

# PRODUCT STEWARDSHIP

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## 1. Executive Summary

Wika Beton maintains a comprehensive and well-governed product stewardship system that ensures the safety, quality, and environmental responsibility of its concrete products throughout their entire life cycle—from production and delivery to installation, use, and disposal. Product stewardship is deeply embedded in the company's operations, reflecting a commitment to both human rights due diligence and sustainable industrial practices.

Through its Product Management System, Wika Beton applies the precautionary principle in accordance with ISO 31000:2018 and Ministerial Regulation No. 2/2023 of the Ministry of State-Owned Enterprises. Risk assessments follow recognized scientific standards, including the HIRARC methodology, to ensure that all raw materials and chemical components—such as cement, aggregates, and supplementary cementitious materials—are safe, compliant, and responsibly sourced.

In 2024, Wika Beton recorded zero product-related non-compliance incidents, underscoring the effectiveness of its quality assurance and risk-control processes. The company continues to innovate through the use of low-carbon cement (PCC and PPC), solar power integration across its production facilities, and B35 biodiesel adoption, supporting Indonesia's transition toward a low-emission, circular and sustainable construction industry.

The company's Greenhouse Gas reduction program has resulted in environmentally responsible concrete production, with 79.8% of total 2024 revenue (IDR 3.33 trillion of IDR 4.91 trillion) generated from the sale of eco-friendly precast concrete products. This demonstrates Wika Beton's strong alignment with global sustainability goals and its position as a leader in low-carbon, compliant, and responsible concrete manufacturing.

Wika Beton also actively supports national sustainability initiatives by promoting the safe utilization of fly ash, collaborating with government agencies and industry associations such as the Indonesian Precast and Prestressed Companies Association (AP3I), and contributing to the development of Indonesian National Standards (SNI) for concrete products. These actions reaffirm Wika Beton's position as a responsible industry leader in advancing safe, compliant, and low-carbon concrete manufacturing—contributing to Indonesia's transition toward a greener construction industry.

## 2. Product Stewardship

For Wika Beton, product stewardship means conducting a comprehensive evaluation of health, safety, and environmental risks associated with the handling and use of our products. We aim to ensure that our products are safe throughout their entire life cycle – from production, delivery, and installation to their use in accordance with customer expectations and eventual disposal. To this end, we provide all necessary information that enables our customers to understand the value created at each stage up to the end user.

Product stewardship also serves as one of the key focuses within our human rights due diligence activities. We not only pay attention to the business processes involved but also take full responsibility for the life cycle of our products — from production to their impacts on society and the environment — as part of our commitment to upholding human rights principles.

Monitoring product quality and compliance with specifications is central to every line of our business. Safe transportation, regulatory compliance, and product marketability are managed by Wika Beton's operational units and are required to be reported periodically to the corporate management.

The safe handling and use of our products are our top priorities. It is essential for us to communicate product safety information in a transparent and comprehensive manner. In addition to mandatory documentation, we also provide further information and technical assistance to customers. Furthermore, specially trained personnel work closely with suppliers, customers, industry associations, and the public. Accordingly, Wika Beton strives to ensure the effectiveness of communication and compliance with health, safety, and environmental information throughout the supply chain.

## 3. Product Management

Product management at Wika Beton encompasses compliance with both mandatory legal requirements and voluntary commitments. We also adopt the precautionary principle as part of our operational policy. Preventive actions are taken even in the absence of full certainty regarding the magnitude of potential risks, whenever objective and comprehensive scientific evaluations indicate the possibility of serious harm or irreversible damage to humans or the environment.

All decisions are based on clear, well-founded reasoning and are never arbitrary. Protective measures are taken in a balanced manner—neither excessive nor insufficient—by considering the cost-benefit implications of all available options, and

are reviewed when new scientific developments emerge. Hence, the precautionary principle must not be used as a justification for arbitrary or unfounded decisions.

In this regard, we follow the principles of ISO 31000:2018 and Ministerial Regulation No. 2 of 2023 issued by the Ministry of State-Owned Enterprises of the Republic of Indonesia when applying the precautionary principle. This principle serves as a balanced framework for protection, grounded in a comprehensive benefit-risk assessment and open to continuous scientific advancement to prevent arbitrary decision-making. The protective measures adopted are proportionate, taking into account the benefits and drawbacks of all relevant options, and are periodically reviewed in light of the latest scientific developments.

To ensure the safe handling and use of chemical substances, risk assessments are conducted using recognized scientific principles as stipulated by the Ministry of Environment and Forestry of Indonesia (KLHK). Each chemical used in our production process is evaluated for its hazard characteristics, exposure levels are estimated, and additional data are requested if necessary to complete the risk assessment. The KLHK also provides an information system and guidance on hazardous and toxic substances (B3) to support risk management and evaluation in Indonesia. Additionally, the HIRARC (Hazard Identification, Risk Assessment, and Risk Control) methodology is implemented to identify and control occupational risks, including those related to chemical substances in the workplace.

All raw materials used in Wika Beton's production undergo a multi-stage evaluation process. First, we identify all chemical components subject to national laws and regulations. The identified substances include relevant hazardous materials legally classified under Indonesian regulatory frameworks based on the guidelines of the KLHK. This identification process helps assess potential risks to our products and provides relevant information to our customers.

Examples of these materials include cement, natural aggregates (sand and gravel), supplementary cementitious materials such as fly ash, silica fume, and ground granulated blast furnace slag (GGBFS), reinforcing steel, and water. The chemical compositions of these raw materials are examined against the limits prescribed by applicable regulations and to make sure that all materials do not contain the "Red List" such as mercury, cadmium, formaldehyde (added), chlorofluorocarbons (CFCs), halogenated flame retardants, lead, PVC regarding to the International Living Future Institute regulation and low-emitting Volatile Organic Compounds (VOC). Testing is conducted routinely for every batch of incoming materials in our in-house laboratory, and periodic verification is carried out by certified independent laboratories. We also perform routine waste testing in cooperation with local environmental agencies to ensure that waste management results comply with environmental regulations, prevent pollution, and safeguard public health.

The results of these tests are communicated to our customers. If testing reveals that certain raw materials pose potential safety or environmental risks, we implement appropriate risk-mitigation measures. These may include technical actions such as the use of protective equipment, revision of product usage recommendations, withdrawal of certain material support, or substitution of hazardous substances. Any replacement materials must be technically feasible, economically viable, and sustainable.

At the final stage of production, every product is labeled with information such as product type and class, product identification number, and date of manufacture. Concrete products are classified and labeled according to their intended functions. Wika Beton's product standards include categories such as concrete piles, spun piles, bridge components, retaining structures, railway components, building elements, hydrological structures, jetty components, and other structural concrete products.

We also issue Product Certificates and Product Handling Manuals. The Product Certificate includes information on material specifications, results of concrete compressive strength tests, and tensile strength test results for reinforcing steel used in the products. The Product Handling Manual provides guidance and safety recommendations for handling, securing, transporting, and installing products at project sites.

Wika Beton systematically collects, documents, and analyzes information regarding product usage and performance issues as a basis for continuous improvement. This includes monitoring product installation, reporting product-related incidents, and ensuring compliance with all relevant regulations. Coordination meetings are conducted with customers prior to product delivery to communicate safety handling procedures. Moreover, internal discussions and training sessions are regularly held to strengthen employee awareness and understanding of product management responsibilities. For the 2024 fiscal year, no incidents of non-compliance were recorded related to health and safety impacts of products and services, nor regarding product information and labeling requirements.

Product and process optimization is an ongoing task within the concrete industry and forms an integral part of our commitment to the Indonesian concrete industry's initiatives for continuous improvement in environmental, health, and safety aspects. Wika Beton actively contributes to these efforts by participating in the national technical committee responsible for the development of Indonesian National Standards (SNI) for concrete products.

Furthermore, Wika Beton is an active member of the Indonesian Precast and Prestressed Concrete Companies Association (AP3I), supporting initiatives aimed at

enhancing environmental and health standards in the concrete industry. We also collaborate with the Ministry of Industry in the development of Green Standards for concrete manufacturing and serve as technical experts on safety aspects of precast concrete implementation in collaboration with the Ministry of Public Works and Housing.

#### **4. Implementation of Regulation and Voluntary Program**

Wika Beton fully complies with applicable national regulations, including Law No. 1 of 1970 on Occupational Health and Safety and the implementation of the Occupational Health and Safety Management System (SMK3) as stipulated in Government Regulation No. 50 of 2012. Both frameworks govern the implementation of occupational safety and health (OSH) aimed at protecting human health and the environment from risks arising in the workplace. As part of the concrete manufacturing industry, we have also established internal regulations to ensure full compliance with all requirements relevant to our operations.

We work closely with local Environmental Agencies to guide our activities in meeting regulatory requirements. This collaboration has led to several adjustments within our production processes, such as the introduction of additional testing requirements, the implementation of new risk management measures, and the incorporation of specific provisions into our company's operational procedures.

One example of such procedural requirements involves the utilization of fly ash, a by-product from coal-fired power plants that is classified as a recycled material in Wika Beton operations, where Wika Beton reuse it as a partial substitute for cement in concrete mixtures. This program aligns with the initiative of the Ministry of Energy and Mineral Resources, which promotes the safe, effective, and efficient utilization of industrial by-products. Scientifically, fly ash—a pozzolanic material—has been proven to be suitable as a supplementary cementitious material in concrete mixtures. However, its widespread application remains limited because it is currently classified as a hazardous and toxic waste, requiring complex permitting procedures for its use.

This classification presents challenges for power plant operators, as accumulated fly ash increases storage and disposal costs. Together with other concrete manufacturers, Wika Beton continues to support the maximized utilization of fly ash as a recovered material from a by-product of coal-fired power plants and advocates for regulatory relaxation from the Ministry of Environment and Forestry to facilitate its use in the concrete industry. As part of our commitment, we actively participate in Focus Group Discussions (FGDs) to communicate the technical benefits and readiness of the concrete industry to safely and effectively use fly ash as a sustainable material.

In addition, concrete examples of Wika Beton's emission-reduction management include the use of environmentally friendly cement types, electricity generated from solar power plants, and the adoption of B35 biodiesel as an operational fuel. We promote the use of Portland Composite Cement (PCC) and Portland Pozzolana Cement (PPC), which are more sustainable alternatives to Ordinary Portland Cement (OPC), as they reduce clinker consumption by partially substituting it with pozzolanic industrial by-products. Generally, the clinker-to-cement ratio in Ordinary Portland Cement (OPC) is around 0.95. In comparison, based on results from our external laboratory testing, the clinker-to-cement ratio in Portland Composite Cement (PCC) is 0.88, which is lower than the typical ratio observed in OPC. The proportion of non-natural raw materials—such as  $\text{SO}_3$ , free CaO, LSF, AM, MC, and total alkali—contained in PCC is 11.98%. The usage of B35 biodiesel at Wika Beton reached 40%, while Portland Composite Cement (PCC) and fly ash as alternative raw materials reached 60.1%, as part of Wika Beton's commitment to reducing emissions.

Meanwhile, electricity sourced from solar energy has been integrated into production lines, complementing power supplied by the State Electricity Company (PLN). The solar energy is generated through rooftop photovoltaic panels designed to maximize sunlight absorption and overcome land area limitations. One of the largest solar power plant installations is located at Wika Beton's Bogor Plant, supplying 440 kWp of electricity. The solar installation program continues to expand gradually, with a target of three plant locations by 2025, bringing the total planned capacity to 879.2 kWp.

To further reduce greenhouse gas emissions, the company has also adopted the use of B35 biodiesel, a biofuel consisting of 35% palm oil-based biodiesel blended with 65% petroleum diesel. This initiative contributes to lowering emissions from operational activities and supports Indonesia's national energy transition toward cleaner and renewable energy sources.

The company's greenhouse gas (GHG) emission reduction program—which includes the use of environmentally friendly cement types, electricity generated from solar power plants, and the adoption of B35 biodiesel as operational fuel across all production facilities—has resulted in the production of environmentally sustainable concrete products. The sustainable revenue in Wika Beton was derived from the sale of environmentally friendly precast concrete products, demonstrating Wika Beton's strong commitment to low-carbon and sustainable manufacturing practices. The sustainable revenue is detailed in the following table:



<b>Description</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Sustainable revenues (Rp million)	3.696.345	5.586.190	3.742.110	4.251.821*
Total revenues (Rp million)	4.458.987	6.003.788	4.203.171	4.896.024
<b>Percentage of sustainable revenues</b>	<b>82,90%</b>	<b>93,04%</b>	<b>89,03%</b>	<b>86,84%</b>

\*After WIKA Beton received its EPD certification in 2024, revenue from EPD-certified products reached IDR 881.86 billion.

As part of our voluntary commitments, we also provide continuous support to customers in understanding safe handling practices for precast concrete products—from delivery to installation. Safety is a key priority, and we actively promote awareness through joint training programs coordinated by the Indonesian Precast and Prestressed Concrete Companies Association (AP3I), seminars involving academics and practitioners, as well as events organized by the Ministry of Public Works and Housing of Indonesia.

## 5. Conclusion

Through the consistent implementation of these regulatory and voluntary initiatives, Wika Beton reinforces its commitment to sustainable industrial practices, regulatory compliance, and continuous environmental improvement. By integrating innovation, renewable energy utilization, and responsible material management, the company not only reduces its environmental footprint but also enhances operational efficiency and product value. Collaboration with government institutions, industry associations, and customers ensures that Wika Beton remains at the forefront of promoting safe, low-carbon, and compliant concrete production in Indonesia—contributing to national sustainability goals and supporting the transition toward a greener construction industry.

Through its strong commitment to product stewardship and sustainable management, Wika Beton ensures that every stage of its product life cycle—design, production, transportation, installation, and end use—meets the highest standards of safety, quality, and environmental responsibility. By integrating the precautionary principle in line with ISO 31000:2018 and Ministerial Regulation No. 2/2023, Wika Beton maintains a proactive and balanced approach to risk management, emphasizing preventive action and continuous scientific review.

The company's adherence to national regulations, combined with its voluntary initiatives such as the use of low-carbon cement (PCC and PPC), B35 biodiesel, and solar energy integration, reflects a strong alignment with Indonesia's net-zero and green industry agenda. Ongoing collaboration with government bodies, regulatory institutions, and industry associations such as AP3I reinforces Wika Beton's leadership in promoting safe, low-emission, and compliant concrete manufacturing.

Overall, Wika Beton's comprehensive approach to product stewardship not only safeguards people and the environment but also strengthens the company's operational resilience and long-term sustainability performance—affirming its position as a responsible and forward-looking leader in Indonesia's precast and prestressed concrete industry.