Value Balancing Alliance e.V.
Bockenheimer Landstraße 22
60323 Frankfurt am Main, Germany
Phone: +49 (0)69 153 29 36 - 10