

RISK MANAGEMENT APPROACH AT PT. RECYCLED PAPER HUB

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Abstract

This study specifically encompasses the risk analysis faced by PT. Recycled Paper Hub, a company engaged in the recycled waste paper industry. Through a risk analysis method based on ISO 31000:2018, this research assesses the impact and likelihood of risks and categorizes these risks based on their severity levels. ISO 31000:2018 provides guidelines and principles for managing risks systematically and consistently, enabling companies to identify the most significant risks and set priorities for mitigation actions. The results of this study offer recommendations for appropriate mitigation strategies to reduce negative impacts and capitalize on existing opportunities. Mitigation strategies may include various actions, such as developing more efficient operational procedures, diversifying revenue sources, enhancing environmental compliance programs, and improving communication and reputation management. Thus, this study aims to enhance the effectiveness of risk management at PT. Recycled Paper Hub. By implementing the recommendations derived from the risk analysis, the company is expected to manage risks better, ensure operational sustainability, and achieve its strategic objectives.

Keywords: Risk Management, ISO 31000:2018, Mitigation Strategies, Recycled Paper.

INTRODUCTION

The pulp and paper industry is one of the most important forest-based industries. Almost every aspect of human life utilizes the commodities from this industry, ranging from household activities, office work, industrial applications, education, commerce, and more. Indonesia, as a country with substantial forest cover, has the potential to become a global player in the pulp and paper industry due to the availability of forests, which are the primary source of raw materials and a key driver for the industry's growth. The pulp and paper industry is a flagship sector that continues to be developed due to its abundant raw materials and large domestic market, supported by advanced technology.

Supported by the Ministry of Industry, which continues to enhance the productivity and innovation of the pulp and paper industry to be competitive both domestically and globally, the availability of domestic raw materials gives the pulp and paper industry significant business potential to contribute substantially to the national economy (KEMENPERIN, 2022). Despite having a promising future, this sector needs to increase product diversification to achieve higher value. Currently, there are 111 pulp and paper companies in the country. This sector directly employs over 161,000 people and indirectly employs 1.2 million people.

Although the pulp and paper industry has great growth potential, it faces several challenges that need to be addressed. Firstly, the pulp and paper industry is a large-scale industry that uses vast land, wood raw materials, and operates non-stop production hours, leading to various environmental issues, including forest and land fires. Secondly, the domestic supply of waste paper materials only meets 50% of the 8.2 million tons needed for the brown paper industry (OCC), while imported raw materials face challenges due to the 2% impurity limit regulation, which is difficult to meet. This regulation also

discourages exporting countries from supplying waste paper to Indonesia. Thirdly, the pulp and paper industry faces competition from imported paper. Fourthly, the relatively high price of industrial gas makes the production costs for pulp and paper companies in Indonesia relatively high.

Recycled paper companies such as PT. Recycled Paper Hub must be able to identify, analyze, and manage various risks that can hinder the achievement of their objectives. This requires a systematic and well-documented approach. ISO 31000:2018 is an international standard that provides guidelines and principles for managing risks effectively and consistently (Yudhaningsih & Yanuar T, 2024). Using this approach, PT. Recycled Paper Hub can understand the impact and likelihood of various risks and categorize them based on their severity levels.

Good risk management not only helps companies reduce the negative impact of the risks they face but also enables them to capitalize on existing opportunities. For instance, by understanding environmental risks, companies can enhance their sustainability programs and comply with applicable regulations, which in turn can improve their reputation and competitiveness in the market (Pranoto & Indradewa, 2023).

The goal of risk management at PT. Recycled Paper Hub is to ensure that the company can operate smoothly, maintain its reputation, and achieve its strategic objectives. By implementing effective risk management, PT. Recycled Paper Hub can ensure their operational sustainability and continue to thrive in this industry.

RESEARCH METHODS

PT. RPH uses a qualitative method through case studies and interviews with the company's key stakeholders. The research findings reveal that PT. RPH faces various risks such as security risks, logistical risks, and reputational risks. In the context of strategic planning, the crucial initial step is to establish the company's short-term, medium-term, and long-term goals, as explained by David (2011: 177). (Iskandriani, Yanuar T, Indradewa R. 2023).

Goals and Targets

The goal of risk management at PT. Recycled Paper Hub is to ensure the achievement of the company's vision, which is to become the primary business partner for the paper and paper product manufacturing industry in Indonesia by realizing sustainable business practices through the provision of recycled paper raw materials. In its implementation, PT. RPH will refer to the ISO 31000:2018 standard on risk management.

Table 1. Goals and Targets of Risk Management

	Risk Management Goals	Risk Management Targets
Short Term (Y1-Y2)	<ul style="list-style-type: none"> - Conduct effective communication and consultation about risks and management plans to internal and external stakeholders, and report progress regularly. - Create and implement SOP (Company Operational Standards) in every Company activity - Increase the company's financial resilience. 	<ul style="list-style-type: none"> - Identify and implement effective preventive measures to reduce risks such as employee negligence, machine damage, etc. - Implementation of the organizer's internal controls on operational processes effectively and efficiency of machine maintenance, etc - Identify, measure and manage risks effectively, in order to reduce the negative impact of financial risks that may occur.

Mid-Term (Y3-Y5)	<ul style="list-style-type: none"> - Organize training to improve speaking, listening and giving feedback skills for all employees. - Conduct regular risk monitoring through mitigation of every business process within the company - Conduct regular audits within the company 	<ul style="list-style-type: none"> - Good cooperation can be established between employees and create a comfortable working environment in the company. - Carrying out risk evaluation and good reporting in every company business process - Conduct internal audits on operational processes consistently
Long-Term (>Y5)	<ul style="list-style-type: none"> - Ensure effective cost control by identifying, evaluating and managing risks that can cause production costs to spike. - Ensure full compliance with all applicable rules and regulations in the recycled paper industry. 	<ul style="list-style-type: none"> - Anticipate the risk of increases in raw material prices, maintenance costs, or equipment replacement costs. - Comply with environmental regulations, work safety regulations, as well as regulations on product quality and waste management.

RESULTS AND DISCUSSION

Scope, Context, Criteria

Establishing the scope, context, and criteria in risk management at PT. Recycled Paper Hub is a crucial initial step to ensure that the risk management process runs effectively and efficiently. The scope determines the boundaries and extent of the risk analysis, including critical areas and specific risk management objectives. The context involves a deep understanding of the external and internal environments affecting the company's operations, such as economic conditions, regulatory changes, and organizational structure. Risk assessment criteria include measures to evaluate the likelihood and impact of risks, the use of risk matrices to determine risk levels, and setting acceptable risk thresholds (Vilianni1 & Kustiawan2, n.d.). With clear scope, context, and criteria, PT. Recycled Paper Hub can identify, analyze, and manage risks more effectively. This includes identifying potential risks, analyzing their likelihood and impact, evaluating and categorizing risks, and developing mitigation strategies. Regular monitoring and review ensure that risk management remains relevant and effective.

Risk Assessment

Risk assessment at PT. Recycled Paper Hub (PT RPH) is a critical process involving the identification, analysis, and evaluation of risks to ensure the achievement of the company's objectives. The first step in this process is to identify various risks that could affect the company's operations and strategies. This process involves gathering information from various sources, such as financial reports, operational data, employee interviews, and business environment analysis. This identification includes operational, financial, environmental, compliance, and reputational risks that the company might face. By conducting a structured and systematic risk assessment, PT RPH can manage risks more effectively, take appropriate actions to mitigate negative impacts, and ensure the company's operational continuity. This process also helps the company plan strategic steps that can enhance competitiveness and achieve its long-term goals.

Risk Identification

In the context of PT. RPH's risk identification process, this stage includes recognizing various potential risks that could affect different aspects of the company's operations. In this regard, the company will conduct a careful evaluation of the internal and external situations that influence its operations. In relation to risk-related decision-

making, PT. RPH will involve various stakeholders, including management, employees, customers, and suppliers, to gather diverse perspectives on existing threats and opportunities. This process aims to formulate a comprehensive picture of the relevant risks that may arise, enabling the company to create more targeted and responsive mitigation strategies (Iskandriani, Yanuar T, Indradewa, 2297). Thus, PT. RPH can minimize the potential negative impacts of risks and maximize opportunities for growth and business sustainability.

Table 2. Risk Identification

Code	Risk Events	Cause of Risks	Risk Implications	Information
Internal Risk				
Marketing Risk				
R001	Sales Target not Achieved	Inadequate marketing tools and inadequate service levels from Marketing Executives	Decreased sales in the company	
R002	Lack of Exposures	Lack of Promotions and Discounts	Customers lose interest in buying	
Operational Risk				
R003	Storage Overload	Limited capacity in storage	Some stocks cannot be stored in storage	
R004	Security in the Hub	Lack of employee awareness and training regarding security in the Hub	The possibility of a security breach occurring in the Hub	
R005	Productions Target not Achieved	Broken Ballingpress Machine, Employees on leave or sick, Problems with office inventory such as computers, internet, electricity, water, etc	Inhibition of the production process within the company	Weakness 1
R006	Imbalance between demand and production capacity	High demand from customers and limited production capacity are caused by a shortage of workers and machines	Stunted growth and risk of losing market share	
HR Risk				
R007	Reduced Workforce	Employees resign or are on long leave	Delayed of work processes within the company	
R008	Work Accidents	Lack of focus while working	Decreased productivity and increased medical costs	Weakness 2
R009	Internal Conflicts	There are disputes between employees in the work environment	The work environment becomes toxic and employee welfare decreases	

Financial Risk				
R010	Big Budget	Ballingpress machines are expensive and warehouse rental costs are not cheap	Liquidity Risk and Finacial Risk	Weakness 3
R011	Uncollectible receivables	Customers does not pay on time	Past Due	
External Risk				
Political Risk				
R012	Government policy	Regulatory Changes	Risk of increased costs and risk of non-compliance with regulations, such as increases in wages and changes in tax rates	
R013	Tax Changes	PPH Increasing	Instability of margin levels	
Economic Risk				
R014	Inflation	Declining purchasing power	A decline in product sales and company profitability	
R015	Prices Increasing	Changes in raw material prices and market fluctuations	Increased production costs	
Social Risk				
R016	Customers dissatisfaction	Many complaints from customers	Risk of losing customers and reducing company reputation	
R017	Suppliers dissatisfaction	Many complaints from suppliers	Risk of losing suppliers and reducing company reputation	
R018	Investors dissatisfaction	Many complaints from Investors	Risk of losing investors and reducing company reputation	
Technology Risk				
R019	New Technology	The company's technology is not up to date	Risk of being left behind in technology with other companies	
Other Risk				
R020	Fire Accidents	The emergence of a fire in the company environment	Risk of infrastructure damage, decreased production, and risk of operational instability	

R021	Disasters	Flood, earthquake, dan etc	Risk of infrastructure damage, decreased production, and risk of operational instability	
R022	Operational disruption	Force Majure	Damage to company Asset	Threat 1

Risk Analysis

After risk identification, the next step is a more in-depth analysis. In this stage, PT. RPH evaluates the potential impact and likelihood of each risk occurring. This helps the company understand which risks are more critical and prioritize mitigation actions. This analysis also aids in designing effective strategies to reduce the impact of risks.

Thus, the company can make more informed and efficient decisions regarding risks. For each risk, an inherent risk assessment will be conducted in terms of the Likelihood Level (LL) of the risk occurring, the Impact Level (IL) caused, the Risk Score (RS), and the Risk Rating (RR).

Table 3. Risk Analysis

Code	Risk	Inherent Risk			
		LL	IL	RS	RR
Internal Risk					
Marketing Risk					
R001	Sales Target not Achieved	2	5	10	7
R002	Lack of Exposures	2	4	8	14
Operational Risk					
R003	Storage Overload	2	4	8	13
R004	Security in the Hub	2	3	6	17
R005	Productions Target not Achieved	4	5	20	2
R006	Imbalance between demand and production capacity	3	3	9	9
HR Risk					
R007	Reduced Workforce	3	4	12	5
R008	Work Accidents	3	5	15	4
R009	Internal Conflicts	1	4	4	19
Financial Risk					
R010	Big Budget	5	5	25	1
R011	Uncollectible receivables	2	4	8	12
External Risk					
Political Risk					
R012	Government policy	2	1	2	22
R013	Tax Changes	2	2	4	20
Economic Risk					
R014	Inflation	2	4	8	11
R015	Prices Increasing	2	3	6	15
Social Risk					
R016	Customers dissatisfaction	2	5	10	6

R017	Suppliers dissatisfaction	2	3	6	16
R018	Investors dissatisfaction	2	4	8	10
Technology Risk					
R019	New Technology	1	3	3	21
Other Risk					
R020	Fire Accidents	1	5	5	18
R021	Disasters	2	5	10	8
R022	Operational disruption	4	5	20	3

Risk Evaluation

After risk analysis, the next step is the evaluation stage. In this stage, PT. RPH measures the risks based on their impact and likelihood of occurrence. The goal is to assess the extent to which these risks affect the company. With the results of this evaluation, the company can determine the priority of risks that need to be addressed and allocate resources effectively. Risk evaluation also provides a basis for better decision-making and risk management.

Table 4. Risk Evaluation Matrix

RISK EVALUATION MATRIX		IMPACT				
		INSIGNIFICANT (1)	MINOR (2)	MODERATE (3)	MAJOR (4)	CATASTROPHIC (5)
LIKELIHOOD	VERY LIKELY (5)					R010
	LIKELY (4)					R005,R022
	POSSIBLE (3)			R006	R007	R008
	UNLIKELY (2)		R012,R013,R019	R004,R015,R017	R002,R003,R011,R014,R018	R001,R016,R021
	VERY UNLIKELY (1)				R009	R020

Risk Mitigation

Risk mitigation is a key step following evaluation. PT. RPH designs and implements strategies to reduce the impact and likelihood of risks. This involves preventive and responsive actions such as supply diversification, security standards, business continuity plans, and insurance. Emergency response plans are also important for rapid response. Risk mitigation helps the company reduce negative impacts and enhance resilience, ensuring operational and sustainable business growth.

Table 5. Risk Mitigation

Code	Risk	Inherent Risk				Mitigation	PIC	Residual Risk			
		LL	IL	RS	RR			LL	IL	RS	RR
Internal Risk											
Marketing Risk											

R001	Sales Target not Achieved	2	5	10	7	Performing promotions that focus more on relationships and providing training for marketers to enhance their service skills.	CEO, SPV Marketing	2	3	6	11
R002	Lack of Exposures	2	4	8	14	Conducting promotions and offering large-scale discounts.	SPV Marketing	1	4	4	12
Operational Risk											
R003	Storage Overload	2	4	8	13	Adding capacity storage in the future.	CEO, SPV Production	2	3	6	10
R004	Security in the Hub	2	3	6	17	Installation of CCTV and recruiting high-quality security personnel.	SPV Production	1	3	3	18
R005	Productions Target not Achieved	4	5	20	2	Monitoring is carried out every month to anticipate this	CEO, SPV Production	2	5	10	4
R006	Imbalance between demand and production capacity	3	3	9	9	Carrying out contractual agreements from the start to relations to provide their requested needs	SPV Production	2	3	6	9
HR Risk											
R007	Reduced Workforce	3	4	12	5	Find high-quality human resources and conduct regular training for each employee.	CEO, SPV HRD	2	3	6	8
R008	Work Accidents	3	5	15	4	Conduct occupational health and safety (K3) training in the workplace.	SPV HRD	3	4	12	3
R009	Internal Conflicts	1	4	4	19	Create a comfortable working environment for every employee.	SPV HRD	1	4	4	13
Financial Risk											
R010	Big Budget	5	5	25	1	Seeking substantial funding from investors.	CEO, SPV Finance	3	4	12	2
R011	Uncollectible receivables	2	4	8	12	Conduct regular audits.	SPV Finance	1	4	4	14
External Risk											
Political Risk											
R012	Government policy	2	2	4	22	Adapting to government regulations.	CEO	1	1	1	22
R013	Tax Changes	2	2	4	20	Adapting to government regulations.	CEO, SPV Finance	1	1	1	21
Economic Risk											
R014	Inflation	2	4	8	11	Implement inflation preparedness planning from the outset.	CEO	2	3	6	7
R015	Prices Increasing	2	3	6	15	Adjust market prices by following existing trends.	CEO, SPV Produksi	1	3	3	19
Social Risk											
R016	Customers dissatisfaction	2	5	10	6	Enhance service quality.	CEO, SPV Marketing	2	4	8	5
R017	Suppliers dissatisfaction	2	3	6	16	Enhance service quality.	CEO, SPV Marketing	1	3	3	17
R018	Investors dissatisfaction	2	4	8	10	Enhance service quality.	CEO, SPV Marketing	1	4	4	15

Technology Risk											
R019	New Technology	2	2	4	21	Adapt to the latest technology.	CEO, SPV Produksi	1	2	2	20
Other Risk											
R020	Fire Accidents	1	5	5	18	Providing fire extinguishers in the workplace.	CEO, All SPV	1	3	3	16
R021	Disasters	2	5	10	8	Training for disaster response in the event of natural disasters.	CEO, All SPV	2	3	6	6
R022	Operational disruption	4	5	20	3	Purchasing insurance.	CEO, All SPV	4	3	12	1

Table 6. Risk Evaluation Matrix after Mitigation

Matriks Analisis Risiko		IMPACT				
		INSIGNIFICANT (1)	MINOR (2)	MODERATE (3)	MAJOR (4)	CATASTROPHIC (5)
LIKELIHOOD	VERY LIKELY (5)					
	LIKELY (4)			R022		
	POSSIBLE (3)				R008,R010	
	UNLIKELY (2)			R001,R003,R006,R007,R014,R021	R016	R005
	VERY UNLIKELY (1)	R012,R013	R019	R004,R015,R017,R020	R002,R009,R011,R018	

Risks Management Costs

Risk management costs refer to all expenses associated with an organization's efforts to identify, assess, reduce, and manage potential risks. In risk management, organizations must account for these costs and seek the right balance between risk reduction and the costs involved. The primary goal is to achieve effective risk management to protect the sustainability and overall success of the organization. PT. RPH recognizes risk management costs as part of its other operational expenses.

Table 7. Risk Management Costs

Tahun	Ke 1	Ke 2	Ke 3	Ke 4	Ke 5
CCTV	IDR 75,000,000	IDR -	IDR -	IDR -	IDR -
Safety Kit, First Aid	IDR 20,000,000	IDR 20,000,000	IDR 20,000,000	IDR 20,000,000	IDR 20,000,000
APAR	IDR 20,000,000	IDR 20,000,000	IDR 20,000,000	IDR 20,000,000	IDR 20,000,000
Fire Hydrant	IDR 75,000,000	IDR -	IDR -	IDR -	IDR -
Genset	IDR 100,000,000	IDR -	IDR -	IDR -	IDR -
Asuransi Kebakaran & Bencana Alam	IDR 10,000,000	IDR 10,000,000	IDR 10,000,000	IDR 10,000,000	IDR 10,000,000
Biaya Manajemen Risiko	IDR 300,000,000	IDR 50,000,000	IDR 50,000,000	IDR 50,000,000	IDR 50,000,000

CONCLUSION

PT. Recycled Paper Hub faces various risks that can impact their operations and achievement of goals. These risks stem from internal factors such as operations, management, human resources, and finances, as well as external factors like economic conditions, regulatory changes, market competition, and environmental issues. By using

risk analysis based on ISO 31000:2018, this study found that PT. RPH can identify and assess risks more effectively. These risks are then categorized based on severity and priority. Recommended mitigation strategies include diversifying raw material sources, enhancing workplace safety standards, business continuity planning, and utilizing insurance to cover potential losses. By implementing effective risk management, PT. RPH can reduce uncertainty, ensure operational continuity, enhance reputation, and achieve its strategic objectives.

BIBLIOGRAPHY

- DataIndonesia.id. (2023). PDB Industri Kertas dan Barang dari Kertas, Percetakan dan Reproduksi Media Rekaman. DataIndonesia.Id. <https://dataindonesia.id/industri-perdagangan/detail/kinerja-industri-kertas-tumbuh-45-pada-kuartal-ii2023>
- David, F. R. (2009). Strategic Management Concepts and Cases.
- Fred R, D. (2009). Strategic Management Edisi 12. Salemba Empat.
- Iskandriani, A., Syah, T. Y. R., Suwanto, S., & Indradewa, R. (2024). The Role of Risk Management in Addressing External Factors in Business Planning Projects. *Jurnal Pendidikan Tambusai*, 8(1), 10327-10335.
- Iskandriani, A., Tantri, Y., Suwanto, & Indradewa, R. (2023). Risk Management Analysis of the Variability of External Factors in Business Planning Projects. *Journal of Syntax Admiration*, 4(12), 2296–2305.
- KEMENPERIN. (2022). Bisnisnya Masih Prospektif, Investasi Industri Pulp dan Kertas Semakin Bergeliat. *Kemenperin.Go.Id*. <https://kemenperin.go.id/artikel/23727/Bisnisnya-Masih-Prospektif,-Investasi-Industri-Pulp-dan-Kertas-Semakin-Bergeliat>
- Pranoto, A., & Indradewa, R. (2023). Risk Management for “Stockists and Fabrication Abrasion Resistance Plate” in Indonesia. *Jurnal Syntax Admiration*, 4(11), 2180-2196.
- Punarbhawa, I. P. D., & Indradewa, R. (2023). RISK MANAGEMENT PROCESS OF" EV-STATION ELECTRIC VEHICLE CHARGING STATION" IN INDONESIA. *Jurnal Scientia*, 12(04), 385-397.
- Vilianni, A., & Kustiawan, U. (n.d.). Risk Management Process of “Mining Contractors Services Company” In Indonesia. *Jurnal Pendidikan Tambusai*, 7(2), 9420-9430
- Yudhaningsih, A., Yanuar, T., & Syah, R. (2024). Risk Management Analysis of Coffee Dregs Brisket Innovation; Alternative Fuels in Indonesia. *Jurnal Manajemen Dewantara*, 8(1), 45-59.