

Case Study

Project Title

SPAS Implementation for Real-Time River Flow Monitoring

Project Snapshot

Klien: PT Kaltim Prima Coal (KPC) | **Lokasi:** East Kalimantan, Indonesia

Sektor: Coal Mining | **Periode / status:** 2025 / Ongoing

Layanan Ganeca: River Flow Monitoring Station (SPAS), real-time river discharge and flow velocity monitoring, and hydrological data analysis.

Project Overview

Monitoring river flow conditions is an important part of water management in mining areas, particularly for understanding changes in river discharge and flow velocity in response to hydrological conditions. Ganeca Environmental Services supports PT Kaltim Prima Coal (KPC) through the implementation of a River Flow Monitoring Station (SPAS) to provide continuous, real-time river flow data that supports flood risk management and mining operations.

The Challenge

Rainfall and changing hydrological conditions can significantly affect river discharge and flow velocity. These changes need to be continuously monitored because increased flow can influence river conditions and potentially increase risks to surrounding operational areas and facilities. Periodic measurements alone can limit visibility of changes occurring between measurement intervals. KPC therefore requires continuously available river flow data to better understand changing flow conditions and support data-driven risk management.

Our Solution

Ganeca Environmental Services implemented a River Flow Monitoring Station (SPAS) to automatically and continuously monitor river discharge and flow velocity in real time. The system collects river flow data continuously, enabling changes in flow conditions to be observed without relying solely on periodic manual measurements. The collected data is also analyzed to identify patterns and changes in river discharge and flow velocity. This information provides KPC with supporting hydrological insight for evaluating river conditions, flood-related risks, and water management across the operational area.

Results & Value

Since its implementation in 2025 and continuing to date, the SPAS system has provided continuous, real-time river discharge and flow velocity data, giving KPC greater visibility into changing river flow conditions. The availability of real-time and historical data supports hydrological assessment, identification of changes in flow patterns, and flood risk mitigation and data-driven operational decision-making. By transforming continuous river flow measurements into accessible hydrological information, the system supports a more responsive approach to water and operational risk management.

Project Photos



Layanan terkait: [Technology-Enabled Environmental Monitoring](#)