

WATER RISK MANAGEMENT

Risk Assessment & Mitigation Strategy



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1. Executive Summary

As a precast industry manufacture, WIKA Beton places water stewardship as a strategic priority within its ESG framework due to the essential role of water in concrete production and the increasing environmental pressures related to water stress in Indonesia. This section summarizes the company's overall performance in managing water risks across multiple operational units, highlighting how water-intensive processes are being optimized to reduce consumption and safeguard operational continuity. The water risk assessment, conducted using global-standard tools such as WRI Aqueduct 4.0, shows that several plants operate in medium to high water-stress areas, making proactive management crucial.

The key achievements and improvements made during the reporting period, including reductions in water-use intensity, improvements in wastewater treatment plan for dust suppression, cleaning the tools and curing product. These improvements demonstrate WIKA Beton's commitment to sustainability and operational resilience. By strengthening governance, monitoring, and cross-plant coordination, the company has built a strong foundation for long-term resource efficiency and environmental responsibility.

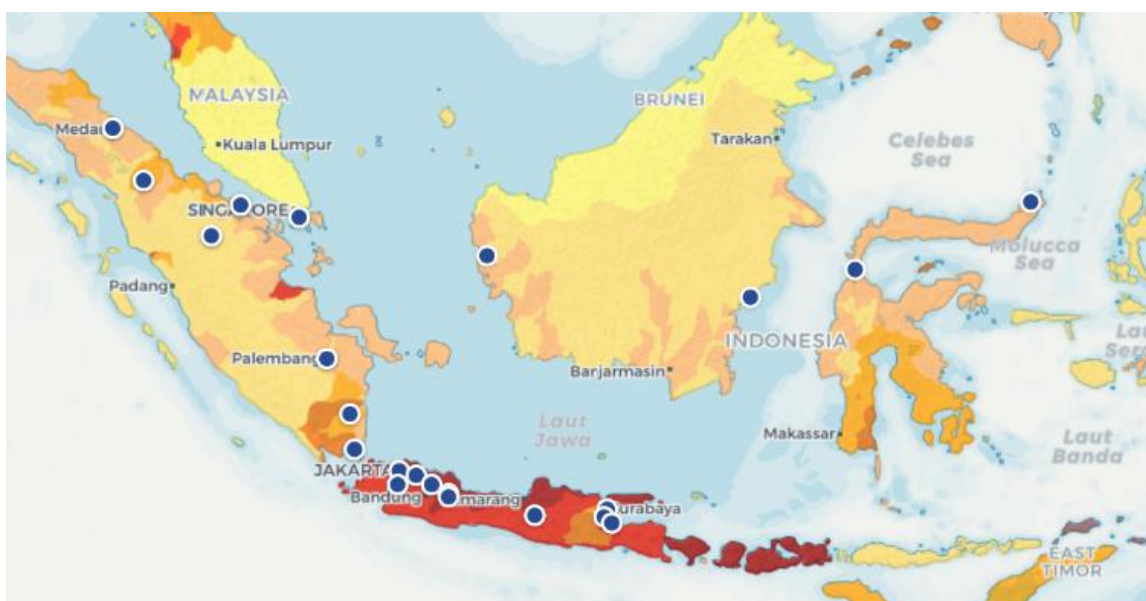
2. Background and Methodology

Water is a critical component in every stage of precast concrete manufacturing, including production, curing, washing of equipment, dust suppression, and infrastructure maintenance. Given increasing pressures from climate change, fluctuating rainfall patterns, and stricter environmental regulations, WIKA Beton must adopt comprehensive water risk management practices to maintain production efficiency and compliance. This section provides the rationale for undertaking a systematic assessment, including compliance obligations, corporate sustainability goals, and stakeholder expectations for responsible water use.

The methodology integrates global tools and plant-level data analysis to provide a comprehensive view of water risks. The assessment employs WRI Aqueduct 4.0 to classify baseline water scarcity, water stress, and baseline water risk for each WIKA Beton plant. Alongside this, detailed operational data—including water consumption records, wastewater discharge volumes, and treatment system performance—are analyzed. The evaluation is structured across four pillars: water-use efficiency, wastewater treatment and discharge quality, alternative water sourcing, and governance practices aligned with ISO 14001. Internal benchmarking ensures consistency, while compliance with national regulations ensures environmental responsibility.

3. Results of Water Risk Management

The assessment reveals varying levels of water risk among WIKA Beton's production units, with sites such as Subang, Karawang, Boyolali, Majalengka, and Pasuruan identified as operating within medium to high water-stress zones according to the WRI Aqueduct 4.0 model. These locations face elevated risks related to water availability, groundwater depletion, and long-term operational continuity. These conditions highlight the need for increased vigilance, efficient water management systems, and diversified water sources. Plants located in lower-stress regions still maintain strict controls to avoid overreliance on groundwater and minimize environmental impact.



Performance trends show encouraging improvements in water-use intensity, primarily driven by process optimization, the deployment of water-saving technologies, and stronger monitoring routines. WIKA Beton has adopted closed-loop systems for improved batching accuracy to reduce unnecessary water usage using CCMS and increased recycling of curing water. These initiatives contribute significantly to reducing the company's overall water footprint while maintaining high production quality. Enhanced maintenance of wastewater treatment plants (WWTP), combined with preventive operations, has reduced the risk of non-compliance.

4. Gap Analysis and Follow-up Action Plan

The gap analysis highlights several areas requiring further improvement. Although most plants comply with regulatory requirements, some units still face limitations in

metering accuracy, wastewater monitoring equipment, and data recording consistency. Plants situated in high-stress regions face elevated risk in long-term availability, requiring more aggressive mitigation measures.

As Subang, Karawang, Boyolali, Majalengka, and Pasuruan factory identified as operating within medium to high water-stress zones according to the WRI Aqueduct 4.0 model, WIKA Beton committed to ensure the quantity and quality water in that area, such as reduce the use of water for production using new concrete technology that adapt less water to improve concrete quality, optimizing Water Treatment Plan (WTP), and also optimizing water recycle for reduce dust and curing product in the stockyard. These initiatives are carried out by WIKA Beton to ensure the long-term quality and quantity of water resources.

WIKa Beton implements a structured approach to monitor and manage potential water-related impacts on surrounding communities, particularly in operational areas located within high water-stress zones. The company regularly assesses local water availability, usage intensity, and potential competition for water resources to ensure that industrial activities do not disrupt community access to clean water. Community feedback channels, routine engagement sessions, and environmental inspections are used to identify early signs of water scarcity or changes in water service conditions. Through these efforts, WIKa Beton seeks to maintain transparent communication, minimize potential social and environmental impacts, and uphold its commitment to responsible water stewardship in water-stressed regions.

In addition to internal monitoring, WIKa Beton works collaboratively with local governments and regional water authorities to support sustainable water management. This collaboration includes data sharing, alignment with local water-use regulations, participation in environmental coordination meetings, and joint efforts to strengthen watershed protection and water conservation programs. Through these combined actions, WIKa Beton reinforces its commitment to responsible water stewardship, community well-being, and long-term sustainability in water-stressed regions.

Other gaps include operational challenges such as under-optimized recycling systems, aging wastewater treatment components, and uneven levels of employee competency in water management practices. Certain plants must strengthen emergency response procedures for spill control and improve documentation to ensure audit readiness. These gaps, once resolved, will further enhance WIKa Beton's operational resilience and strengthen compliance with ISO 14001 and ESG standards.

The action plan addresses these gaps through structured short-, medium-, and long-term strategies. Short-term actions (within one year) focus on improving metering systems, repairing leaks, upgrading pretreatment equipment, and improving wastewater monitoring routines. Medium-term plans (1–3 years) involve upgrading WWTP facilities, and implementing semi-closed-loop water systems. Long-term initiatives (beyond three years) include exploring digital water management platforms, integrating real-time monitoring technologies, and aligning all plants

toward reduced groundwater extraction targets. These actions collectively support the company's vision of sustainable and responsible resource management.

5. Conclusion

WIK A Beton's water risk management assessment demonstrates tangible improvements in water efficiency, wastewater control, and alternative water sourcing, reaffirming the company's strong commitment to environmental responsibility. The results show that proactive management and structured monitoring can significantly reduce exposure to water-related risks, particularly as several plants operate in water-stressed regions. These initiatives also align closely with WIK A Beton's sustainability roadmap and its long-term operational objectives.

Moving forward, continuous improvement will remain central to WIK A Beton's strategy. The company will continue expanding rainwater harvesting initiatives, investing in water-efficient technologies, and strengthening governance systems to ensure compliance and operational resilience. By integrating water stewardship into daily operations and long-term planning, WIK A Beton positions itself as an industry leader in sustainable manufacturing and responsible resource management.