ZEKINDO CHEMICALS

SUSTAINABILITY REPORT 2025

PT ZEUS KIMIATAMA INDONESIA

created by:

ALGATEK

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Sustainability Outline

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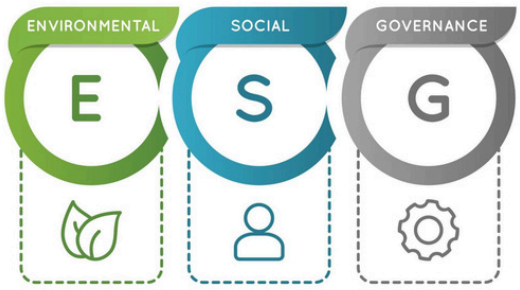
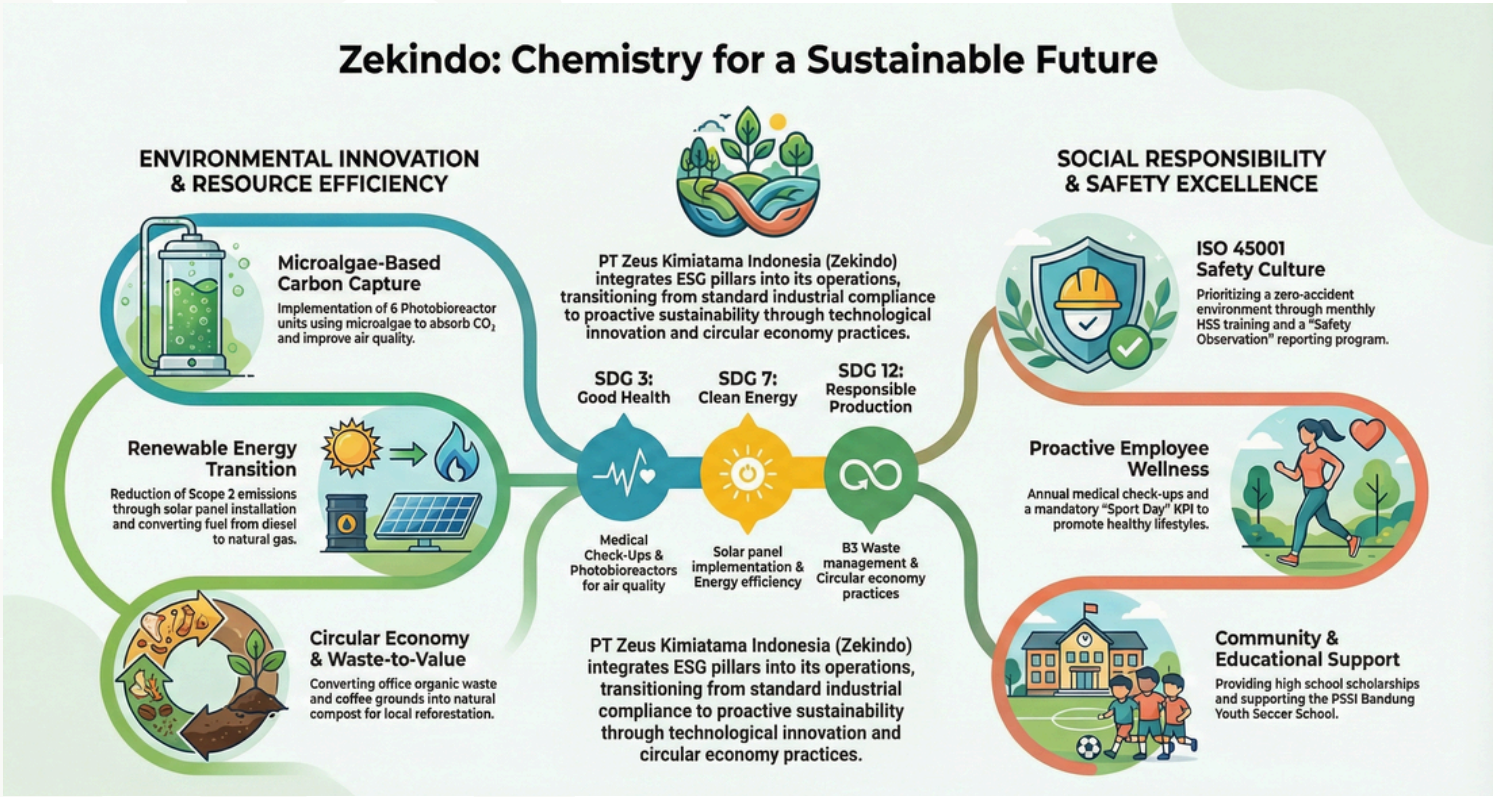
SUSTAINABILITY OUTLINE 01



PT Zeus Kimiatama Indonesia (Zekindo) is dedicated to conducting its business with responsibility by incorporating sustainability principles into every facet of its operations and corporate governance. As a specialty chemical manufacturer catering to diverse strategic industrial sectors, the company acknowledges that sustainability transcends mere compliance; it is a fundamental pillar for ensuring long-term business continuity.

Zekindo's sustainability strategy is founded on three principal pillars: environmental protection, social responsibility, and effective corporate governance. These pillars are executed in a cohesive manner through policies, management systems, and quantifiable, documented sustainability initiatives. Zekindo is dedicated to the ongoing enhancement of its sustainability performance by bolstering data-driven performance assessment, establishing more structured objectives, and fostering technological innovations that promote a more environmentally sustainable and competitive chemical industry. Through this approach, PT Zeus Kimiatama Indonesia aims to generate long-term value for stakeholders while contributing to responsible and sustainable industrial development.



Company Profile

2020

COMPANY PROFILE 02

ABOUT PT ZEUS KIMIATAMA INDONESIA (GRI 2-1)

Company Name	PT Zeus Kimiatama Indonesia
Legal Status of Ownership	A private limited company, where ownership is managed privately.
Business Operations and Manufactured Goods	Production, marketing, and distribution of specialty chemicals.
Headquarters Address	The Prominence Office Tower, 12th Floor, Jl. Sutera Barat No. 15, Alam Sutera, Tangerang, Banten, Indonesia 15143
Number of Factories	**2 factories in the Cikarang and Purwakarta regions** a. Jababeka Industrial Area, Jl. Jababeka IV Block V District. 74-75, Kel./Desa Pasirgombong, Kec. North Cikarang, Kab. Bekasi, West Java, Indonesia 17530. b. Jl. Bukit Akasia V Plot A II No. 19, Bukit Indah Area, Dawuan, Purwakarta Regency, West Java, Indonesia 41181
Target Audience	Our primary target market encompasses chemical formulation companies and service providers in Indonesia and the ASEAN region, specifically Singapore, Malaysia, and Thailand. This includes industries such as water treatment, oil and gas, mining and mineral processing, automotive, and sugar processing.
Date of Foundation	15 January 1998
Contact	+6221 8934922 customer.service@zekindo.co.id
Website	https://zekindo.co.id/id/
Social media platforms	https://id.linkedin.com/company/pt-zeus-kimiatama-indonesia

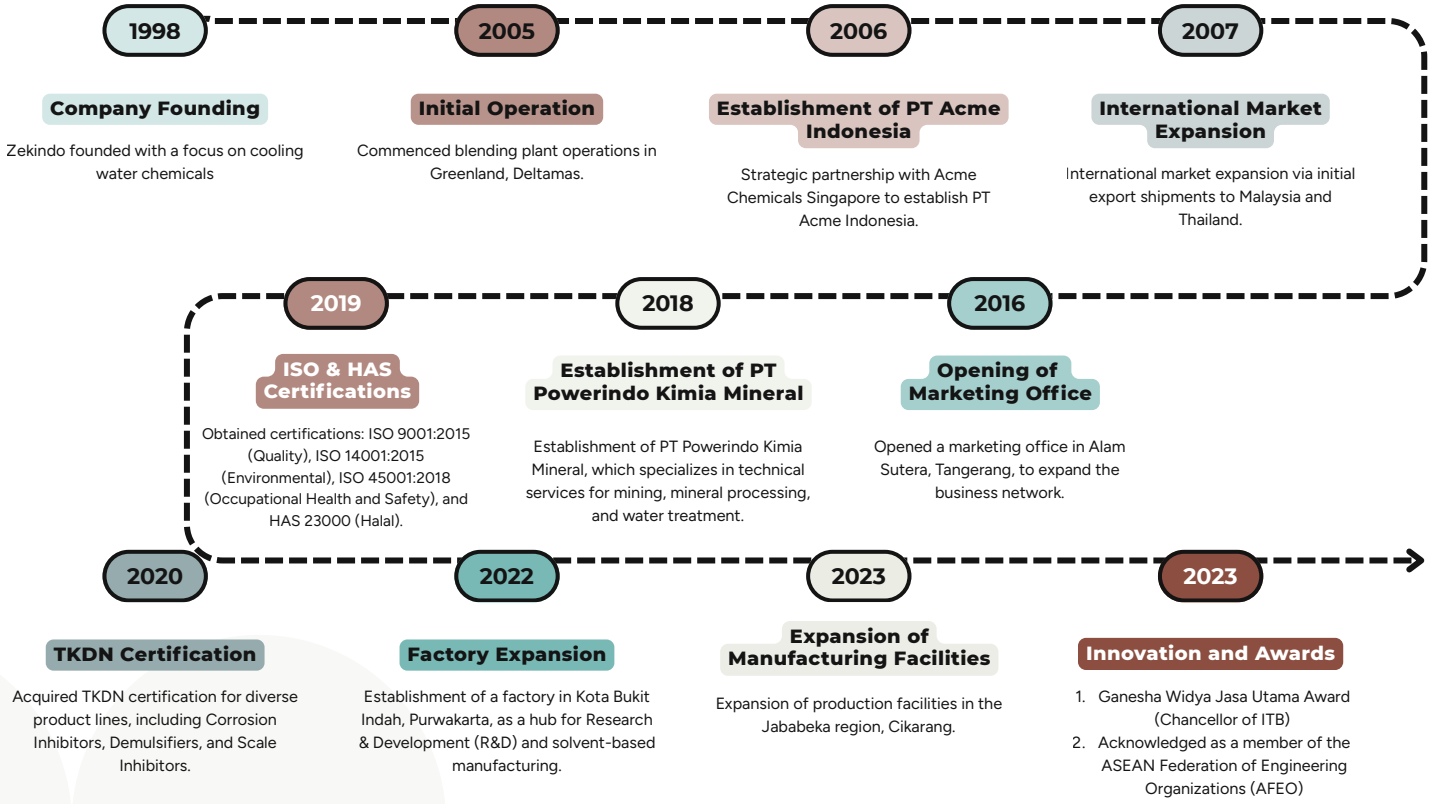
COMPANY OVERVIEW (GRI 2-1)

PT Zeus Kimiatama Indonesia (Zekindo) stands as a premier manufacturer of specialty chemicals in Indonesia, boasting over 27 years of experience in catering to the demands of both national and regional industries. Backed by a team of more than 200 skilled and seasoned professionals, Zekindo is delivering high-quality local chemical products that are both competitive and compliant with international standards. The company consistently emphasizes innovation, product reliability, and extensive technical services to offer value-added solutions to its customers.

Zekindo's primary target markets encompass chemical formulation companies and industrial service providers within Indonesia and the ASEAN region, which includes Singapore, Malaysia, and Thailand. With a robust distribution network and strategic partnerships, the company is consistently broadening its regional market presence. Zekindo caters to a range of strategic industrial sectors, including: water treatment, oil and gas, mining and mineral processing, automotive, and sugar processing.

Through the implementation of a comprehensive quality, safety, and environmental management system, Zekindo is dedicated to responsible, safe, and sustainable operations. The company consistently enhances governance, product innovation, and sustainability practices to foster competitive and environmentally aware industrial growth at both national and regional levels.

OUR JOURNEY (GRI 2-1)



PT Zeus Kimiatama Indonesia was established in 1998 and commenced operations in the development of chemical products for cooling water treatment through a straightforward blending process. Over the past 27 years, Zekindo has delivered products and services in the specialty chemicals sector across various expanding industrial domains in Indonesia and internationally. To facilitate its operational activities, Zekindo maintains several locations, including the head office, manufacturing and storage facilities in Jababeka, Cikarang; manufacturing facilities and laboratories in Kota Bukit Indah, Purwakarta; and a marketing office in Alam Sutera, Tangerang.

COMPANY VISION AND MISSION

VISION

To become Indonesia's leading specialty chemicals manufacturer.

MISSION

Committed to continuous innovation through research and development, we deliver high-quality, competitive specialty chemical solutions by prioritizing renewable resources and sustainable practices—supporting our customers while contributing to long-term environmental and economic growth across Indonesia and the region.

CORPORATE CULTURE (GRI 2-1)

Integrity and Teamwork

Acting in accordance with ethical principles rooted in honesty, embracing accountability, and acknowledging errors. One team, one objective. We uphold and respect one another as colleagues.

Respect for Others

Foster mutual respect, encourage transparent communication free from apprehension, and appreciate the worth of each individual.

Customer Focus

Position yourself as an integral member of the customer team, consistently delivering added value and the highest quality.

Pride and Enthusiasm

Collaborating with dedication and enthusiasm to deliver advantages to society.

Accountability for Results

Learn from errors, comprehend every detail, confront challenges directly, and execute tasks meticulously.

Organizational Discipline

Upholding commitments, confronting realities with objectivity, demonstrating initiative, and generating impact by establishing ambitious goals.

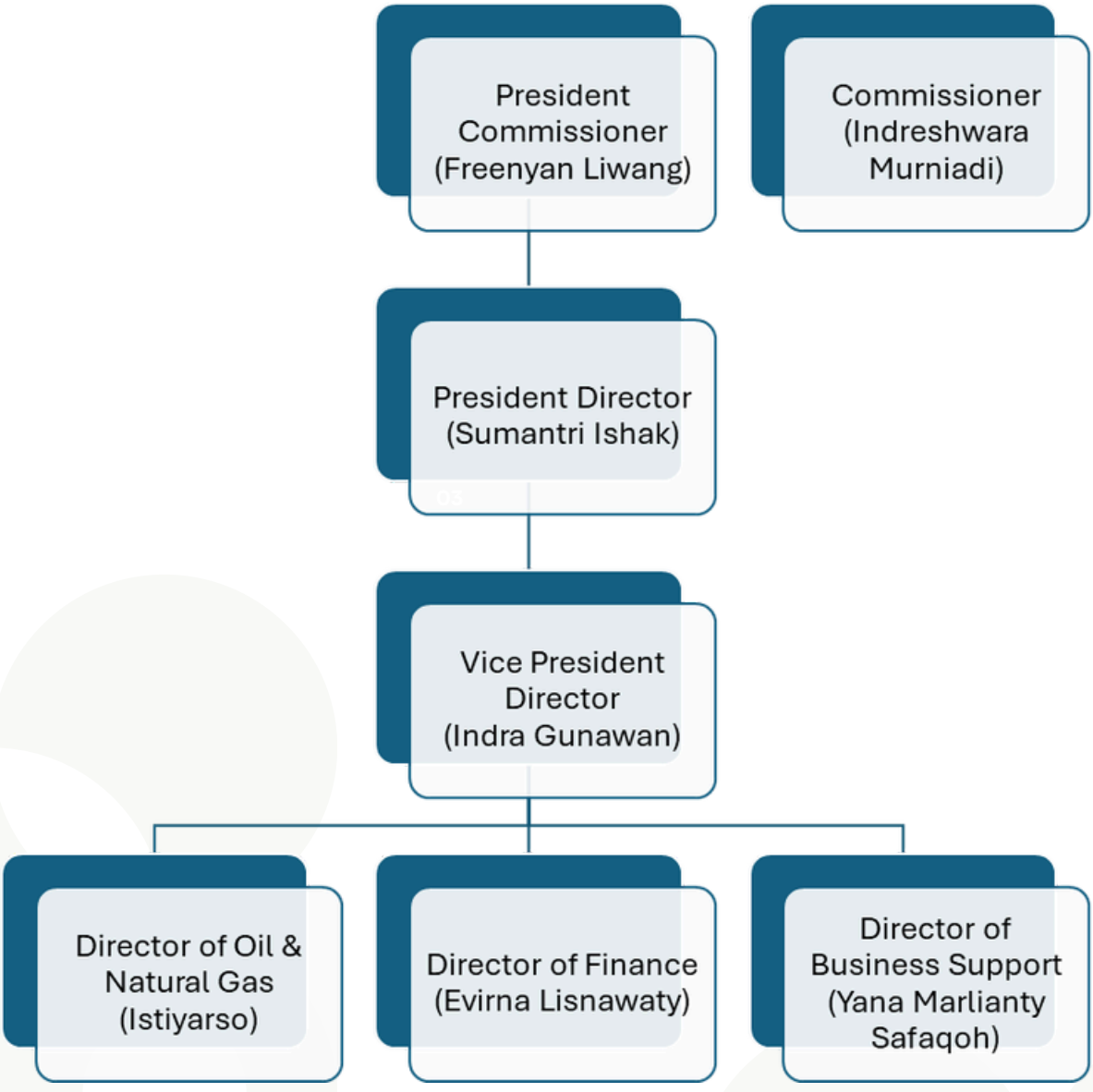
BUSINESS SECTOR (GRI 2-1)

- **Specialty Chemical Manufacturing:** The production of high-performance chemicals, encompassing polymers, wastewater treatment products (WWTPs), and various industrial chemicals.
- **Trading and Distribution:** Marketing industrial chemical products, encompassing both our proprietary production and collaborations with international partners (including Dow, Kemira, etc.).
- **Target Market:** Catering to diverse B2B (Business to Business) sectors in Indonesia and the ASEAN region.
- **Subsidiaries:** Includes subsidiaries such as PT Acme Indonesia and PT Powerindo Kimia Mineral (mining only).

OPERATIONAL DOMAIN (GRI 2-1)

- **Headquarters & Operations and Factory 1 →** Jababeka Industrial Area, Jl. Jababeka IV Block V, District 74-75, Kelurahan Pasirgombong, Kecamatan North Cikarang, Kabupaten Bekasi, West Java, Indonesia 17530.
- **Factory Plant 2 →** Jl. Bukit Akasia V Plot A II No. 19, Bukit Indah Area, Dawuan, Purwakarta Regency, West Java, Indonesia 41181.
- **Marketing Office →** The Prominence Office Tower, 12th Floor, Jl. West Silk Road No. 15, Alam Sutera, Tangerang, Banten, Indonesia 15143.

ORGANIZATIONAL FRAMEWORK (GRI 2-1)



About the Report

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MATERIAL TOPIC IDENTIFICATION PROCESS (GRI 3-1)

PT Zeus Kimiatama Indonesia acknowledges that, as a specialty chemicals manufacturer engaged in diverse strategic industrial sectors, its operational activities can significantly influence environmental, social, and governance dimensions. Consequently, the company systematically identifies and delineates material topics to ensure that this Sustainability Report accurately reflects the most pertinent and impactful issues for both the company and its stakeholders. The process of determining material topics is conducted in accordance with GRI 3: Material Topics 2021, which underscores an impact-based materiality approach.

Through this process, PT Zeus Kimiatama Indonesia identified key material topics primarily associated with process and workplace safety, hazardous waste management, emissions and pollution control, water and energy management, and adherence to environmental and industrial safety regulations. The company is dedicated to periodically reviewing these material topics to ensure their relevance to business dynamics, regulatory changes, and the evolving expectations of stakeholders.

01

Preliminary identification of pertinent sustainability concerns derived from an analysis of the chemical industry's characteristics and operational risks, along with an assessment of internal documents.

Identifying Sustainability Challenges

02

Zekindo identifies essential stakeholders who possess direct or indirect connections to the company's operations.

Identification of Stakeholder Involvement

03

Each issue will be evaluated according to two primary dimensions: the extent of actual or potential impact on the environment and society, as well as its severity and significance to the company's business sustainability.

Impact Evaluation & Prioritization

04

The outcomes of the analysis and mapping of material topics are evaluated by senior management to ensure consistency with business strategy, corporate policies, and long-term sustainability commitments.

Management Validation & Approval

LIST OF MATERIAL TOPICS (GRI 3-2)

No	Material Issues	Primary Concerns	Stakeholders	Related SDG	GRI
1	Occupational Health and Safety	• K3LH Policy and Commitment • Signage Systems and Risk Management in Operational Areas • Access Control and Safety Protocols for Visitors • Routine Medical Check-up Program • Program Athletic Event Day	Internal: Staff, contractors, operational management External: Employees' families, labor authorities		GRI-403
2	Process Safety and Industrial Accident Prevention	• Risk of fire or explosion • Production system malfunction • HIRADC Administration • Emergency response preparedness	Internal: Staff, production management External: Community stakeholders, municipal authorities, clients		GRI 403, 306
3	Hazardous Waste (B3) Management	• Hazardous chemical waste • Waste management and transportation • Waste processing and disposal in accordance with regulations • Risk of soil and water contamination	Internal: Operations and HSE teams External: Local communities, environmental authorities, waste management entities		GRI 306
4	Air Emissions and Climate Change	Enhancing air quality within the company's operational regions.	Internal: Management, operations team External: Regulatory bodies, clients, local community		GRI 305

LIST OF MATERIAL TOPICS (GRI 3-2)

No	Material Issues	Primary Concerns	Stakeholders	Related SDGs	GRI
5	Water and Wastewater Management	• Production water usage • Wastewater quality • WWTP Operations • Risk of aquatic contamination	Internal: Manufacturing operations External: Local communities, environmental authorities		GRI-303
6	Energy Efficiency	• High energy consumption • Energy efficiency and reduction initiatives	Internal: Administration & Operations External: Stakeholders, regulators, industry clients		GRI 302
7	Environmental Regulatory Adherence	• Adherence to environmental permits • PROPER KLHK • Possible sanctions or fines • Environmental assessments and evaluations	Internal: Board of Directors and Management External: Regulators, Investors, Customers		GRI 307
8	Product Safety and Security (Chemical) / Product Stewardship	• Quality and safety of chemical substances • SDS and labeling • Risks to end users • Product impact assessment	Internal: Research and Development Team, Quality Assurance/Quality Control External: Industrial clients, distributors, end users		GRI 416

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

A. Occupational Health and Safety

As a specialty chemicals manufacturing enterprise with significant operational risk potential, PT Zeus Kimiatama Indonesia has prioritized Occupational Safety and Health (OHS) as a key material topic. The company is dedicated to fostering a safe, healthy, and regulated work environment by implementing a structured management system, enhancing a safety culture, and continuously monitoring operational risks. The OHS management strategy at PT Zeus Kimiatama Indonesia is executed through formal policies, operational controls, heightened awareness, and extensive employee health protection. The Occupational Safety and Health considerations at PT Zeus Kimiatama Indonesia encompass:

- **K3LH Policy and Commitment**

PT Zeus Kimiatama Indonesia has developed and instituted an Occupational Safety, Health, and Environment (K3LH) policy that serves as the fundamental guideline for the company's operations. This policy has been communicated to all employees via official briefings, accompanied by the signing of a collective commitment to foster shared responsibility for occupational safety. Through this policy, the company underscores that safety is of paramount importance and is the responsibility of every individual in the workplace, without exception.

- **Sign Systems and Risk Management in Operational Areas**

To facilitate effective risk management, PT Zeus Kimiatama Indonesia has implemented comprehensive K3 sign across the company's premises. These signs are categorized according to the following safety color standards: blue (mandatory), yellow (warning), red (prohibition), and green (safety information).

These signs are not merely installed as a formality; they are integral to a risk control system that all employees, both in production and back office areas, must comprehend and follow. To promote a uniform understanding, the company routinely conducts safety inductions that elucidate the meaning, function, and application of each safety sign.

- **Access Control and Safety Protocols for Visitors**

As a chemical manufacturer facing potential fire risks and process hazards, the company enforces stringent safety protocols for all guests and contractors entering the operational area. These protocols encompass the use of visitor cards as official identification, Work Permits for project activities, the preparation and approval of a Job Safety Analysis (JSA) prior to the commencement of work, mandatory safety induction, a prohibition on cameras, and a smoking ban throughout all company premises. These measures are designed to mitigate the risk of fire, leaks, or other incidents that could jeopardize the safety of workers or the integrity of production facilities.

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

- **Medical Check-up Program**

As part of its commitment to employee health protection, PT Zeus Kimiatama Indonesia implements an annual Medical Check-up (MCU) program, which takes place between July and August. This initiative is applicable to all employees without exception. The medical check-up is designed to identify potential illnesses or health issues at an early stage, assess the effects of work-related exposure on health, and facilitate medical follow-up if any abnormalities are detected. This strategy underscores the company's dedication to preserving employee health in a proactive and sustainable manner.

- **Sports Day Program as a Health Promotion Initiative**

In addition to its preventive measures, PT Zeus Kimiatama Indonesia adopts a promotive strategy for employee health through the Sports Day initiative. This program is recognized as one of the company's Key Performance Indicators (KPI). All employees are mandated to engage in a sports activity of their choice, with attendance tracked via an application system featuring an attendance function. The objectives of this program include enhancing fitness and endurance, mitigating the risk of non-communicable diseases, and fostering a healthy lifestyle within the workplace. Through this initiative, the company reinforces its dedication to promoting the physical health and overall well-being of its employees.

- **Ongoing Assessment and Enhancement**

Occupational safety and health management at PT Zeus Kimiatama Indonesia is conducted continuously through the monitoring of compliance with K3LH policies, regular evaluations of safety procedures, internal audits of the safety management system, and the enhancement of a safety culture via communication and training. Employing a systematic and participatory approach, PT Zeus Kimiatama Indonesia aims to cultivate a safe, healthy, and productive work environment while mitigating the operational risks associated with the chemical manufacturing industry.

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

B. Process Safety and Prevention of Industrial Accidents

As a manufacturing entity operating within the specialty chemicals sector, PT Zeus Kimiatama Indonesia acknowledges that industrial process risk (process safety risk) constitutes a critical aspect with the potential to significantly affect employee safety, operational continuity, and the surrounding environment. Consequently, the company adopts a preventive and systematic strategy to avert industrial accidents through competency enhancement, regular oversight, equipment testing, and the cultivation of a participatory safety culture. Process safety management at Zekindo emphasizes the prevention of major accidents, the control of production process risks, and the elevation of awareness among all employees regarding potential hazards.

- **HSE Training (Health, Safety, and Environment Training)**

As a fundamental preventive strategy, the HSE team at PT Zeus Kimiatama Indonesia conducts monthly training sessions focused on occupational safety and health. This training aims to enhance employee awareness of potential hazards within the production environment, reinforce comprehension of safety protocols, elevate proficiency in applying safety principles in practice, and mitigate workplace accidents and process-related incidents. The training content is specifically tailored to address the company's operational risks, encompassing chemical handling, emergency response protocols, the use of personal protective equipment (PPE), and risk management within the production process. This methodology ensures that all employees not only grasp safety concepts theoretically but are also equipped to apply them consistently in their daily work activities.

- **HSE Monthly Assessment**

To guarantee the effective execution of OHS policies, the HSE team performs monthly inspections throughout all operational areas, with particular emphasis on production zones that present elevated risk levels. These inspections are designed to verify adherence to safety protocols, identify potential hazards, assess the utilization of PPE, and confirm the preparedness of safety equipment. The findings from these inspections are recorded and form the foundation for corrective and preventive measures. This system enables the company to detect risks early, preventing their escalation into more severe incidents.

- **K3 Inspection Examination "Riksa" (Equipment Evaluation and Testing)**

As a component of technical risk management, PT Zeus Kimiatama Indonesia conducts

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

Periodic K3 inspections of operational equipment (Riksa) are conducted to verify its suitability and adherence to safety standards. The equipment assessed includes production reactors, forklifts, fire extinguishers, lightning rods, compressors, and more. These inspections aim to ensure that all equipment is functioning optimally, to prevent technical failures that could lead to industrial accidents, and to mitigate the risk of incidents resulting from equipment malfunctions. Inspections are performed in accordance with relevant safety standards and are integral to the company's operational risk management system.

- **Safety Observation Initiative**

PT Zeus Kimiatama Indonesia promotes active employee engagement in fostering a safety culture through its Safety Observation program. This initiative is designed to enhance individual awareness of potential hazards within the work environment. Employees are encouraged to report any unsafe actions, conditions, near misses, or instances of safe behavior to the HSE team. In 2025, a total of 171 safety observation reports were documented, with 40 individuals actively participating as reporters. This data reflects a growing awareness and involvement among employees in upholding workplace safety. The program serves as a positive indicator that the safety culture at PT Zeus Kimiatama Indonesia is not solely driven from the top down, but also flourishes through the awareness of individual employees.

- **Best Safety Awarding**

In recognition of employees' dedication to the implementation of occupational safety measures, the company conducts the Best Safety Award program. This award is presented to employees who consistently exhibit adherence to and concern for OHS practices while performing their responsibilities. The program seeks to enhance employee motivation and engagement, fortify a reward-driven safety culture, and cultivate safety role models within the workplace. Through this appreciative initiative, the company establishes a safety system that is not solely reliant on oversight but also promotes a positive culture.

- **Ongoing Assessment and Enhancement**

The implementation of process safety at PT Zeus Kimiatama Indonesia is periodically assessed through monitoring inspections and test results, analyzing trends in safety observations, evaluating the effectiveness of training, and reviewing management's evaluations of potential process risks. This methodology guarantees that industrial risk control is both systematic and sustainable, thereby supporting the company's commitment to safe and responsible operations.

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

C. Hazardous (B3) Waste Management

As a specialty chemicals manufacturing entity, PT Zeus Kimiatama Indonesia (Zekindo) generates waste classified as Hazardous and Toxic Materials (B3). The management of B3 waste is recognized as a material topic due to its potential significant effects on the environment, human health, and regulatory compliance for the company. Zekindo is dedicated to ensuring that all processes related to B3 waste management are conducted responsibly, thoroughly documented, and in alignment with relevant laws and regulations. The B3 waste management practices at PT Zeus Kimiatama Indonesia are as follows:

- **Identification and Segregation of B3 Waste**

The company identifies and categorizes hazardous and toxic waste according to its characteristics and origins from production activities. The resulting waste is segregated from non-hazardous and toxic waste to prevent cross-contamination and enhance control and tracking. All hazardous and toxic waste is stored in specialized containers that comply with safety standards, are clearly labeled, and are situated in a temporary storage area designed in accordance with technical and safety requirements.

- **Collaboration with Authorized Third Parties**

In the course of transporting, utilizing, and/or disposing of hazardous waste, PT Zeus Kimiatama Indonesia partners with third parties possessing official permits and expertise in hazardous waste management. This collaboration seeks to ensure that the waste is managed by companies equipped with facilities and technology that adhere to established standards, guarantee the safe execution of transportation and processing, mitigate the risk of environmental pollution, and ensure compliance with relevant legal regulations.

Prior to entering into a partnership, the company assesses the legality and licensing of third parties to ensure that all waste management processes are conducted in compliance with regulations.

- **Documentation and Reporting**

Every procedure for the transportation and management of hazardous waste is meticulously documented, encompassing waste manifests and transfer reports to third parties. This documentation constitutes a component of the company's internal control system and evidences its adherence to environmental regulations. Additionally, the company performs periodic reporting in alignment with relevant regulations to guarantee transparency and accountability in waste management.

- **Risk Management and Environmental Impact Mitigation**

As a precautionary measure, Zekindo has established emergency protocols for spills or incidents involving hazardous waste. The HSE team conducts regular inspections of storage areas to confirm the absence of potential leaks or unsafe conditions.

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

This strategy seeks to mitigate soil and water pollution, diminish the risk of worker exposure, and uphold the company's reputation as a compliant and responsible entity within the industry.

D. Air Emissions & Climate Change

As a chemical manufacturing entity, PT Zeus Kimiatama Indonesia (Zekindo) acknowledges that its operational activities may produce air emissions, encompassing both greenhouse gases (GHG) and non-GHG emissions. Consequently, the management of air emissions and their role in climate change mitigation have been designated as essential priorities for the company. The company's strategy emphasizes not only adherence to regulatory requirements but also proactive initiatives aimed at enhancing air quality in its operational regions and minimizing its carbon footprint.

- **Enhancing Air Quality with Algatek Photobioreactor Technology**

As an integral component of its decarbonization strategy, Zekindo has adopted photobioreactor technology that harnesses microalgae to capture carbon dioxide (CO_2) from the atmosphere. This technology operates through the natural process of photosynthesis, wherein microalgae transform CO_2 into biomass and oxygen. The deployment of this technology seeks to enhance air quality within the workplace, bolster Carbon Dioxide Removal (CDR) initiatives, and exemplify the company's dedication to sustainable technological innovation. This initiative represents a tangible effort by the company to contribute to climate change mitigation while fostering a healthier work environment.

- **Scope 2 Emission Reduction via Solar Panel Implementation**

In addition to managing direct emissions, the company is actively engaged in minimizing indirect emissions (Scope 2) associated with electricity consumption. To achieve this objective, PT Zeus Kimiatama Indonesia has adopted solar panels as an alternative energy source to bolster its operations. The utilization of solar energy presents numerous advantages, such as decreasing reliance on fossil fuel-based electricity, lowering indirect carbon emissions from electricity usage, and facilitating a cleaner, more sustainable energy transition. Replacing a portion of the company's conventional electricity requirements with solar energy is integral to its energy efficiency strategy and the progressive reduction of its carbon footprint.

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

E. Water and Wastewater Management

Water management represents a significant environmental concern for PT Zeus Kimiatama Indonesia (Zekindo), particularly due to the inherent requirements of the chemical manufacturing industry, which relies heavily on water for its operational processes. The company implements measures to optimize water consumption and ensure that the wastewater generated complies with applicable quality standards. According to internal monitoring data from 2025, the company's water consumption exhibits seasonal fluctuations. The peak consumption occurred in May, while comparatively lower levels were observed in July and September. This variability is influenced by production activity levels and operational demands during each period. Water consumption is systematically monitored on a monthly basis to maintain control and efficiency. This data underpins evaluations aimed at reducing water use intensity and identifying opportunities for enhanced efficiency.

To ensure compliance with environmental regulations, PT Zeus Kimiatama Indonesia performs regular wastewater quality testing, focusing on key parameters specified in applicable quality standards.

- **Semiannual Evaluation**

During the semiannual monitoring, Total Dissolved Solids (TDS) and color parameters were documented as exceeding the quality standard range for a designated period. These findings provide the foundation for an internal assessment aimed at refining the treatment process and enhancing the wastewater control system.

- **Monthly Oversight**

During monthly monitoring, the primary parameters of concern are Chemical Oxygen Demand (COD) and ammonia. These parameters are routinely assessed to ensure that wastewater quality does not adversely affect the aquatic environment. If values are found to be near or exceeding quality standards, the company promptly implements corrective measures, including evaluating the production process, inspecting the wastewater treatment system, and enhancing operational controls.

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

F. Energy Efficiency

Energy management is a central component of PT Zeus Kimiatama Indonesia's (Zekindo) sustainability strategy, particularly due to the substantial energy demands of the chemical manufacturing sector. The company enhances energy efficiency through operational controls and the integration of renewable energy sources. According to electricity consumption monitoring data for 2025, electricity usage varies, influenced by monthly production activity levels. Consumption gradually increased during the first quarter, peaking in July. Following this peak, usage stabilized, exhibiting a downward trend in November and December.

These fluctuations illustrate the dynamics of production operational loads and the necessity for supporting utilities. Electricity consumption is monitored monthly as an integral component of the company's energy management system. In pursuit of energy efficiency and to diminish reliance on conventional electricity, Zekindo has adopted solar panels as a supplementary energy source. This utilization of solar energy aims to decrease fossil fuel-based electricity consumption, lower indirect carbon emissions, optimize long-term energy expenses, and facilitate the transition to cleaner energy.

G. Environmental Regulatory Compliance

PT Zeus Kimiatama Indonesia has implemented regulatory compliance pertaining to sustainability and environmental considerations, including:

No	Regulation	Topics Addressed
1	UU No. 32 Tahun 2009	Environmental Protection and Management
2	PerMenLHK No.19 tahun 2010	Wastewater Quality Standards for Oil and Gas and Geothermal Enterprises and/or Operations
3	PerMenLHK No. 68 Tahun 2016	Domestic Wastewater Quality Standards
4	PerMenLHK No. 14 Tahun 2013	Hazardous (B3) Waste Symbols and Labels
5	PerMenLHK No. 80 Tahun 2019	Continuous and Online Monitoring of Wastewater Quality for Enterprises and/or Operations
6	UU No. 18 Tahun 2008	Waste Management

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

No	Regulation	Topics Addressed
7	UU No. 7 Tahun 2004	Water Resources
8	PerMenLHK No. 06 Tahun 2021	Procedures and Requirements for the Management of Hazardous and Toxic Waste, B3 Waste Documentation, B3 Waste Management Technical Specifications
9	PP No. 22 Tahun 2021	Implementation of Environmental Conservation and Management
10	Surat Edaran Menteri Perindustrian No. 2 Tahun 2023	Reporting on the Regulation of Exhaust Gas Emissions in the Industrial Sector within the Special Capital Region of Jakarta, West Java Province
11	UU RI No. 18 Tahun 2008	Waste Management
12	UU RI No. 32 Tahun 2009	Environmental Stewardship and Governance
13	PermenLHK No. 06 Tahun 2021	Procedures and Requirements for B3 Waste Management
14	PP RI No. 74 Tahun 2001	Hazardous and Toxic Substances
15	KepmenLH No. 48 Tahun 1996	Noise Level Standard
16	PermenLHK No. 5 Tahun 2018	Standards and Competency Certification for Individuals Responsible for Wastewater Treatment Operations and Individuals Responsible for Air Pollution Control
17	PermenLHK No. 74 Tahun 2019	Emergency Program for the Management of Hazardous and Toxic Materials and/or Waste from Hazardous and Toxic Materials

MANAGEMENT OF MATERIAL TOPICS (GRI 3-3)

H. Product Safety and Security (Chemical/Product Stewardship)

As a specialty chemicals manufacturer catering to diverse strategic industrial sectors, PT Zeus Kimiatama Indonesia (Zekindo) places a premium on product safety and security. Chemical products possess attributes that necessitate stringent controls regarding hazard information, handling, storage, and distribution to guarantee user safety and mitigate adverse environmental impacts. The company maintains compliance with relevant quality, safety, and regulatory standards for every product it supplies.

- **Implementation of the Safety Data Sheet (SDS)**

Zekindo has adopted a structured Safety Data Sheet (SDS) for all products on the market. The SDS is developed in compliance with relevant standards and includes detailed information pertaining to product and company specifics, hazard identification, composition and material details, first aid protocols, fire prevention strategies, spill and waste management, handling and storage guidelines, exposure controls and personal precautions, physical and chemical properties, stability and reactivity, toxicological data, ecological considerations, disposal guidelines, transportation details, regulatory information, and additional relevant information.

- **Structured Product Labeling Framework**

In addition to SDSs, the company implements a clear and structured product labeling system for each package. This labeling system is designed to ensure that safety information is readily comprehensible to users, distributors, and other stakeholders within the supply chain.

- **Quality Assurance and Product Assessment**

Product safety is further reinforced by a quality control system established prior to distribution. This process encompasses product quality testing conducted by the QC team, verification of adherence to technical specifications, and a pre-market safety evaluation. This methodology guarantees that products delivered to customers align with the company's defined quality and safety standards.

Sustainability Strategies

04

SUSTAINABILITY STRATEGIES 04

No	Sustainability Strategy	Corporate Commitment	Corporate Initiatives and Accomplishments	Corporate Accomplishments
1	Energy Efficiency and the Transition to Clean Energy	Systematically decrease energy intensity and operational emissions.	Utilization of solar panels to diminish reliance on conventional energy. Monitoring of electricity consumption in 2025 as a benchmark for energy efficiency.	The utilization of solar panel lamps is a significant factor contributing to the reduction of electricity consumption among companies.
2	Carbon Dioxide Removal (CDR)	Developing initiatives aimed at enhancing air quality within the company's operational vicinity.	Implementation of technology through the use of microalgae to enhance air quality, thereby supporting the improvement of air quality in the vicinity of the plant's operational area.	The company has installed four photobioreactors designed to enhance air quality.
3	Circular Economy-Driven Waste Management	Implementing principles of a circular economy in waste management	Waste separation system to enhance the effectiveness of waste management. Converting organic waste into natural fertilizer. Promoting reforestation and minimizing organic waste.	The company regularly gathers coffee grounds from office activities, collecting approximately 1 kg each week that would otherwise be discarded as waste.

SUSTAINABILITY STRATEGIES 04

No	Sustainability Strategy	Corporate Commitment	Corporate Initiatives and Accomplishments	Corporate Accomplishments
4	Environmental Conservation and Water Management	Utilization of organic waste to enhance water absorption in the vicinity of the company.	The Biopore program involves the creation of infiltration holes to enhance water absorption capacity, minimize puddles, and promote the equilibrium of soil microorganisms.	These biopores can effectively diminish the volume of organic waste within a company, as they serve as agents to enhance water absorption capacity.
5	Corporate Social Responsibility (CSR)	Supporting the advancement of national education and research while delivering sustainable social contributions to society.	1. Collaboration on product research with prominent universities in Indonesia to foster innovation and facilitate knowledge transfer. 2. A recognition program for exceptional high school students through the awarding of scholarships. 3. Financial assistance for students' extracurricular activities, including the Children's Football School affiliated with the Bandung City PSSI Association. 4. Continual social initiatives and contributions aimed at enhancing the quality of life.	
6	Health, Safety, and Environmental Excellence	Fostering a safety culture as an employee responsibility involves establishing a secure and healthy workplace.	1. Implementation of an occupational health and safety management system in accordance with ISO 45001. 2. Proper and regulatory management and handling of chemical waste. 3. Ongoing safety training for employees. 4. Collective accountability for the safety of oneself, colleagues, contractors, and the surrounding community.	

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

- **Energy Efficiency and the Transition to Clean Energy**

PT Zeus Kimiatama Indonesia is minimizing energy intensity and operational emissions by optimizing resources and transitioning to cleaner energy sources. The implementation of solar panels as an alternative energy solution represents a significant initiative aimed at decreasing reliance on conventional electricity. Additionally, the company is shifting from diesel to natural gas to enhance combustion efficiency and lower carbon and particulate emissions.

- **Carbon Dioxide Sequestration (CDS)**

Field surveys have been conducted to assess air quality and the operational conditions of the combustion and waste processing systems, supporting improved environmental performance and operational sustainability. These initiatives encompass the measurement of carbon monoxide (CO), oxygen (O_2), and ammonia (NH_3) concentrations at various strategic locations within the operational area. The overall evaluation results demonstrate that ambient air quality and gas emission control within the company's operational area are satisfactory and adhere to relevant regulations. The primary challenges that necessitate further focus include regulating the temperature of the work environment and the ongoing monitoring of air quality surrounding the operational area of PT Zeus Kimiatama Indonesia.

Air quality management in operational areas —including heat control and routine monitoring—supports a safe, healthy, and sustainable work environment. Zekindo has also implemented microalgae-based technology to further improve air quality. Microalgae are a group of microscopic plants classified as algae, with diameters ranging from 3 to 20 micrometers, existing as both single cells and colonies in various freshwater and marine environments, commonly referred to as phytoplankton. The morphology of microalgae can be unicellular or multicellular, yet they lack a clear division of labor among their component cells, distinguishing them from higher plants (Widyaningrum et al., 2013). Microalgae possess the capability to absorb CO_2, with their fixation efficiency being 10 to 50 times greater than that of terrestrial plants (Wang et al., 2008).

This technology is referred to as a photobioreactor. A microalgae photobioreactor is a sealed reactor system meticulously engineered for the regulated cultivation of microalgae, facilitating optimal photosynthesis for biomass production, along with the absorption and biofixation of carbon dioxide (CO_2).

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

- **Carbon Dioxide Removal (CDR)**

In the context of carbon capture, photobioreactors are essential as microalgae can directly absorb CO_2 from emission sources via photosynthesis, transforming CO_2 into organic matter that constitutes biomass while releasing oxygen (O_2) as a byproduct. The CO_2 gas entering the reactor is typically introduced through gas injection or a two-phase (gas-liquid) flow system to enhance the efficiency of CO_2 transfer into the culture medium, which is subsequently metabolized by the microalgae cells. Photobioreactors serve not only as a biological cultivation system but also as a pivotal technology in emission reduction strategies and the transition to a low-carbon economy, particularly when developed in a scalable manner and integrated with contemporary industrial processes and energy systems.

During its implementation, Zekindo has installed five Photobioreactor units, two of which are situated indoors at Plant 1 Jababeka, while the remaining three are located indoors at The Prominence Tower, Alam Sutera. The selection of Photobioreactor technology aligns with the zero-waste principle, as it not only serves to enhance air quality but also allows the refreshed algae water to be utilized for bioremediation, thereby improving soil fertility. Algae that have become concentrated in color will undergo a technical refresh, involving the replacement of water and the introduction of a new algae culture.

Photobioreactor 15L → Room 12E, The Prominence Tower, Alam Sutera

Photobioreactor 40L → Room 12D, The Prominence Tower, Alam Sutera

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

- **Carbon Dioxide Sequestration (CDS)**

The implementation of this technology not only bolsters the company's carbon dioxide removal strategy but also enhances the comfort and quality of the workspace environment. Below are testimonials from users in the laboratory area:

Ema Halimah - Manager of DTA

"In my view, the utilization of Algatek products can be encapsulated in three terms: effective, applicable, and cost-efficient. This technology is not only straightforward to integrate into our work environment but also delivers substantial advantages in enhancing air quality within the laboratory."

Meeting Room 1 Plant 1 Jababeka PT Zeus Kimiatama Indonesia (6x5 m).

Josephine Christine Utomo - QMS Manager

"This initiative, executed in partnership with the Algatek team, represents a forward-thinking approach to enhancing indoor air quality. The inclusion of the photobioreactor unit fosters a more pleasant and invigorating work environment, despite being indoors. Additionally, the Algatek team consistently offers education on microalgae and maintenance guidance for the unit, ensuring we comprehend its advantages and how to manage it effectively."

Laboratory Room Plant 1 Jababeka PT Zeus Kimiatama Indonesia (22 x 10 m) Photobioreactor 100L.

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

The company utilizes the treated wastewater to irrigate plants and the adjacent soil. This process can enhance soil fertility, as the microalgae employed in wastewater treatment are particularly adept at eliminating heavy metals (HMs). The nutrients and energy present in pollutants like heavy metals can facilitate the growth and development of microalgae (Vieites et al., 2022).

According to Kusuma et al. (2024), various complex marine microalgae species possess the ability to produce heavy metal-binding peptides. These peptides are subsequently transported and sequestered in cell vacuoles to meticulously regulate the concentration of heavy metals in the cytoplasm, thereby mitigating or neutralizing the toxic effects of metals on cellular structures. The removal of heavy metals, particularly mercury, by microalgae occurs through two primary mechanisms. The first mechanism is rapid extracellular passive adsorption (biosorption), while the second involves a slower intracellular active transport process that leads to the accumulation of metals within the cell (bioaccumulation) (Priatni et al., 2018).

Microalgae cell walls primarily consist of lipids, organic proteins, and polysaccharides, including alginate and cellulose. These constituents feature a range of functional groups capable of binding heavy metals, such as thiol, phosphate, amino, hydroxyl, carboxyl, imidazole, and sulfonate groups (Priatni et al., 2018). Additionally, they possess numerous carboxyl groups, deprotonated sulfates, and monomeric alcohols that exhibit a strong affinity for both cationic and anionic forms of various heavy metals (Pradhan et al., 2019).

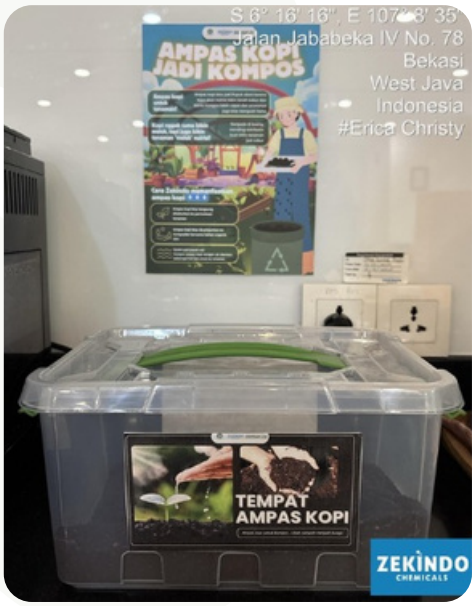
Mr. Aman - Gardener

"The water derived from the microalgae cultivation has been utilized to irrigate the plants in the company's garden, encompassing potted plants and seedlings such as palm, guava, teak, and ketapang. My observations suggest that the plants are growing at a noticeably accelerated rate compared to prior growth."

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

- **Circular Economy-Driven Waste Management**

In support of environmental conservation and sustainability principles, PT Zeus Kimiatama Indonesia manages the organic waste generated from its daily operations. One initiative undertaken is the separation and repurposing of coffee grounds. Coffee consumption is a regular practice among employees, resulting in the generation of waste in the form of coffee grounds. If not properly managed, this waste could exacerbate the growing volume of organic waste. Consequently, PT Zeus Kimiatama Indonesia has instituted a waste sorting system at the source to effectively separate the coffee grounds.



The discarded coffee grounds are not immediately disposed of; instead, they are collected and repurposed as organic fertilizer. Coffee grounds contain nutrients beneficial for plant growth, making them suitable for supporting reforestation and plant care initiatives in the surrounding area.

The application of coffee grounds as an organic fertilizer has been extensively examined in the scientific literature and is integral to innovations in sustainable organic waste management. Coffee grounds are rich in essential nutrients, including nitrogen (N), phosphorus (P), and potassium (K), as well as organic matter that can enhance soil fertility and promote plant growth when appropriately utilized (Alifah and Agus, 2025). The incorporation of coffee grounds as a fertilizer has demonstrated beneficial effects on soil's chemical and biological properties. For instance, research assessing spent coffee grounds (SCGs) as an organic fertilizer revealed that the addition of coffee grounds to the soil elevated organic matter content and macronutrients such as nitrogen and phosphorus, thereby enhancing soil fertility and nutrient availability for plants (Sinclair et al., 2024).

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

- **Circular Economy-Driven Waste Management**

The coffee grounds sorting and utilization program at PT Zeus Kimiatama Indonesia has been consistently executed since September 2025. Since its inception, the company has regularly collected coffee grounds from office activities, gathering approximately 1 kg of coffee grounds that would have otherwise been discarded as waste on a weekly basis. Through this sorting process, all coffee grounds are excluded from the mixed waste stream and are instead managed separately for reuse as organic fertilizer. This initiative significantly aids in diminishing the volume of organic waste directed to landfills (TPA).

From a sustainability and climate change perspective, minimizing the organic waste sent to landfills significantly mitigates potential greenhouse gas emissions, particularly methane (CH_4), which is typically generated from the anaerobic decomposition of organic materials in landfills. By diverting coffee grounds from the waste stream and repurposing them as fertilizer, companies indirectly aid in the reduction of methane emissions. Additionally, employing coffee grounds as fertilizer diminishes reliance on chemical fertilizers, which possess their own carbon footprint throughout their life cycle, encompassing production, distribution, and application.

This program not only influences waste management but also contributes to the implementation of circular economy principles within PT Zeus Kimiatama Indonesia. Moving forward, regularly documenting the quantity of coffee grounds collected can act as an environmental performance indicator for the company, as well as a foundation for assessing the program's concrete impact on waste reduction and potential decreases in greenhouse gas emissions.

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

- **Corporate Social Responsibility (CSR)**

Occupational safety and health constitute a paramount focus within Zekindo's sustainability strategy. The company is dedicated to fostering a safe, healthy, and regulated work environment by implementing an Occupational Health and Safety Management System in alignment with ISO 45001 standards. Each employee bears responsibility for their own safety, as well as that of their colleagues, contractors, and the surrounding community.

This commitment is actualized through systematic hazard identification and risk management, compliance with regulations regarding chemical waste, regular occupational safety training, and preparedness for emergencies. By cultivating a robust safety culture, the company aims to reduce the risk of workplace accidents and ensure the ongoing safety of operations.

CSR Tree Planting at ITB Cirebon Campus

Zekindo Scholarship for Outstanding Students

Repair of the SMAN 1 Kibang Basketball Hoop

Bantuan Modernisasi Laboratorium Teknik Kimia ITB

1. IMPLEMENTATION OF SUSTAINABILITY STRATEGIES

- **Health, Safety and Environment (HSE)**

Zekindo asserts that business success should align with contributions to social development. The company partners with several prominent universities in Indonesia for product research, fostering innovation and human resource development. As a gesture of appreciation for the younger generation, the company consistently offers scholarships to outstanding high school students.

and supports financing for external student activities, including the Children's Football School affiliated with the Bandung City Football Association (PSSI). Additionally, the company engages in social initiatives and donations aimed at enhancing the community's quality of life. This strategy underscores the company's dedication to fostering harmonious relationships with the community and contributing to sustainable development.

HSE Training - APAR

K3LH Commitment of PT Zeus Kimiatama Indonesia

ISO 45001 Certificate

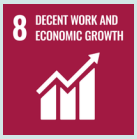
2. COLLABORATION WITH STAKEHOLDERS

PT Zeus Kimiatama Indonesia promotes sustainability through constructive and continuous collaboration with stakeholders. As a specialty chemicals manufacturer catering to various strategic industrial sectors, the company fosters transparent communication, open dialogue, and enduring partnerships with all parties involved in its operations and performance. This strategy is in accordance with the reporting and stakeholder engagement principles advocated by the Global Reporting Initiative standards.

PT Zeus Kimiatama Indonesia identifies stakeholders according to their influence and impact on the company's operations. Key stakeholders encompass employees and management, industrial customers and business partners, suppliers and contractors, regulators and government agencies, as well as communities surrounding operational areas. Stakeholder input serves as the foundation for identifying material topics and formulating the company's sustainability strategy. Regular dialogue enables the company to comprehend evolving expectations and risks, ensuring that implemented policies and programs remain relevant and yield a positive impact. This collaboration also strengthens mutually beneficial relationships, enhances trust, and creates shared value for all parties involved. Zekindo continues to expand and deepen stakeholder engagement through greater transparency, stronger two-way communication, and collaborative programs that promote sustainable and responsible industrial growth.

3. HOW OUR SUSTAINABILITY STRATEGIES SUPPORT THE SDGS

PT Zeus Kimiatama Indonesia (Zekindo) supports the advancement of the Sustainable Development Goals (SDGs) as an integral part of its corporate responsibility to promote inclusive and sustainable development. The company's contributions are realized through the incorporation of environmental, social, and governance factors into its business operations and strategies. Below are the primary SDGs pertinent to the company's sustainability initiatives and programs:

SDG	Aspect	Corporate Commitment
	Optimal Health and Well-being	• Implementation of the Occupational Health and Safety Management System (ISO 45001). • Annual routine medical examination program for all employees. • Sport Day program as an initiative to promote a healthy lifestyle. • Implementation of photobioreactor technology to enhance air quality in workplace environments.
	Clean Water and Sanitation	• Consistent assessment of wastewater quality (TDS, color, COD, ammonia). • Wastewater management in accordance with quality standards. • Implementation of the biopore program to enhance the quality of water resources.
	Affordable and Sustainable Energy	• The implementation of solar panels as an alternative energy source. • Initiatives to enhance electricity consumption efficiency. • Conversion of fuel from diesel to natural gas to enhance energy efficiency.
	Sustainable Employment and Ergonomic Development	• Employing over 200 individuals. • Implementation of rigorous occupational safety standards. • Enhancement of competencies through regular HSE training. • Best Safety Award Program.

3. HOW OUR SUSTAINABILITY STRATEGIES SUPPORT THE SDGS

SDG	Aspect	Corporate Commitment
	Industry, Innovation, and Infrastructure	• University research collaboration. • Development of specialty chemical products for diverse industrial sectors.
	Sustainable Consumption and Production	• Management of B3 waste via authorized third-party services. • Domestic waste segregation initiative. • Transforming coffee grounds into compost. • Provide a Safety Data Sheet (SDS) and an organized product labeling system.
	Climate Initiative	• Reduction of Scope 2 emissions via solar panels. • Implementation of microalgae-based Carbon Dioxide Removal (CDR). • Transitioning fuel sources to natural gas.
	Peace, Justice, and Robust Institutions	• Adherence to environmental and industrial regulations. • Management system based on international standards. • Transparency in sustainability reporting.

Through these diverse initiatives, PT Zeus Kimiatama Indonesia continuously enhances its contribution to the Sustainable Development Goals (SDGs) through a measurable and sustainable approach. The company will persist in incorporating sustainable development principles into its business strategy to generate long-term value for the environment, society, and stakeholders.

DOCUMENTATION PERTAINING TO SUSTAINABLE STRATEGY ASSISTANCE FOR SDG

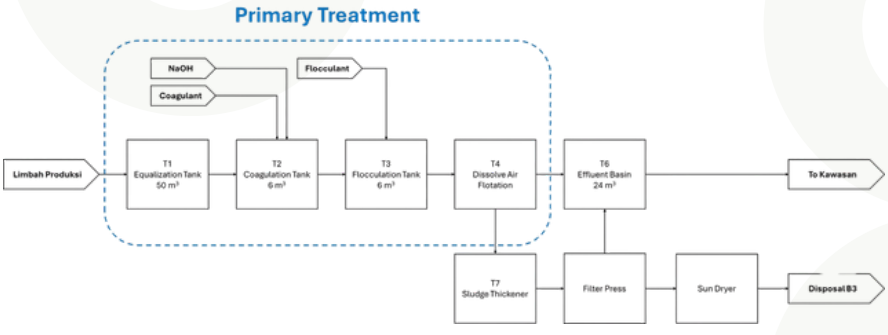
1. SDG 7 - Affordable and Clean Energy

The implementation of solar panel lamps represents an initiative to decrease electricity consumption within the company. A total of 17 solar panel lamps have been installed at various locations within PT Zeus Kimiatama Indonesia's Plant 1.



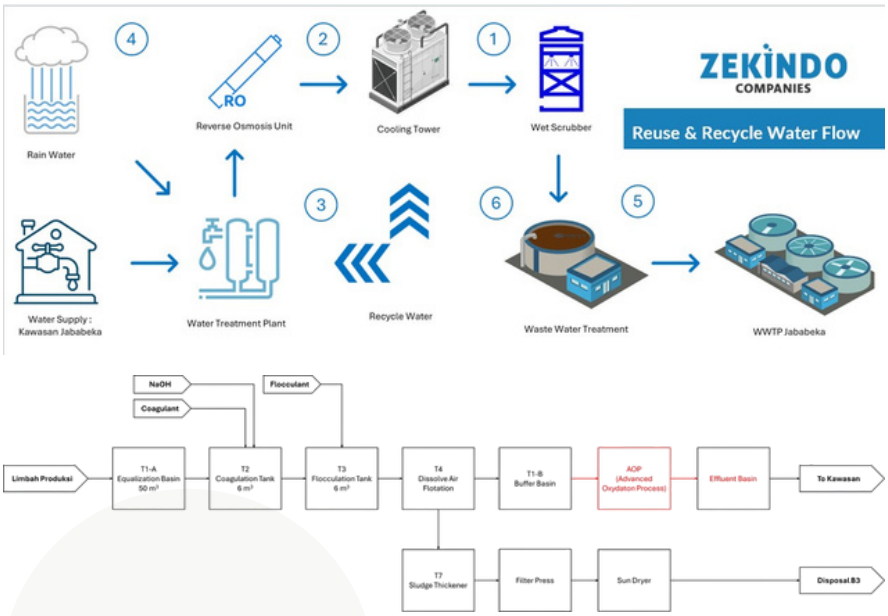
2. SDG 6 - Clean Water and Sanitation



Existing WWTP Diagram

DOCUMENTATION PERTAINING TO SUSTAINABLE STRATEGY ASSISTANCE FOR SDG



WWTP Future Project

The current system and the forthcoming project utilize identical fundamental processes: equalization, coagulation, flocculation, and Dissolved Air Flotation (DAF), along with a consistent sludge handling pathway (Filter Press → Sun Dryer → Hazardous Waste Disposal). The primary distinction between the future project and the existing system lies in the incorporation of the Advanced Oxidation Process (AOP) prior to entering the effluent basin.

AOP is employed to decompose dissolved pollutants, including COD, color, and micropollutants, which cannot be eliminated through physical treatment alone. This system is engineered to yield higher-quality output and comply with more stringent discharge standards.

Zeus WWTP Unit Inlet vs Outlet Table

Parameter	Standard	Unit	Inlet	Outlet
pH	6-9		8,5	7,71
TSS	<400	mg/L	255,56	82,18
TDS	<2000	mg/L	3704,97	2738,19
Ammonia	<5	mg/L	12,37	32,15
COD	<200	mg/L	3544	1059,74

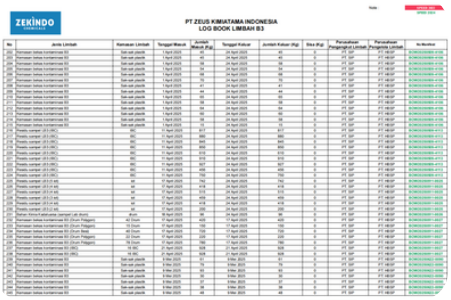
DOCUMENTATION PERTAINING TO SUSTAINABLE STRATEGY ASSISTANCE FOR SDG

2. SDG 12 - Sustainable Consumption and Production

Categorizing waste by type

Blue	:	Anorganic Based Paper
Grey	:	Residue
Red	:	Hazardous Waste
Green	:	Organic
Yellow	:	Anorganic

Hazardous and Toxic Waste (B3) that has been sorted is subsequently transferred to a licensed third party, PT Harapan Baru Sejahtera Plastik, for further processing. The transportation of B3 waste is conducted by PT Sugema Indah Perkasa in compliance with relevant laws and regulations.



The waste is subsequently processed at an incineration facility that complies with B3 waste management standards. As a means of accountability and verification of the management process, PT Harapan Baru Sejahtera Plastik issues a B3 Waste Management Certificate that includes comprehensive details regarding the type of waste, acceptance period, Festronik number, and quantity of waste managed.

4. ESG ANALYSIS

- **Environmental**

As a chemical enterprise, environmental considerations are paramount in the company's operational management. Key risks associated with this sector include high energy consumption, potential greenhouse gas emissions, chemical waste management, and effects on air and water quality. Zekindo employs various mitigation strategies to minimize these environmental impacts. In energy management, the company has adopted solar panels as an alternative energy source and transitioned from diesel to natural gas to enhance combustion efficiency and decrease carbon emissions.

Furthermore, the adoption of microalgae-based Carbon Dioxide Removal (CDR) technology via a photobioreactor system underscores the company's dedication to advancing decarbonization initiatives and enhancing air quality within its operational environment. In the realm of waste management, the company has instituted a domestic waste sorting system and processes organic waste, such as coffee grounds, into compost to promote the greening of its facilities. Additionally, a biopore program has been established to enhance groundwater absorption, mitigate flooding risks, and support the equilibrium of the local ecosystem. Through this strategy, Zekindo aims to evolve from mere regulatory compliance to a more proactive approach in environmental management, emphasizing efficiency and innovation.

- **Social**

The social aspect of Zekindo's ESG framework emphasizes occupational safety and health, human resources development, and community engagement. Given the high-risk nature of the industry, occupational safety and health are paramount. The company has established an Occupational Health and Safety Management System in alignment with ISO 45001 standards to guarantee a secure and regulated work environment. Systematic measures for hazard identification, risk management, safety training, and emergency preparedness are employed to mitigate the likelihood of workplace accidents and their repercussions on employees and the surrounding community.

Moreover, Zekindo plays a vital role in education and community development by engaging in research collaborations with prominent Indonesian universities. The company's commitment to human resource development is exemplified through a scholarship program for high-achieving high school students and support for student outreach initiatives, including the Children's Football School under the Bandung City Football Association (PSSI). Regular social activities and donations further enhance the harmonious relationship between the company and the local community, thereby fostering a sustainable social license to operate.

4. ESG ANALYSIS

- **Governance**

Effective corporate governance serves as a fundamental pillar for the successful execution of ESG strategies. Zekindo adheres to the principles of transparency, accountability, and compliance with relevant environmental and industry regulations. As a chemical manufacturing entity, the company's internal control system encompasses adherence to environmental permits, management of hazardous waste, and regular audits and inspections. Health, Safety, and Environment (HSE) oversight is seamlessly integrated with operational risk management. Furthermore, the company prioritizes integrity in its business practices, fostering strong relationships with customers, suppliers, and partners.

This strategy seeks to protect the company's reputation, mitigate legal and operational risks, and ensure long-term business viability. Overall, PT Zeus Kimiatama Indonesia has exhibited a robust commitment to the integrated management of Environmental, Social, and Governance factors. Key challenges within the chemical industry, including emissions, waste management, and occupational safety, are addressed through a blend of technological innovation, a standardized management system, and collaboration with stakeholders. Moving forward, the company will enhance its ESG strategy through more structured performance measurement, the establishment of quantitative targets, and the formulation of a medium- and long-term sustainability roadmap to ensure competitive, responsible, and sustainable business growth.

Sustainable Management Standard

ISO

SUSTAINABLE MANAGEMENT STANDARD 05

In line with its responsible and sustainable environmental management practices, PT Zeus Kimiatama Indonesia (Zekindo) has achieved the ISO 14001: Environmental Management System certification. This certification signifies that the company has established a structured, documented, and integrated environmental management system within its business operations. ISO 14001 serves as an international standard that outlines the framework for systematically and sustainably identifying, controlling, and mitigating the environmental impacts of a company's operational activities. By implementing ISO 14001, PT Zeus Kimiatama Indonesia guarantees the consistent management of the following aspects, including:

Identification and assessment of environmental aspects and impacts

1. Management of air emissions and liquid waste
2. B3 waste management in compliance with regulations
3. Optimal utilization of energy and resources
4. Adherence to relevant environmental regulations
5. Follow-up regarding potential environmental risks

This system promotes a proactive strategy for reducing adverse environmental effects and ensuring adherence to legal standards. By acquiring and upholding ISO 14001 certification, Zekindo enhances the confidence of customers, regulators, and business partners in the company's operations, which are executed with significant and professional environmental awareness. This certification further reinforces the company's standing as a responsible chemical manufacturer dedicated to sustainable industrial advancement.

Challenges & Mitigation Strategies

CHALLENGES & MITIGATION STRATEGIES 06

In fulfilling its sustainability commitments, PT Zeus Kimiatama Indonesia (Zekindo) acknowledges the various challenges that necessitate strategic management, especially as a chemical manufacturing entity characterized by complex and high-risk operations. The company actively identifies these challenges and formulates mitigation strategies to ensure the effective and consistent implementation of sustainability initiatives.

- **Culture of Safety, Equality, and Employee Engagement**

Maintaining a consistent safety culture in a high-risk industry necessitates the active participation of all employees. It is crucial to recognize that achieving this consistency is a formidable challenge, particularly for the entire workforce, and it poses a significant task for the company to perpetually cultivate a safety culture. Zekindo's mitigation efforts encompass the monthly recognition of individuals who effectively apply OHS principles and the provision of monthly refresher courses on OHS-related topics during HSE training.

- **Adherence to Evolving Regulations**

Environmental and safety regulations within the chemical industry are continually evolving and becoming more stringent. This poses a challenge for PT Zeus Kimiatama Indonesia, which has implemented a mitigation measure by monitoring regulatory updates.

- **ESG Integration within Business Strategy**

Integrating ESG considerations into business decisions necessitates the enhancement of reporting and performance measurement systems. Mitigation strategies encompass the monitoring of energy, water, waste, and safety data, the preparation of regular sustainability reports, and the establishment of sustainability improvement targets across all dimensions.

Zekindo perceives sustainability challenges as an opportunity to enhance competitiveness and boost operational efficiency. By employing a risk-based approach, fostering continuous improvement, and leveraging technological innovations such as microalgae-based photobioreactors, the company is dedicated to progressively advancing its environmental, social, and governance performance. Looking ahead, the company will persist in reinforcing the integration of sustainability into its strategic and operational planning to ensure responsible, resilient, and sustainable business growth.

References & Editorial Team

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REFERENCES 07

- Global Reporting Initiative (GRI Standards 2021)
- https://zekindo.co.id/id/
- International Organization for Standardization – ISO 14001: Environmental Management System.
- International Organization for Standardization – ISO 45001: Occupational Health and Safety Management System.
- Kusuma, Heri.S., Nafisa, Illiyanasafa., Debora,Engelien,C.J., Handoko, Darmokoesoemo., and Nicky, Rahmana.P. 2024/ Utilization of the Microalga *Chlorella vulgaris* for Mercury Bioremediation from Wastewater and Biomass Production. *Sustainable Chemistry and Pharmacy*, 37(2024): 1-11.
- Priatni, S., Ratnaningrum, D., Warya, S., Audina, E. 2018. Phycobiliproteins Production and Heavy Metals Reduction Ability of Porphyridium Series : Earth and Environmental Science. *Institute of Physics Publishing*, 160(2018).
- Sinclair, Catherine.L., Peter, J.Inga., Gabrielle, Duani.,and Fraser, R.T. 2024. Spent Coffee Grounds (SCGs) as a Soil Amendment : The Effects of Composting Time on Early Sunflower Development. *Environments*, 11(2024): 1-21.
- Vieites, M.Blanco., D.Suarez-Montes., F.Delgado., M.Alvarez-Gil., A.Hernandez, Battez., and E. Rodriguez. 2022. Removal of Heasvy Metals and Hydrocarbons by Microalgae from Wastewater in the Steel Industry. Algal Research, (64) : 1-10.
- Wang, B., Li, Y., Wu, N., and Lan, C.Q. 2008. CO2 Bio-Mitigation Using Microalgae. *Applied Microbiology and Biotechnology*, 79(5): 707.
- Widyaningrum, N.F., Bambang, S., dan M, Bagus.H. 2013. Studi Eksperimental Fotobioreaktor Photovoltaic untuk Produksi Mikroalga (*Nannochloropsis oculata*). *Jurnal Biopress Komoditas Tropis*, 1(2).

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