PT Asia Pulp & Paper - Climate Change 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Asia Pulp & Paper (APP) is a pulp and paper manufacturer headquartered in Indonesia. APP is a global company that employs 40,000 people and has an annual converting capacity of 20 million tons. With branches and sales offices in several countries, the Company markets its products in over 150 countries across 6 continents. APP Indonesia main operation includes mills as processing facilities from pulpwood suppliers into products. APP mills in Indonesia including OKI Pulp & Paper, Pindo Deli Pulp & Paper, Indah Kiat Pulp & Paper, Tjiwi Kimia, Ekamas Fortuna, Univenus and Lontar Papyrus. APP Sinar Mas' operations in Indonesia are carried out by direct or indirect subsidiaries of PT Purinusa Ekapersada. The company began in 1960 when our founder, Eka Tjipta Widjaja, migrated from China to Indonesia in 1930 and established a small trading company called CV. Sinar Mas, which focused on importing textiles and exporting natural resources. For over 60 years, the company has transformed itself into APP Sinar Mas as we know it today, having transformed millions of lives through employment opportunities, community development programs, support for education, developing specialized skills, conservation of natural forests, and more. Our focus on technology and product development allows us to deliver innovative solutions that enhance people's lives while positively impacting the environment and society. Our commitment to innovation has resulted in exceptional paper-based products that meet the growing global demand for environmentally friendly packaging, food packaging, surgical masks, and tissues. We believe that the growth of doing our business responsibly, sustainably, is dependent on the support of the stakeholders and people around us: partners, employees, communities, and the general public. As part of our vision for a better future, the integrity of our supply chain and our commitments to our Sustainability Roadmap Vision (SRV) 2030 are crucial to our operations. Every day, we do our best to achieve sustainable forest and peatland management, market-leading product environmental footprints, and people-first sustainable operations. This vision extends beyond the countries where we operate. We believe that the growth of our business is dependent on the support of the people around us: partners, employees, and communities.

In 2022, we took concrete steps towards improving our ESG performance by collaborating with external partners to create a plan for decarbonization roadmap and evaluate our ESG performance. We also began to incorporate the Task Force on Climate-related Financial Disclosures (TCFD) to further improve our reporting of climate-related financial information and Science Based Targets initiative (SBTi) for our guidance on decarbonization goals. Additionally, we evaluated and updated our ESG policy to further align it with our SRV 2030 and three core pillars: Production, Forest, and People.

In the pulp and paper industry, our belief is in fostering productive plantations through responsible management of the ecosystem, including both flora and fauna. We take steps to ensure our plantations meet global sustainability standards. To minimize any potential disruptions, we integrate our operations with the local community and ensure for sustainability implementation. In line with this philosophy, we are proud to have accomplished several significant milestones in 2022, including our energy use and efficiency, our Carbon Disclosure Project (CDP) Score Report, and our SPOTT assessment, among others.

More information can be found at our website and Sustainability Dashboard.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date
January 1 2022

End date
December 31 2022

Indicate if you are providing emissions data for past reporting years
No

Select the number of past reporting years you will be providing Scope 1 emissions data for
<Not Applicable>

Select the number of past reporting years you will be providing Scope 2 emissions data for
<Not Applicable>

Select the number of past reporting years you will be providing Scope 3 emissions data for
<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.
Indonesia

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?

	Relevance
Agriculture/Forestry	Both own land and elsewhere in the value chain [Agriculture/Forestry only]
Processing/Manufacturing	Direct operations only [Processing/manufacturing/Distribution only]
Distribution	Direct operations only [Processing/manufacturing/Distribution only]
Consumption	Direct operations only [Processing/manufacturing/Distribution only]

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodity

Timber

% of revenue dependent on this agricultural commodity

More than 80%

Produced or sourced

Both

Please explain

100% of the raw materials in the form of pulpwood come from owned concessions, long-term pulpwood suppliers, community forest (smallholders) and open purchase in Indonesia, but 1.79% of the pulpwood that we use for production in the mills is imported from Malaysia, South Africa, Thailand and Vietnam.

100% of APP's pulpwood suppliers in Indonesia are certified under both mandatory and voluntary sustainable forest management certification. To meet the requirement of our global stakeholders, APP's pulpwood suppliers are certified under the globally recognized Program for Endorsement of Forest Certification (PEFC).

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, another unique identifier, please specify (Indonesia stock exchange)	INKP, TKIM

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Chief Executive Officer (CEO)	Together with APP's: Deputy CEO, Managing Director, Director of Corporate Affairs and Communications, Social Division Head, Human Resources Division Head, Business Unit Heads and Chief Sustainability Officer (CSO), our Chief Executive Officer (CEO) responsible to oversee our sustainability commitments implementation across APP operations. This team named as "Sustainability Committee", previously mentioned as Sustainability Committee Board (SCB). CEO responsible to lead the team on evaluating the assessment results on the adequacy and effectiveness of environment, social, and climate strategy according to APP's Sustainability Roadmap Vision (SRV) 2030, national regulations and global relevant standards. Our CEO also approved Sustainability Commitment and its' policies (such as Environmental Policy), and initiatives related to climate change risk
Chief Sustainability Officer (CSO)	Chief Sustainability Officer (CSO) responsible for integrating, synergizing, and managing companywide sustainability, initiatives, policy and programs focuses on production manufacturing, forest and people to ensure environmentally compliance world-wide and suggest ways to harmonize company activities with nature. From the Governance side, CSO is one of the members of Sustainability Committee that in-charge evaluating climate change and energy-related issues and its' decision-making process by management. Our CSO approved new published policies (such as Environmental Policy, etc), monitoring climate change and energy performance periodically, and evaluating them every semester through a KPI monitoring system, conducting a study to align its Net Zero goals with the Science Based Targets initiative (SBTi) and SBTi FLAG, participate in Net Zero Hub and implementation of solar panel
Director on board	APP has a clear governance structure in place through the Governance Policy, with the operational involvement of the Board of Directors and other governance mechanisms to oversee climate-related risks and opportunities. Director on board directly involve in the development of sustainability target 2030 , this include lead the discussion and workshop related to carbon emission and energy target, mapping current condition, challenge and opportunity as well as strategy to achieve the target. In terms of how our individual mills are managed, each mill reports to the COO through the respective COO for pulp, paper and tissue divisions. Our mill KPI scorecard helps to track performance against Vision 2030 targets and we encourage a culture of sharing good practice and working collaboratively where further improvement is required.
Board-level committee	APP Sustainability Committee Board headed by APP's CEO, members include APP's Deputy CEO, Managing Director, Director of Corporate Affairs and Communications, Social Division Head, Human Resources Division Head, Business Unit Heads and Chief Sustainability Officer (CSO). This committee responsible for sustainability issues in accordance to achieve sustainability target, that including environment, social, energy, forest related, carbon emission reduction, etc. Our sustainability committee held a meeting periodically to discuss progress and challenge we faced.
Chief Operating Officer (COO)	In terms of how our individual mills are managed, each mill reports to the COO through the respective COO for pulp, paper and tissue divisions. Our mill KPI scorecard helps to track performance against Vision 2030 targets, and we encourage a culture of sharing good practice and working collaboratively where further improvement is required. COO has responsibility to monitor and review implementation of climate strategy in mill level.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing innovation/R&D priorities Overseeing and guiding employee incentives Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing value chain engagement	<Not Applicable>	APP holds regular meetings with the sustainability team and Management Board/Director on Board related to the progress of implementation of Sustainability Roadmap Vision 2030, as well as meetings with stakeholders. The meeting discusses progress and monitoring related to forest conservation, climate issues, environment, social, and supply chain concerns. The meeting serves as a platform for engagement and collaboration with stakeholders to ensure effective governance and implementation of sustainability initiatives.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	APP Sustainability Committee Board headed by APP's CEO, members include APP's Deputy CEO, Managing Director, Director of Corporate Affairs and Communications, Social Division Head, Human Resources Division Head, Business Unit Heads and Chief Sustainability Officer (CSO). APP Sustainability Commitee Board comes from difference background and knowledge that can drive the strategy related with environmental aspect especially on climate change issue. With the difference background and knowledge can give broader insight to make sure the strategic implementation is aligned APP Sustainability Roadmap Vision (SRV)	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee
Chief Executive Officer (CEO)

Climate-related responsibilities of this position
Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line
Half-yearly

Please explain
Chief Executive Office responsible to oversee our sustainability commitments implementation in APP operations. This team named "Sustainability Committee", previously mentioned as Sustainability Committee Board (SCB). Our CEO responsible to lead the team on evaluating the assessment results on the adequacy and effectiveness of environment, social, and energy issues including climate change and energy strategy as part of Sustainable Roadmap Vision (SRV) 2030. Our CEO also approved Sustainability Commitment and its' new published policies (such as FPPP, Environmental Policy, etc).

Position or committee
Chief Sustainability Officer (CSO)

Climate-related responsibilities of this position
Managing annual budgets for climate mitigation activities
Developing a climate transition plan
Implementing a climate transition plan
Integrating climate-related issues into the strategy
Conducting climate-related scenario analysis
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Managing public policy engagement that may impact the climate
Managing value chain engagement on climate-related issues
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line
More frequently than quarterly

Please explain
Chief Sustainability Officer (CSO) responsible for integrating, synergizing, and managing companywide sustainability, initiatives, policy and programs focuses on production manufacturing, forest and people to ensure environmentally compliance world-wide and suggest ways to harmonize company activities with nature. From the Governance side, CSO is one of the members of Sustainability Committee that in-charge evaluating climate change and energy-related issues and its' decision-making process by management. Our CSO approved new published policies (such as FPPP, Human Rights Policy, etc), monitoring climate change and energy performance periodically, and evaluating them every semester through a KPI monitoring system, conducting a study to align its Net Zero goals with the Science Based Targets initiative (SBTi) and SBTi FLAG, participate in Net Zero Hub and implementation of solar panel

---

Position or committee
Chief Operating Officer (COO)

Climate-related responsibilities of this position
Implementing a climate transition plan
Conducting climate-related scenario analysis
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line
Quarterly

Please explain
In terms of how our individual mills are managed, each mill reports to the COO through the respective COO for pulp, paper and tissue divisions. Our mill KPI scorecard helps to track performance against Vision 2030 targets and we encourage a culture of sharing good practice and working collaboratively where further improvement is required.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Yes, we provide incentives for the management of climate-related issues.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive
Director on board

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Achievement of climate transition plan KPI
Progress towards a climate-related target
Achievement of a climate-related target
Implementation of an emissions reduction initiative
Reduction in emissions intensity
Energy efficiency improvement
Increased share of low-carbon energy in total energy consumption
Increased share of renewable energy in total energy consumption
Reduction in total energy consumption
Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)

Incentive plan(s) this incentive is linked to
Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)
The design of incentives are thoughtful, aligned with the desired outcomes, and consider potential unintended consequences. Properly designed incentives can be powerful tools in driving progress, fostering engagement, and ultimately contributing to the successful achievement of goals. Sustainability Roadmap Vision (SRV) 2030 has goals in each pillars, where one of the goals is to reduce greenhouse gas emission 30% in our operations. This embedded to KPI target of our Chief Sustainability Officer (CSO). Once the target achieved, incentives will be distributed.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The incentive(s) encouraged the Director on Board to continue improve performance of APP's climate change, energy-related strategy implementation as part of Sustainable Roadmap Vision (SRV) 2030.

Incentives plays a crucial role in motivating and driving behavior towards achieving goals. Here are some ways in which incentives contribute to goal attainment driven by our Director on Board:
1. Encouraging Action
2. Focusing Attention
3. Driving Performance
4. Stimulating Innovation
5. Aligning Interests
6. Sustaining Motivation
7. Changing Behavior,
for integrating, synergizing, and managing company-wide sustainability, initiatives, policy and programs focuses on production manufacturing, forest and people to ensure environmentally compliance world-wide and suggest ways to harmonize company activities with nature.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?
Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	10	In the short term, we commit is to address these risks and opportunities through our SRV 2030, which outlines our strategic goals and actions towards sustainability and resilience. Specifically, for the Production pillar, we aim for a 30% reduction in carbon footprint by 2030. We recognize risks from extreme weather events that can disrupt our supply chain and operations, but also see opportunities in sustainable forest management practices. In response to the growing market demand for low-carbon products, APP is taking the opportunity to certify its products as a carbon neutral. By certifying its products as carbon neutral, APP is not only providing value to its customers, but also to its stakeholders. Customers who purchase APP's carbon neutral certified products can be assured that they are making a positive contribution to address climate change and become more aware on the importance of reducing GHG emissions. Moreover, APP has identified opportunities to improve its 3R Strategy (Reduce, Reuse, Recycle) by expanding our initiatives for effluent management.
Medium-term	10	20	In the medium term, changing regulatory frameworks related to climate change present opportunities for investments in renewable energy sources. APP needs to invest in upgrading its facilities with the best available technology. This will involve replacing old boilers, motors, and other operational equipment, as well as making additional investments in mills with high-potential markets for low-carbon products.
Long-term	20	30	APP supports the Government of Indonesia's efforts to achieve Net Zero emissions by 2050. APP is currently conducting a study to align its Net Zero goals with the Science Based Targets initiative (SBTi).

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

APP takes consideration climate change as one of the issues that would impact to business. According to several studies, Indonesia is vulnerable to other weather-related disasters such as forest and land fires, landslides, storms and drought that have destroyed infrastructure and degraded forest and coastal ecosystems, leading to loss of life, property, ecosystem services and livelihoods. The biggest risk of climate change would be on our supply chain where more than 90% of APP's raw material is pulpwood which sourced from Sustainable Forest Management (SFM). Reduction in our pulpwood production will impact to burden cost on purchasing activity and at the worst case will impact to continuity of our pulp and paper production. Reduction 5-10% of pulpwood production can be overcame by import from another sources, this would also impacted to reduction of company revenues. Meanwhile pulpwood reduction of more than 40% may impact to shut down of some pulp mills operation, this would also impacted to business revenues reduction in the same percentage (40%) as well as impacted to another business chain such as paper, tissue and board. Raw material is crucial for APP as it determines the sustainability of our operation. We consider substantive financial impact if the risk can result a loss above USD 10 million.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
The Sustainability Committee, headed by APP's CEO, takes into consideration climate change as one of the issues discussed on a regular basis. The Committee meets monthly, reviewing sustainability performance, overall direction and strategy, as well as any issues raised from stakeholders. Where necessary, based on an appraisal of the company's strategy and risk management of issues including climate change, the Sustainability Committee will make provide material to the Management Board to inform strategic Board decisions.

We recognize the potential for climate change to affect APP's operations and business. These risks and opportunities are both short, medium and long term. Our pulp and paper mills require energy resulting in GHG emissions. Our pulpwood plantations are a store of carbon which is renewed through replanting and rapid growth, contributing to the circular bioeconomy. We are aligned with the objectives of our customers to reduce carbon emissions and provide products with low carbon footprints.
We recognize that both local and global Governments will progressively adjust policies and regulations to tackle climate change.

We are also recognizing the physical climate risk impact such as extreme weather conditions such as droughts can increase the incidence of fires and reduce yields, affecting our pulpwood suppliers. APP takes account of climate change (both transition risks and direct physical risks) through corporate risk management processes. Floods and droughts are common issues in Indonesia and becoming more frequent. In response, we have mapped out which mills we think are vulnerable to climate change and developed long term adaptation plans that considers business continuity and disaster recovery plans for our assets.

These plans consider our supply chain too. We recognize the risk opportunity from supply chain by mapping our supply chain, identifying the carbon emission emitted from supply chain, monitoring & evaluating the supplier performance & impact. As we are committed to Science Based Target initiatives (SBTi), we will also encourage the supply chain also committed with SBTi as well. We are doing the quarterly basis meeting to have the visibility of our carbon emission and decarbonization program to align with our SRV

Other opportunities such as improving production efficiency with better technology can reduce energy consumption, reduce carbon footprint of product, increase productivity as well as influence the market. Moreover, APP has identified opportunities to improve its 3R Strategy (Reduce, Reuse, Recycle), using waste from production process to use as energy, eg: black liquor, bark.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Risk assessment includes compliance with relevant regulations. For instance, the Ministry of Energy and Mineral Resources requires companies to report their energy consumption annually, while the Ministry of Industry mandates companies to report their carbon emissions on their platform. Companies that break these regulations will receive disincentives such as warning letters, penalties, publication on media, and even energy supply reduction.
Emerging regulation	Relevant, always included	Europe has launched a product environmental footprint category standard that regulates the environmental impact of paper products marketed in Europe. One of the environmental impacts included in this standard is the limitation of the product's carbon footprint. While this standard is currently voluntary for European companies, it may become mandatory in the future. If this happens, our products with a higher carbon footprint may not be accepted by the European market, which could significantly affect our company's revenue.
Technology	Relevant, always included	APP always benchmarks technology against the best available technology and includes it in our climate and energy risk assessment. We ensure that we adapt and adopt appropriate technology in our operation lines not only to gain better efficiency but also to preserve resources. For instance, we recognize that old equipment on some aged paper machines can lead to high energy consumption, which in turn, affects our carbon footprint as well as the carbon product itself. As customers and stakeholders are increasingly concerned about the low environmental impact of products, we must respond to this by improving our technology.
Legal	Relevant, always included	The scope of legal covers a wide range of areas within the company. Our mills are certified ISO 14001, and the regulations are continuously monitored and evaluated through our system. Moreover, as we are certified for sustainable forest management, we are required to follow all legal regulations in this area.
Market	Relevant, always included	Currently market demand always seek product with low impact to environmental. We marketed product to both of local and overseas. The awareness of responsible consumption is growing fast both in domestic and overseas, and we ensure to responsibly respond to the requirements. For example, we marketed our product in Indonesia and exported to overseas. Indonesia and overseas market such as Singapore and New Zealand require us to fulfill ecolabel standard where one of its items is carbon footprint of product. This parameter can be a potential preference of customers to choose low environmental impact of product. Product with higher carbon footprint will not a good preference in market.
Reputation	Relevant, always included	Reputation of company included to one of priority as company reputation can reduce market and sales. Our pulpwood supply sourced from sustainable forest in Sumatera and Kalimantan where land management and conservation practice are the most priority raised by stakeholder in related to environment. We are also facing the challenge to maintain environmental management including emissions in our mills operations. Should we failed to maintain those, our reputation would be down and affected to our market and sales.
Acute physical	Relevant, always included	Acute physical risk such as hurricane and storm can disrupt water supply and can be also disrupt our supply chain as impact of flooding. Increased capital costs due to supply chain and water shortage requiring expenditure to replace raw material. Increased opportunity and demand for solutions to improve crop resilience (e.g. water efficiency, drought and heat tolerance, as well as soil carbon sequestration).
Chronic physical	Relevant, always included	Severe weather events such as hurricanes and storms can pose an acute physical risk to our water supply and disrupt our supply chain, especially through flooding. However, this situation also presents opportunities for innovative solutions that can improve crop resilience, including water efficiency, drought and heat tolerance, and soil carbon sequestration. Additionally, we need to consider the potential impact of long-term climatic changes on mean temperatures and precipitation patterns, which can affect rising sea levels and water intake, crop quality, yields, and the length of harvesting periods, ultimately impacting our production capacity. These changes may also create opportunities for us to explore the use of new species. Physical risk at APP is regulated in line with OHSMS Procedure Guidelines APP/OHSMS/P/013 on Emergency Management. In line with this guideline, APP conducts risk identification of its operational activities as a basis for setting emergency response objectives and improvement programs. The identification process involves all parties responsible in the Work Units. Risk identification and assessment of APP activities take into account (but not limited to) infrastructure, equipment, materials, contents, and physical conditions of the workplace; and includes disasters such as earthquakes, floods, and landslides, among others. APP has a procedure in place to deal with each of these types of emergencies

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Technology	Transitioning to lower emissions technology

Primary potential financial impact

Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Some of our pulp & paper machines are operated more than 20 years, Our data shows that those machines taking lower efficiency due to age of machines. It shows that the machine efficiency is decrease 10 % compared with the initial operation 20 years ago.
On the other hand, new pulp & paper machines with the new technology are consuming 20 % less of energy compared with the pulp & paper machines technology in 20 years old ago. That means, if we could invest new pulp & paper machines, it's potentially impact to reduce energy consumption about 20-30 % as well as carbon footprint.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)
150000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As maximum impact, our energy intake is 287 million GJ, increment of 20% of energy intake equal to 50 million GJ based on our conservative calculation. Assume we use coal as main fuel, 1 ton coal assume 18 GJ, then 50 million GJ energy equal to 3.1 million ton of coal. Assume coal price is 110 USD/ton then price of 3.1 million Tonnes of coal is 346 million USD. This is the estimated maximum impact cost for financial impact of our inefficient pulp & paper machine.

The potential financial impact per single figure can be estimated with decrease the efficiency 20% for one pulp & paper mill can lead the increment of 20 % of energy intake or 26 million GJ. We can assume the increase energy intake cost equal with 1.4 million ton Coal or 150 million USD

Cost of response to risk
200000000

Description of response and explanation of cost calculation
Replace old equipment with new equipment by considering best available technology. Installation of new technology includes:
- installation of new boiler equipment, with potential expenses
- installation of new pulp and paper machine equipment, with potential expenses

For example, in the long term, we have initiative, our Indah Kiat Perawang mill installed new high efficiency boiler to replace old boiler, this impacted on energy consumption reduction as well as carbon emission reduction. The new installation for 1 set Recovery Boiler with specification 5,500 TDS need to be invested around 200,000,000 USD.

The impact of action plan, we can reduce carbon absolute.

Comment

Identifier
Risk 5

Where in the value chain does the risk driver occur?
Downstream

Risk type & Primary climate-related risk driver

Market	Changing customer behavior

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Some of local and overseas market such as New Zealand, Singapore, etc. require us to fulfill ecolabel standard where one of its items is environmental label for product to reduce product carbon footprint. This parameter can be a potential preference of customers to choose low environmental impact of product. Product with higher carbon footprint will not a good preference in market. Currently, three of our mills, require getting ecolabel standard from market, especially for toilet tissue product.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
8000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The financial impact related to the market is investment to put the ecolabel standard to the designated product. For single use estimate impact, we estimate the cost for specific type of tissue product, and for the maximum impact, we estimate based on all tissue products. The failure to follow the ecolabel requirement will impact to reduction of revenues.

Currently three of our mills require to get ecolabel standard from market. Should our mills failed to follow the ecolabel requirement will be impacted to reduction of revenues. The financial calculation includes product that not accepted in market then impacted to potential revenue reduction.

The revenue cost post product is estimated 8,000,000 USD.

Cost of response to risk
70000

Description of response and explanation of cost calculation
The situation is described as single figure cost, it's assumed only tissue toilet product want to be put ecolabel standard. Meanwhile, for maximum impact we want to label all of tissue product.

It's assumed for the ecolabel cost is around 16,720 USD/certificate. The single figure cost around 1000-ton product in new zealand market with 4 product type. Total cost certificate around 70,000 USD

Comment

Identifier
Risk 5

Where in the value chain does the risk driver occur?
Downstream

Risk type & Primary climate-related risk driver

Market	Changing customer behavior

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
We sold our product for tissue paper and copy paper to overseas both of developing and develop countries. Our products currently still have carbon emission on such amount. Carbon offsetting strategy could be one potential strategy to be applied. Should we apply carbon credit program to offset our product carbon emission then we can produce carbon neutral product which able to compete in the market.

For example, Australian market developed a mechanism for low carbon product, including paper product from our operations. This regulates company to assess their carbon footprint of product, then product with higher emission shall participate in carbon market to make their product to be carbon neutral product. Once carbon neutral product achieved, we will be able to compete in the market. Other countries such as New Zealand and Europe seems to follow this scheme. To make our product to be carbon neutral, we need to do carbon off-set program by buying carbon from carbon market. This will impact to our expenses or operating cost.

We have successful carbon offsetting the tissue toilet to be marketed in Australian & New Zealand market, copy paper in Australian market, and some other products to be marketed in other countries are still in the process.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
2300000

Potential financial impact figure – maximum (currency)
100000000

Explanation of financial impact figure
Our existing customer has carbon footprint reduction target in their value chain. APP carbon footprint is part of scope 3 emission of our customer. If APP doesn't do anything or show the progress to reduce their carbon footprint, APP will lose existing customer with that generate to point USD 2,300,000 year as minimum and USD 100,000,000 year as potential impact and it will probably increase due to the demand of low-carbon footprint product increased.

Cost of response to risk
70000000

Description of response and explanation of cost calculation
In response to our customer requirement to reduce APP carbon footprint, we are doing several initiatives and program to reduce carbon footprint, APP has a long-term plan for decarbonization program that need investment about USD 1,400,000,000 for 10 years but the equipment lifetime can be until 30 years

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp5

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Markets

Primary climate-related opportunity driver
Access to new markets

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
We sold our tissue & paper product to overseas such as Australia, Singapore, etc. Our customers in this market increase the demand for low carbon footprint of product such as ecolabels certification. We take this opportunity to design low environmental impact for other products and reach other operations which not yet certified on ecolabels scheme. This will be a good opportunity to reach a new market as well as to place more products on current market.

At the moment, the requirement for ecolabel is for tissue product, if we can expand our certificate into paper product, it would be increasing the revenue.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
42000000

Potential financial impact figure – maximum (currency)
170000000

Explanation of financial impact figure
The potential financial impact range can be estimated around 42 million USD - 170 million USD with the lost potential increase revenue for paper product

Cost to realize opportunity
70000

Strategy to realize opportunity and explanation of cost calculation
We have marketed some certified product to both of regional and overseas market and gain positive revenue. Product price of ecolabel certified is higher compared to product with non-certified low environmental impact.

To get access on new market, we need to place more of our products on ecolabel scheme. We apply the relevant actions to reduce carbon footprint of product in our mills facility in order to meet ecolabel criteria. Actions include.
- energy efficiency at paper and pulp production
- improve power generation efficiency, plan to replace old boiler.
- increase biofuel consumption, by replace fuel oil to used rubber compound oil
- replace hazardous chemical into more Enviromental friendly chemical
- implement energy management system
- conduct third party certification

It's assumed for the ecolabel cost is around 16,720 USD/certificate. The single figure cost around 1000-ton product in market with 4 product type. Total cost certificate around 70,000 USD

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Primary potential financial impact
Reduced direct costs

Company-specific description
As impact of regulation and stakeholder request to low carbon emission, our operations implemented efficiency process in all production related area. This includes investment to modify the boiler to increase the biomass consumption that can lead the reduce cost for coal consumption.

Time horizon
Long-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
150000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As maximum impact, our energy intake is 287 million GJ, increment of 20% of energy intake equal to 50 million GJ based on our conservative calculation. Assume we use coal as main fuel, 1 ton coal assume 18 GJ, then 50 million GJ energy equal to 3.1 million ton of coal. Assume coal price is 110 USD/ton then price of 3.1 million Tonnes of coal is 346 million USD. This is the estimated maximum impact cost for financial impact of our inefficient pulp & paper machine.

The potential financial impact per single figure can be estimated with decrease the efficiency 20% for one pulp & paper mill can lead the increment of 20 % of energy intake or 26 million GJ. We can assume the increase energy intake cost equal with 1.4 million ton Coal or 150 million USD

Cost to realize opportunity
70000000

Strategy to realize opportunity and explanation of cost calculation
In response to our customer requirement to reduce APP carbon footprint, we are doing several initiatives and program to reduce carbon footprint, APP has a long-term plan for decarbonization program that need investment about USD 1,400,000,000 for 10 years but the equipment lifetime can be until 30 years

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of recycling

Primary potential financial impact
Reduced direct costs

Company-specific description
Life cycle process of paper product using recycled material is lower compare to virgin pulp based material due to short process of paper production with recycled material. This impacted to lower carbon footprint of the recycled based product. Our paper mills, Tjiwi Kimia and Indah Kiat Serang are using recycled material to produce paper, board and other converted paper product. As demand of lower carbon footprint product is increased in market then strategy for using recycled material is a good option. This strategy also impacted to the cost of operation. Price of recycled paper is 80% lower than virgin pulp, this result significant effect on reduction of operating cost.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
59000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Recycled material contributes to reduction of operating cost due to the price of virgin pulp is higher recently. Price of virgin pulp is around 700 USD/ton and price of recycled paper material is around 100 USD/ton then operating cost can reduce significantly.

One of APP Mill (Tjiwi Kimia) use recycled paper material on such amount, if compared to the cost virgin pulp material, then operational cost of using recycled material will be reduced. The recycle paper in 2022 in Tjiwi Kimia reach 500,000 ton product. If we compared the quantity with virgin pulp & recycle pulp, It can save cost 59,000,000

USD.

Assume 290 USD/ton x 500,000 ton as virgin pulp = 171,100,000 USD
Assume 100 USD/ton x 500,000 ton as recycle paper = 112,100,000 USD
Total cost saving 413,000,000 USD - 354,000,000 USD = 59,000,000 USD

Cost to realize opportunity
28000000

Strategy to realize opportunity and explanation of cost calculation
Paper production using recycled material need investment on deinking facility to improve quality of fiber sourced from recycled material.

Our mills Tjiwi Kimia invest deinking facility which includes pulper, flotation machine, coarse screen and storage tank. Investment for deinking plant around USD 28 million.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan
Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan
Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan
We have a different feedback mechanism in place

Description of feedback mechanism
Feedback mechanisms that we have for our climate transition plan are through Stakeholder Advisory Forum (SAF) that held annually, regular meeting of our Sustainability Committee that include discussion on climate change and energy-related issues.

Frequency of feedback collection
More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future
<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: Customized publicly available transition scenario	Company-wide	1.5ºC	Indonesia launch NDC in 2016, this is a guideline for all private sectors in Indonesia to decide climate change target. As APP operates in developing country with limited access to renewable energy , therefore NDC would be the most possible guideline to be implemented by private sectors . Indonesia's Nationally Determined Contribution (NDC) outlines the country's transition to a low carbon and climate resilience future. The NDC describes the enhanced actions and the necessary enabling environment during the 2015-2019 period that will lay the foundation for more ambitious goals beyond 2020, contributing to the concerted effort to prevent 2oC increase in global average temperature and to pursue efforts to limit the temperature increase to 1.5oC above pre-industrial levels. We have also committed in SBTi that set scenario to reduce GHG emission more ambitious with some many or major initiatives and GHG reduction program thar more impactful rather than other scenario.
Transition scenarios: Customized publicly available transition scenario	Company-wide	1.6ºC – 2ºC	This scenario is assumed a scenario as business as usual with many / minor initiatives or impact to reduce GHG emission. The scenario impact is assumed can below as business-as-usual scenario with increase the global temperature up to 2 degrees Celsius
Transition scenarios: Customized publicly available transition scenario	Company-wide	2.1ºC - 3ºC	This scenario is assumed a scenario as business as usual with few initiatives or GHG reduction program to minimize impact to global warming. The scenario impact is assumed can increase the global temperature up to 4 degrees Celsius.
Transition scenarios: Customized publicly available transition scenario	Company-wide	3.1ºC - 4ºC	This scenario is assumed a scenario as business as usual without any initiatives or GHG reduction program to minimize impact to global warming. The scenario impact is assumed can increase the global temperature up to 4 degrees Celsius.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

How the decarbonization program impact to the low carbon footprint ?

Results of the climate-related scenario analysis with respect to the focal questions

Scenario analysis example action plan:

1. as business-as-usual (3.1 - 4 degree Celsius) with using fossil fuel boiler for combustion as usual in 2022
2. as transitional plan (2.1 - 3 degree Celsius), with increasing the efficiency of fossil fuel boiler in 2022-2023
3. as transitional scenario (1.6 - 2-degree Celsius), with modifying the fossil coal to be combined with biomass fuel in 2025
4. as transitional scenario (1.5-degree Celsius) with installing new recovery boiler with biomass energy, and stop fossil boiler in 2027

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	As customer behavior is change to low environmental impact of product, we develop strategy to design our product with low carbon or environmental impact. This will impact to the development of our market, increase sustainability performance as well as increase company reputation in medium to long term. For example, ecolabel product of our product impacted to higher revenues as ecolabel product price higher than non-certified product. The magnitude of this impact is high as this affected to company revenue. At APP we have product name: Foopak Bio Natura, the flagship innovation product, is one type of biodegradable board. Foopak is a range of sustainable packaging products made from eco-friendly materials. The product range includes biodegradable and compostable paper cups, food trays, and containers, all designed to minimize the environmental impact of food packaging while maintaining food safety and quality. Through 8 years of research and development, the Foopak Bio Natura product line has been carefully crafted using high-quality ingredients and has met rigorous regulations to ensure it is free of harmful compounds. The packaging is entirely plastic-free, making it an eco-friendly alternative to traditional plastic packaging. Furthermore, it is recyclable, biodegradable, and compostable in both industrial and home composting settings, ensuring that the product can be disposed of in an environmentally responsible manner.
Supply chain and/or value chain	Yes	Temperature extremes may include occurrence of very low or very high temperatures causing damage to tree species. This will impact to shortage of our pulpwood supply therefore affected to the continuity of our production lines. The magnitude of this impact is high for our business. Time horizon is medium to long term.
Investment in R&D	Yes	We are currently working on tree species research. The purpose of this research is to seek species which able to adapt on the exchanges of physical parameters and higher temperature. These parameters can impact to pest control in our concession then impacted to pulpwood production. The magnitude of this impact is medium level to our business as we have to put additional investment on our R&D. Time horizon is medium to long term.
Operations	Yes	As the risk of carbon footprint product impacted to most of the market and stakeholders nowadays. Business expansion and current operations is considered to achieve low carbon product. For example our OKI mill, our new mill operated 2018 has equipped with best technology and result low carbon emission. This strategy also considered when APP launch sustainability roadmap vision 2030 as our long term commitment to sustainability.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Access to capital Assets	As market demand nowadays tend to low carbon product, we take this opportunity to place our product on low carbon product certified. The price of low carbon certified product at least 50% higher than non-certified product. As the impact, our revenue will increase significantly. Currently we have 2 mills which ecolabel certified, there is a big opportunity to expand this scheme on other mills. To accommodate this planning, we need to do investment on our facility to upgrade this with best technology available. Some facility has upgraded such as replacement old boiler, motors and other operations equipment, we plan to do more investment to another mills with high potential market of low carbon product and this will impact to higher capital expenditures. Indirect cost will also impact as other market need to put on carbon neutral product. To accommodate this, we need to put more cost or indirect cost to participate on carbon market. Time horizon of this actions is medium to long term.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, but we plan to in the next two years	<Not Applicable>

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Target ambition
1.5°C aligned

Year target was set
2023

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2
Scope 3

Scope 2 accounting method
Location-based

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 9: Downstream transportation and distribution
Category 10: Processing of sold products
Category 12: End-of-life treatment of sold products

Base year
2021

Base year Scope 1 emissions covered by target (metric tons CO2e)
10980146

Base year Scope 2 emissions covered by target (metric tons CO2e)
794481

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
3130809

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
701830

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
174466

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
422254

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
4832680

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
73978

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)

9336018

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
21110645

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
100

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
100

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
100

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
100

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
100

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2030

Targeted reduction from base year (%)
42

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
11075441

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
687613

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
2489607

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
834438

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
169381

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
404905

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
3375221

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
73561

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
7347449

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
100

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
New

Please explain target coverage and identify any exclusions
This reporting year, we are in the transition plan to reduce GHG emission target aligning with SBTi with scenario 1.5 degree celcius in 2030. Previously, we set target based on carbon intensity under Sustainability Roadmap Vision (SRV) , and now, we are setting target as carbon absolute.

Target is covered for 10 big mills, such as Ekamas Mas Fortuna, Indah Kiat Pulp & Paper Perawang, Serang, and Tangerang Mill, Tjiwi Kimia, OKI Pulp & Paper, Lontar Papyrus Pulp & paper, Pindo Deli Karawang 1, 2, and 3.

Plan for achieving target, and progress made to the end of the reporting year
We have some initiatives or plan to reduce GHG emission for both short and long terms. Overall, for Scope 1 & 2, our plans to achieve target are to increase the efficiency of operational & equipment, reduce fossil fuel consumption in power boiler by modifying or installing with biomass fuel, and seek other green initiatives to replace fossil fuel, such as, installation of solar panel, obtain more REC, waste utilization as biogas / biomass. for Scope 3, we will engage with the supply chain to have same commitment to reduce GHG emission aligning with SBTi, and monitor carbon emission emitted supply chain.

For the land & forestry sector, we will also consider the carbon sequestration / absorption coming from our restoration or conservation area.

Some of initiatives have been made within this reporting period as below:
- Increase biomass consumption, as a result, we have achieved 59 % energy consumption by renewable energy which is increase 3 % of renewable energy consumption comparing with 2021
- Increase the efficiency of boiler / recovery boiler, as a result, we have reduced fossil fuel with reduction 1.587.099 GJ of non-renewable energy with direct consumption

comparing with 2021
- Increase the waste utilization as biogas consumption, as a result, we have increased the renewable energy from biogas with 533.760 GJ comparing with 2021
- Increase the waste utilization as biomass (sludge), as a result, we can replace the fossil fuel consumption with increase the renewable energy from biomass 168.344 GJ comparing with 2021
- Obtain the Renewable Energy Certificate (REC) from National Grid (PLN) which is equivalent to 87,181 MWh, as a result, we can reduce our Scope 2 emission with 106.869 tCO2e comparing with 2021
- Install solar panel with capacity 18,6 MWp in 2022, as a result, the energy from fossil can be replace by this non fossil with equal 66,96 GJ once the solar panel have fully in 2023.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Is this a science-based target?
No, but we are reporting another target that is science-based

Target ambition
<Not Applicable>

Year target was set
2018

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Intensity metric
Metric tons CO2e per metric ton of product

Base year
2018

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
1.087

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
0.077

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

<Not Applicable>

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
1.164

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
100

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure
<Not Applicable>

% of total base year emissions in all selected Scopes covered by this intensity figure
100

Target year
2030

Targeted reduction from base year (%)
30

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

% change anticipated in absolute Scope 1+2 emissions
30.2

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
0.95

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
0.06

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
1.01

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
As a part of sustainability strategy, pr We have Sustainability Roadmap: Vision (SRV) 2030 priorly. The strategy has three pillars—Production, Forest, and People, that has been established in 2021. One of our indicators is committed to achieve a 30% reduction in carbon intensity by 203. with baseline 2018

Target is covered for 10 big mills, such as Ekamas Mas Fortuna, Indah Kiat Pulp & Paper Perawang, Serang, and Tangerang Mill, Tjiwi Kimia, OKI Pulp & Paper, Lontar Papyrus Pulp & paper, Pindo Deli Karawang 1, 2, and 3.

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2018

Target coverage
Company-wide

Target type: energy carrier
All energy carriers

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2018

Consumption or production of selected energy carrier in base year (MWh)
40033630.07

% share of low-carbon or renewable energy in base year
53

Target year
2030

% share of low-carbon or renewable energy in target year
50

% share of low-carbon or renewable energy in reporting year
59

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Achieved

Is this target part of an emissions target?
This related to emission reduction target, reduce energy also support to reduction of GHG emission.

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions
We have target renewable energy consumption under our Sustainability Roadmap Vision (SRV) 2030 to achieve 50 % energy consumption by 2030. This number is higher better, which is we expect the renewable energy in the future will be increased in harmony with the production expand with minimum renewable energy consumption in 50 % by 2030.

Target is covered for 10 big mills, such as Ekamas Mas Fortuna, Indah Kiat Pulp & Paper Perawang, Serang, and Tangerang Mill, Tjiwi Kimia, OKI Pulp & Paper, Lontar Papyrus Pulp & paper, Pindo Deli Karawang 1, 2, and 3.

Plan for achieving target, and progress made to the end of the reporting year
<Not Applicable>

List the actions which contributed most to achieving this target
Some of initiatives have been made within this reporting period as below:
- Increase biomass consumption, as a result, we have achieved 59 % energy consumption by renewable energy which is increase 3 % of renewable energy consumption comparing with 2021
- Increase the efficiency of boiler / recovery boiler, as a result, we have reduced fossil fuel with reduction 1.587.099 GJ of non-renewable energy with direct consumption comparing with 2021
- Increase the waste utilization as biogas consumption, as a result, we have increased the renewable energy from biogas with 533.760 GJ comparing with 2021
- Increase the waste utilization as biomass (sludge), as a result, we can replace the fossil fuel consumption with increase the renewable energy from biomass 168.344 GJ comparing with 2021
- Obtain the Renewable Energy Certificate (REC) from National Grid (PLN) which is equivalent to 87,181 MWh, as a result, we can reduce our Scope 2 emission with 106.869 tCO2e comparing with 2021
- Install solar panel with capacity 18,6 MWp in 2022, as a result, the energy from fossil can be replace by this non fossil with equal 66,96 GJ once the solar panel have fully in 2023.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1

Target year for achieving net zero
2050

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Please explain target coverage and identify any exclusions
This reporting year, we are in the transition plan to reduce GHG emission target aligning with our commitment in SBTi with scenario 1.5 degree celcius in 2030, We also currently conducting a study to align its Net Zero goals with SBTi in 2050.

Target is covered for 10 big mills, such as Ekamas Mas Fortuna, Indah Kiat Pulp & Paper Perawang, Serang, and Tangerang Mill, Tjiwi Kimia, OKI Pulp & Paper, Lontar Papyrus Pulp & paper, Pindo Deli Karawang 1, 2, and 3.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Yes

Planned milestones and/or near-term investments for neutralization at target year
We have some initiatives or plan to reduce GHG emission for both short and long terms. Overall, for Scope 1 & 2, our plans to achieve target are to increase the efficiency of operational & equipment, reduce fossil fuel consumption in power boiler by modifying or installing with biomass fuel, and seek other green initiatives to replace fossil fuel, such as, installation of solar panel, obtain more REC, waste utilization as biogas / biomass. for Scope 3, we will engage with the supply chain to have same commitment to reduce GHG emission aligning with SBTi, and monitor carbon emission emitted supply chain.

For the land & forestry sector, we will also consider the carbon sequestration / absorption coming from our restoration or conservation area, and also carbon on neutral scheme by offseting or insetting program in the long term.

Planned actions to mitigate emissions beyond your value chain (optional)
We also currently conducting a study to identify some initiatives beyond the compliance.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	35	484.76
To be implemented*	1	11484
Implementation commenced*	1	16182
Implemented*	25	316306
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
226338

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
14908509

Investment required (unit currency – as specified in C0.4)
24240800

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Initiative to increase efficiency of operation & equipment such as improve, replace, modify, maintain and repair with more efficiency equipment, fix major overhaul, install inverter, etc

The number of investment and annual monetary saving is in the total of implemented initiatives covering 23 initiatives.

Initiative category & Initiative type

Low-carbon energy consumption	Biogas

Estimated annual CO2e savings (metric tonnes CO2e)
11331

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
746374

Investment required (unit currency – as specified in C0.4)
3000000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Increase biomass consumption with installing WWT 2 anareob

Initiative category & Initiative type

Low-carbon energy generation	Geothermal

Estimated annual CO2e savings (metric tonnes CO2e)
75847

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
4995941

Investment required (unit currency – as specified in C0.4)
43743067

Payback period
<1 year

Estimated lifetime of the initiative
<1 year

Comment
- Obtain the Renewable Energy Certificate (REC) from National Grid (PLN) which is equivalent to 87,181 MWh.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Our major mills are certified with energy management system (ISO50001) and there is a requirement to reduce energy as recommended by energy audit. Besides that we have to make several activity to reduce energy as recommended by Government regulation
Financial optimization calculations	Pulp and paper manufacturing is an energy intensive process, where the generation of heat, steam and electricity is required. Reducing energy use equal to reduce fuel consumption which also means reducing our energy cost.

C-AC4.4/C-FB4.4/C-PF4.4

(C-AC4.4/C-FB4.4/C-PF4.4) Do you implement agriculture or forest management practices on your own land with a climate change mitigation and/or adaptation benefit?

Yes

C-AC4.4a/C-FB4.4a/C-PF4.4a

(C-AC4.4a/C-FB4.4a/C-PF4.4a) Specify the agricultural or forest management practice(s) implemented on your own land with climate change mitigation and/or adaptation benefits and provide a corresponding emissions figure, if known.

Management practice reference number
MP1

Management practice
Agroforestry

Description of management practice
IFFS (Integrated Forestry and Farming System) Program aim to provide alternative sustainable livelihood for forest community to prevent them opening land using illegal practices such as fire and illegal logging. To prevent deforestation due to community illegal practices, APP initiate an Integrated Forest and Farming System (IFFS), a program aim to support community in implementing sustainable livelihood using existing land to prevent unsustainable practices such as opening land using fire, poaching or illegal logging.

Primary climate change-related benefit
Emission reductions (mitigation)

Estimated CO2e savings (metric tons CO2e)
20000

Please explain
This program reduce emission from forest due to reduction of forest fires.

Management practice reference number
MP2

Management practice
Pest, disease and weed management practices

Description of management practice
We develop precautionary approach to prevent pest attack or illness in plantation forest

Primary climate change-related benefit
Increasing resilience to climate change (adaptation)

Estimated CO2e savings (metric tons CO2e)
41502

Please explain
CO2 saving in biomass plantations

Management practice reference number
MP3

Management practice
Fire control

Description of management practice
Integrated Fire Management Strategy (prevention, preparation, early detection and rapid response)

Primary climate change-related benefit
Emission reductions (mitigation)

Estimated CO2e savings (metric tons CO2e)
3682822

Please explain
Physical risks arise from forest fires which still happen in our concession area in Sumatra. We do not practice, and highly condemn slash and burn activity for its detrimental impact to the environment. To combat forest fires, we are implementing Integrated Fire Management Strategy (prevention, preparation, early detection and rapid response).

Management practice reference number
MP4

Management practice
Land use change

Description of management practice
SERA (Supplier Evaluation and Risk Assessment)

Primary climate change-related benefit
Emission reductions (mitigation)

Estimated CO2e savings (metric tons CO2e)
500000

Please explain
CO2 savings in biomass plantations

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (Carbon Neutral Scheme)

Type of product(s) or service(s)

Pulp and paper	Other, please specify (Tissue / Toilet Paper)

Description of product(s) or service(s)
We have successful carbon offsetting the tissue / toilet paper to be marketed in Australian & New Zealand market with equivalents 1,913,660 kgCO2e / ton product tissue / toilet paper

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Methodology for Environmental Life-Cycle Assessment of Information and Communication Technology Goods, Networks and Services (ITU-TL.1410)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Cradle-to-gate + end-of-life stage

Functional unit used
1 ton of tissue / toilet paper

Reference product/service or baseline scenario used
The product is tissue / toilet paper with baseline 1 January - 31 December 2021

Life cycle stage(s) covered for the reference product/service or baseline scenario
Cradle-to-gate + end-of-life stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
1913660

Explain your calculation of avoided emissions, including any assumptions
The LCA boundary follows a “cradle-to-customer plus waste” approach in line with the Greenhouse Gas Protocol Product
Life Cycle Accounting and Reporting Standard (GHG Protocol). Emissions were taken into account according to the following lifecycle stages: Extraction and pre-processing of raw materials and packaging, production, supply of the product up to the customer’s factory gates as well as any relevant disposal emissions for the product and its packaging.

In this approach, the calculation focuses on the processes that can be monitored by the producer. The emissions from the service life or 'use' stage cannot generally be controlled and are subject to assumptions and estimates in the application. As such, they were not taken into account throughout the calculation.

Where possible, primary data was used. Where this was not possible, secondary data was gathered from recognised sources. The underlying emission factors are derived from international databases, such as ecoinvent or GEMIS. All greenhouse gases were taken into account for the calculation and are represented in carbon dioxide equivalents (CO_2e) for improved legibility and
comparability.

Emissions that could not be directly attributed to the product but were required for production, such as employee commuting or business travel, were also included in the calculation as “general emissions”.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
0.3

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?
No

Name of organization(s) acquired, divested from, or merged with
<Not Applicable>

Details of structural change(s), including completion dates
<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
10980146

Comment
No change boundary or methodology, in transition plan, we change carbon reduction from carbon intensity to carbon absolute.

Scope 2 (location-based)

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
794.481

Comment
No change boundary or methodology, in transition plan, we change carbon reduction from carbon intensity to carbon absolute.

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
3130809

Comment
Primary data : purchased raw material for chemicals & pulp .

Secondary data : cradle-to-gate emissions factors were obtained from commercially and publicly available databases SimaPro (Pre) software and ecoinvent V3.6

Scope 3 category 2: Capital goods

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
in 2021 baseline, capital good is not considered because no have activity related to purchase machinery or equipment.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
701830

Comment
Primary data: quantity of wood transported to pulp mills, distance between forestry to pulp mills

Secondary data : cradle-to-gate emissions factors were obtained from commercially and publicly available databases SimaPro (Pre) software and ecoinvent V3.6, estimate distance by calculator online

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
174466

Comment
Primary data: quantities of raw materials, distances between suppliers and mills

Secondary data : cradle-to-gate emissions factors were obtained from commercially and publicly available databases SimaPro (Pre) software and ecoinvent V3.6, estimate distance by calculator online

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
in 2021 baseline, waste generated is not considered because its already include in scope 1 emission.

Scope 3 category 6: Business travel

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
in 2021 baseline, business travel is not considered because the covid pandemic

Scope 3 category 7: Employee commuting

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
in 2021 baseline, employee commuting is not considered because the covid pandemic most emplooyee have work from hom system.

Scope 3 category 8: Upstream leased assets

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
not relevant category

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
422254

Comment
Primary data: quantities of products sold in the reporting year as well as transportation to customers. Transportation was assumed by sea freight. Land transportation from mills to port is negligible due to short distance compare to sea freight.
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).
The figure is calculated by multiplying distance kilometres and by the respective CO2-eq factors using Simapro Software.

Scope 3 category 10: Processing of sold products

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
4832680

Comment
Primary data: production of pulp product from APP mills.
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).
The total emissions value is calculated based on pulp sold amount and multiplied using CO2-eq factors for each material using Simapro Software.

Scope 3 category 11: Use of sold products

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
Not a relevant category. Pulp and paper products do not generate emissions at the use stage.

Scope 3 category 12: End of life treatment of sold products

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
73978

Comment
Primary data: whole paper production from APP mills

Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).
The total emissions value is calculated based on paper sold amount and multiplied using CO2-eq factors for each material using Simapro Software.

Scope 3 category 13: Downstream leased assets

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
not relevant category

Scope 3 category 14: Franchises

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
not relevant category

Scope 3 category 15: Investments

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
0

Comment
not relevant category

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
not relevant category

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
not relevant category

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance
The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard
Other, please specify (Calculation Tools for GHG pulp & paper)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
11075441

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Scope 1 - includes direct emissions from fuel used in power generators, petrol for company vehicles, CaCO3 purchased for lime kiln, solid waste to landfill, refrigerant consumption.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment
Scope 2 - includes indirect emissions from purchased national grid electricity

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
687613

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Scope 2 - includes indirect emissions from purchased national grid electricity

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?
Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions
source scope 2 which are not included: market - based.
sources scope 3 which are not included: capital goods, waste generation, employee commuting, leased asset, investment, franchises

Scope(s) or Scope 3 category(ies)
Scope 2 (market-based)
Scope 3: Capital goods
Scope 3: Waste generated in operations
Scope 3: Upstream leased assets
Scope 3: Use of sold products
Scope 3: Downstream leased assets
Scope 3: Franchises
Scope 3: Investments
Scope 3: Other (upstream)

Relevance of Scope 1 emissions from this source
<Not Applicable>

Relevance of location-based Scope 2 emissions from this source
<Not Applicable>

Relevance of market-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of Scope 3 emissions from this source
Emissions are not relevant

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0

Estimated percentage of total Scope 3 emissions this excluded source represents
30

Explain why this source is excluded
5 categories are not relevant (e.g. upstream leased assets, use of sold products, downstream leased assets, franchises, and investment), and 3 categories are relevant but not significant (e.g. capital goods, employee commuting, waste).

Explain how you estimated the percentage of emissions this excluded source represents
The total source scope 3 are 15 categories. 7 categories are relevant, 5 categories are not relevant (e.g. upstream leased assets, use of sold products, downstream leased assets, franchises, and investment), and 3 categories are relevant but not significant (e.g. capital goods, employee commuting, waste).

Therefore, we only calculate excluded categories with not significant divided by total relevant categories (relevant and not significant categories with total 10 categories).
The percentage is (3 / 10) x 100% = 30%

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
2489607

Emissions calculation methodology
Average data method
Other, please specify (Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard - IPCC)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Primary data: quantities of purchasing volumes from APP sourcing, supplier data.
Secondary data: Emissions factors (secondary data), cradle-to-gate emissions factors were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020)

Capital goods

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
not yet calculated

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
834438

Emissions calculation methodology
Average data method
Other, please specify (Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard - IPCC)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Primary data: quantity of wood transported to pulp mills, distance between forestry to pulp mills
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
169381

Emissions calculation methodology
Average data method
Other, please specify (Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard - IPCC)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Primary data: quantity of wood transported to pulp mills, distance between forestry to pulp mills
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).

Waste generated in operations

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We have identified the waste treatment owned or operated by third parties but not yet calculated the emission in scope 3.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
336

Emissions calculation methodology
Distance-based method
Other, please specify (Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard - IPCC)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Primary data: distance and number people travelled by air & car
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).

Employee commuting

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We have identified that some employees are provided mess / house thus no emission cause from employee commuting. Some of them are also live with distance not more than 25 km from the office.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant with business process. The study carried out by UPM showed 0.4% of total emissions for machines and buildings. Overall, emissions related to infrastructure (capital goods, leased assets, etc.) can be estimated to be less than 100,000 tonnes.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
404904.999

Emissions calculation methodology
Average data method
Other, please specify (Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard - IPCC)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Primary data: quantities of products sold in the reporting year as well as transportation to customers. Transportation was assumed by sea freight. Land transportation from mills to port is negligible due to short distance compare to sea freight.
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).

Processing of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
3375221

Emissions calculation methodology
Average data method
Other, please specify (- Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard - IPCC)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Primary data: production of pulp product from APP mills.
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).

Use of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not a relevant category. Pulp and paper products do not generate emissions at the use stage.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
73561

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Primary data: whole paper production from APP mills
Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant with business process.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant with business process.

Investments

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Not relevant with business process. .

Other (upstream)

Evaluation status
Please select

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?
Yes

C-AC6.8a/C-FB6.8a/C-PF6.8a

(C-AC6.8a/C-FB6.8a/C-PF6.8a) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

CO2 emissions from land use management

Emissions (metric tons CO2)
15939000

Methodology
Region-specific emissions factors

Please explain
We have conducted feasibility study to identify emission form land use management based on land used land cover (LULC) from 2013 – 2020 using national emission factor released by Ministry of Enviromental & Forestry. As summary, our land management distributed in several regions, such as Riau, Jambi, South Sumatera, West Kalimantan, and East Kalimantan have emitted 15,939,000 tCO2 and removed 11,037,000 tCO2 since 2013 - 2020. It's equal with total net emission is 4,902,390 tCO2.

CO2 removals from land use management

Emissions (metric tons CO2)
11037000

Methodology
Region-specific emissions factors

Please explain
We have conducted feasibility study to identify emission form land use management based on land used land cover (LULC) from 2013 – 2020 using national emission factor released by Ministry of Enviromental & Forestry. As summary, our land management distributed in several regions, such as Riau, Jambi, South Sumatera, West Kalimantan, and East Kalimantan have emitted 15,939,000 tCO2 and removed 11,037,000 tCO2 since 2013 - 20. It's equal with total net emission is 4,902,390 tCO2.

Sequestration during land use change

Emissions (metric tons CO2)
9037253

Methodology
Region-specific emissions factors

Please explain
Beside land use management which is coming from our plantation area. We have also conducted feasibility study to identify Sequestration/Removals from Conservation Areas is calculated using landcover data in 2013 and 2020.

The Sequestration/Removal calculation in conservation areas is based on: Forest remaining Forest and Shrub remaining Shrub. Sequestration in the conservation area during 2013 – 2020 totaled 9.0 MMT CO2

CO2 emissions from biofuel combustion (land machinery)

Emissions (metric tons CO2)
19227

Methodology
Field measurements

Please explain
The biofuel combustion emits the biogenic emission. The source of emission is machinery used for transporting fertilizer and wood which is part or Scope 3

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)
17008538

Methodology
Field measurements

Please explain
The biofuel combustion emits the biogenic emission.

The source of emission is primary data from quantity of black liquor, bark , palm fiber, and oteher biomas / biogass consumption in processing / manufacturing machinery
Secondary data: Emissions factors from IPCC

CO2 emissions from biofuel combustion (other)

Emissions (metric tons CO2)

Methodology

Please explain

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

Agricultural commodities
Timber

Do you collect or calculate GHG emissions for this commodity?
No, not currently but intend to collect or calculate this data within the next two years

Reporting emissions by
<Not Applicable>

Emissions (metric tons CO2e)
<Not Applicable>

Denominator: unit of production
<Not Applicable>

Change from last reporting year
<Not Applicable>

Please explain
<Not Applicable>

Explain why you do not calculate GHG emission for this commodity and your plans to do so in the future
We have conducted feasibility study to identify our emission from land used and forestry since 2013 - 2020. Our baseline, target, and monitor program to calculate and report regularly is still in the process.

We have considered this part to our commitment as well in SBTi FLAG Sector.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
1.01

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
11763054

Metric denominator
metric ton of product

Metric denominator: Unit total
100

Scope 2 figure used
Location-based

% change from previous year
0.1

Direction of change
Decreased

Reason(s) for change
Change in renewable energy consumption
Other emissions reduction activities

Please explain
This reporting year the carbon absolute is 11,763,054 tCO2e and reduce 0,1 % or equal with 11,573 tCO2e from 2021 (total carbon absolute in 2021 is 11,774,627 tCO2)

Some of initiatives have been made within this reporting period as below:
- Increase biomass consumption, as a result, we have achieved 59 % energy consumption by renewable energy which is increase 3 % of renewable energy consumption comparing with 2021
- Increase the efficiency of boiler / recovery boiler, as a result, we have reduced fossil fuel with reduction 1.587.099 GJ of non-renewable energy with direct consumption comparing with 2021
- Increase the waste utilization as biogas consumption, as a result, we have increased the renewable energy from biogas with 533.760 GJ comparing with 2021
- Increase the waste utilization as biomass (sludge), as a result, we can replace the fossil fuel consumption with increase the renewable energy from biomass 168.344 GJ comparing with 2021
- Obtain the Renewable Energy Certificate (REC) from National Grid (PLN) which is equivalent to 87,181 MWh, as a result, we can reduce our Scope 2 emission with 106.869 tCO2e comparing with 2021
- Install solar panel with capacity 18,6 MWp in 2022, as a result, the energy from fossil can be replace by this non fossil with equal 66,96 GJ once the solar panel have fully in 2023.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	10963003	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	16488	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	42432	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	53518	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Indonesia	11075441

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.
By facility

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Ekamas Fortuna Malang	118179	-7.975985	112.626878
Indah Kiat Pulp & Paper, Serang Mill	1917520	-6.12	106.15028
Indah Kiat Pulp & Paper, Tangerang Mill	105084	-6.17833	106.63194
Indah Kiat Pulp & Paper, Univerus, and Pindo Deli in Perawang Mill,	4093359	0.664278	101.595668
Tjiwi Kimia	2010836	-7.4716	112.44
Pindo Deli Karawang, Mill 1	442698	-6.3125	107.295
Pindo Deli Karawang, Mill 2	971846	-6.3125	107.295
Pindo Deli Karawang, Mill 3	322446	-6.3125	107.295
Lontar Papyrus	914343	-1.01	103.08
OKI Pulp & Paper	179131	-3.329272	105.416347

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?
Yes

C-AC7.4a/C-FB7.4a/C-PF7.4a

(C-AC7.4a/C-FB7.4a/C-PF7.4a) Select the form(s) in which you are reporting your agricultural/forestry emissions.
Total emissions

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

Activity
Processing/Manufacturing

Emissions category
<Not Applicable>

Emissions (metric tons CO2e)
11763054

Methodology
Field measurements

Please explain
Scope 1 includes direct emissions from fuel used in power generators, petrol for company vehicles, CaCO3 purchased for lime kiln, solid waste to landfill, refrigerant consumption.

The assessment of GHG emissions is based on the methodology of the Intergovernmental Panel on Climate Change (IPCC) and the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD)—Greenhouse Gas (GHG) Protocol.

emission factor and global warming potential (GWP) rates are based IPCC 5th assessment report

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Indonesia	687613	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.
By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Ekamas Fortuna Malang	81066	0
Indah Kiat Serang Mill	165958	0
Indah Kiat Tangerang Mill	24687	0
Tjiwi Kimia	209291	0
Pindo Deli Karawang Mill 1	43057	0
Pindo Deli Karawang Mill 2	150862	0
Pindo Deli Karawang Mill 3	12692	0
Indah Kiat Pulp & Paper, Univerus, and Pindo Deli in Perawang Mill,	0	0
Lontar Papyrus	0	0
OKI Pulp & Paper	0	0

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?
No

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?
Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	1295111	Decreased	8	APP has initiative to increase the biomass consumption, as a result it will increase the biogenic emission and decrease the fossil emission. Biogenic emission in 2021 is 15,713,427 tCO2e, and Biogenic emission ini 2022 is 17,008,538 tCO2e. There is an increase biogenic emission as resulted from biomass consumption with 1,295,111 tCO2e. The emission value is 8 % differentiate comparing with 2021. Therefore, emission value is coming from changing in biogenic emission divided by total emission in 2022.
Other emissions reduction activities	106869	Decreased	13	APP has initiative to decrease the Scope 2 emission with reducing purchased electricity and also obtaining the Renewable Energy Certificate (REC) from National Grid Electricity In 2021, scope 2 emission from indirect emission is 794,481 tCO2e and scope 2 emission in 2022 is 687,613 tCO2e. The reduction emission is 106,869 tCO2e. The emission value is 13 % differentiate comparing with 2021
Divestment	0	No change		No change with this category
Acquisitions	0	No change		No change with this category
Mergers	0	No change		No change with this category
Change in output	0	No change		No change with this category
Change in methodology	0	No change		No change with this category
Change in boundary	0	No change		No change with this category
Change in physical operating conditions	0	No change		No change with this category
Unidentified	0	No change		No change with this category
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	48032749	33216372	81249121
Consumption of purchased or acquired electricity	<Not Applicable>	87181	790360	877541
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	48119930	34006731	82126662

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
LHV

Total fuel MWh consumed by the organization
48032749

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
48032749

Comment
Biomass fuel come from bark, black liquor, saw dust, palm fiber

Other biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Not applicable because "other biomass" category has been included in sustainable biomass

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
87181

MWh fuel consumed for self-generation of electricity
87181

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
We have obtained Renewable Energy Certificates (REC) from National Grid Electricity, the State Electricity Company (PLN) which is equivalent to 87,181 MWh.
REC is an important certification that proves the electricity production generated per megawatt hour (MWh) is derived
from power plants that use renewable or non-fossil energy sources such as solar, wind, hydro,
or geothermal power.

Coal

Heating value
LHV

Total fuel MWh consumed by the organization
28847316

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
28847316

Comment
We use sub-bituminous coal with direct measurement of carloy value

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
451054

MWh fuel consumed for self-generation of electricity
451054

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment
Include Diesel Oil , IDO , MFO, Gasoline

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
4025069

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
4025069

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Natural Gas & Methanol Gas

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
We have also installed solar panel with capacity 18,6 MWp in 2022 but not yet fully operated, as a result, the energy from fossil can be replace by this non fossil with equal 66,96 GJ once the solar panel have fully in 2023.

Other non-renewable fuel is still under feasibly study.

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
33216372

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
33216372

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	10885352	11855199	87181	87181
Heat	4025069	4025069	94422	94422
Steam	81249121	81249121	48032749	48032749
Cooling	0	0	0	0

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area
Indonesia

Consumption of purchased electricity (MWh)
87181

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Waste

Metric value

Metric numerator
Zero waste to landfill

Metric denominator (intensity metric only)
MT

% change from previous year

Direction of change
<Not Applicable>

Please explain

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
High assurance

Attach the statement
APP SR 2022 ESG and assurance statement SGS komen.pdf

Page/ section reference

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
58

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
High assurance

Attach the statement
APP SR 2022 ESG and assurance statement SGS komen.pdf

Page/ section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)
4

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Please select

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
High assurance

Attach the statement
APP SR 2022 ESG and assurance statement SGS komen.pdf

Page/section reference

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
38

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Indonesia start to develop carbon market mechanism through Industry Ministry with a program called PMR (partnership for market readiness). This will be a journey for companies in Indonesia to involve in carbon market or carbon pricing. We realize that our company is one of high energy consumed manufacturing therefore we are now preparing for that mechanism through investment plan for energy efficiency and renewable energy. We also have conservation program in our concession to be able participate in selling carbon to carbon market or as alternative we conduct carbon in-setting mechanism which balancing our conservation programs to our manufacturing emission.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services
Collaborate with suppliers on innovative business models to source renewable energy
Invest jointly with suppliers in R&D of relevant low-carbon technologies

% of suppliers by number
70

% total procurement spend (direct and indirect)
70

% of supplier-related Scope 3 emissions as reported in C6.5
70

Rationale for the coverage of your engagement
Coverage of engagement mainly on pulpwood supplier as this is our main raw material, and fuel & chemical suppliers which are the second highest of expenses cost related to raw material. These all represent our supplier number. Some other supplier is considered as well.

Impact of engagement, including measures of success
We engaged our pulpwood supplier to implement sustainable forest management (SFM), as the result all of our pulpwood supplier is certified SFM therefore concession area that identified as High conservation value or high carbon stock will not converted to be plantation area. We also enforce best practice of peatland management and fire risk reduction in our suppliers area. The impact of these is that the forestry operations managed to avoid significant amount of carbon avoidance compared to business as usual. The success of engagement proved by reduced emission from forest.

In 2018, we engaged with independent consultant to calculate emission from forestry since the implementation of Forest Conservation Policy, the result was we succeed reduce 64% carbon emission from forestry compare to business as usual (BAU).

Furthermore, We recognize the risk opportunity from supply chain by mapping our supply chain under supplier engagement, identifying the carbon emission emitted from supply chain, monitoring & evaluating the supplier performance & impact. As we are committed to Science Based Target initiatives (SBTi), we will also encourage the supply chain also committed with SBTi as well.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number
100

% of customer - related Scope 3 emissions as reported in C6.5
100

Please explain the rationale for selecting this group of customers and scope of engagement
About 60% of our product is exported to overseas and they often request environmental information including GHG emission in our facility or product. We engage our customer both local and overseas (export) through meeting, workshop and seminars. We also provide a campaign mechanism about our product and environmental performance. This is representing o our 100 % customer.

Impact of engagement, including measures of success
As impact of engagement, customer is more aware about environmental product. We have product with certified on Ecolabel scheme. This will be a good consideration for low impact environmental product. We are also prepare our product for LCA as customer in other countries requested such product for the best environmental product.

This is representing o our 100 % customer scope 3 emission, we have fully support to proivde our scope 3 emission to customer if needed.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

These plans consider our supply chain too. We recognize the risk opportunity from supply chain by mapping our supply chain, identifying the carbon emission emitted from supply chain, monitoring & evaluating the supplier performance & impact. As we are committed to Science Based Target initiatives (SBTi), we will also encourage the supply chain also committed with SBTi as well.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Implementation of emissions reduction initiatives

Description of this climate related requirement
We recognize the risk opportunity from supply chain by mapping our supply chain, identifying the carbon emission emitted from supply chain, monitoring & evaluating the supplier performance & impact. As we are committed to Science Based Target initiatives (SBTi), we will also encourage the supply chain also committed with SBTi as well. We are doing the quarterly basis meeting to have the visibility of our carbon emission and decarbonization program to align with our SRV

% suppliers by procurement spend that have to comply with this climate-related requirement
100

% suppliers by procurement spend in compliance with this climate-related requirement
50

Mechanisms for monitoring compliance with this climate-related requirement
Certification
Supplier self-assessment
First-party verification

Response to supplier non-compliance with this climate-related requirement
Retain and engage

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?
Yes

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-PF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Management practice reference number
MP1

Management practice
Agroforestry

Description of management practice
IFFS (Integrated Forestry and Farming System) Program aim to provide alternative sustainable livelihood for forest community to prevent them opening land using illegal practices such as fire and illegal logging. To prevent deforestation due to community illegal practices, APP initiate an Integrated Forest and Farming System (IFFS), a program aim to support community in implementing sustainable livelihood using existing land to prevent unsustainable practices such as opening land using fire, poaching or illegal logging.

Your role in the implementation
Financial
Knowledge sharing

Explanation of how you encourage implementation
IFFS (Integrated Forestry and Farming System) Program aim to provide alternative sustainable livelihood for forest community to prevent them opening land using illegal practices such as fire and illegal logging. To prevent deforestation due to community illegal practices, APP initiate an Integrated Forest and Farming System (IFFS), a program aim to support community in implementing sustainable livelihood using existing land to prevent unsustainable practices such as opening land using fire, poaching or illegal logging. Our target is 500 villages in and around APP pulpwood suppliers concession area that has identified having high risk of forest fire. As per year 2022, IFFS has been implemented in 421 villages and provide benefit to more than 80,000 people.

Climate change related benefit
Emissions reductions (mitigation)
Increase carbon sink (mitigation)

Comment
Emission reduction by reduction forest fires, and community around forest area maximize land potential value

Management practice reference number
MP2

Management practice
Pest, disease and weed management practices

Description of management practice
We develop precautionary approach to prevent pest attack or illness in plantation forest

Your role in the implementation
Financial

Knowledge sharing
Operational
Procurement

Explanation of how you encourage implementation
The change of temperature caused by climate change impacts APP pulpwood supply in terms of diseases and/or pest attack in the plantation forest. It potentially disrupts our production volume. Therefore, we develop precautionary approach to prevent pest attack or illness in plantation forest as well as mitigation plan if the attack does happen.

Climate change related benefit
Increasing resilience to climate change (adaptation)

Comment

Management practice reference number
MP3

Management practice
Fire control

Description of management practice
Integrated Fire Management Strategy (prevention, preparation, early detection and rapid response)

Your role in the implementation
Financial
Knowledge sharing
Operational
Procurement

Explanation of how you encourage implementation
Physical risks arise from forest fires which still happen in our concession area in Sumatra. We do not practice, and highly condemn slash and burn activity for its detrimental impact to the environment. In 2015 forest fires impacted significantly to our operation. To combat them, we are implementing Integrated Fire Management Strategy (prevention, preparation, early detection and rapid response).

Climate change related benefit
Emissions reductions (mitigation)
Increasing resilience to climate change (adaptation)
Increase carbon sink (mitigation)

Comment

Management practice reference number
MP4

Management practice
Land use change

Description of management practice
SERA (Supplier Evaluation and Risk Assessment)

Your role in the implementation
Knowledge sharing
Operational
Procurement

Explanation of how you encourage implementation
As pulp and paper company which committed to zero deforestation, we use 100% pulpwood plantation fiber as our raw material to produce our products. To ensure that we only source from sustainable plantation, we implement FPPP (Fiber Procurement & Processing Policy). We also implement SERA (Supplier Evaluation and Risk Assessment) to ensure our suppliers comply to our no deforestation policy.

Climate change related benefit
Emissions reductions (mitigation)
Increase carbon sink (mitigation)

Comment

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-PF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?
Yes

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

We have commited in SBTi an ambitious effort towards achieving a 1.5°C world.

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Our sustainability initiatives are discussed in various platforms involving other industrial players and relevant stakeholders. For example on how corporations can take action in climate change mitigation. We have regular meeting with stakeholders to discuss progress on our climate change commitments and provide regular public report on progress on our commitments. We are also involved in relevant flagship initiatives such as REDD+, UN Global Compact initiatives and others. We are also involved in international platforms that encourage GHG emission reduction commitments across sectors and between private and government organizations such as the New York Declaration on Forests and the Bonn Challenge.

We are in the process to set baseline & target aligning with SBTi, and also seek validation by 2024.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Net FOLU sink, Indonesia target 2030

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Climate-related targets

Climate transition plans

Low-carbon, non-renewable energy generation

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Indonesia

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Supporting the Ministry of Environment and Forestry on Net FOLU sink target in 2030 by providing method and measurement of forest emission, and NDC 2060

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

<Not Applicable>

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Consumer Goods Forum (CGF)

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Please select

Trade association
Please select

Is your organization's position on climate change policy consistent with theirs?
Please select

Has your organization attempted to influence their position in the reporting year?
Please select

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
<Not Applicable>

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Please select

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In voluntary sustainability report

Status
Complete

Attach the document

Page/Section reference

Content elements
Emissions figures
Emission targets

Comment

Publication
In other regulatory filings

Status
Complete

Attach the document

Page/Section reference

Content elements
Emissions figures
Emission targets

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Global Reporting Initiative (GRI) Community Member Science Based Targets Network (SBTN) Task Force on Climate-related Financial Disclosures (TCFD) UN Global Compact	

C13. Other land management impacts

C-AC13.1/C-FB13.1/C-PF13.1

(C-AC13.1/C-FB13.1/C-PF13.1) Do you know if any of the management practices implemented on your own land disclosed in C-AC4.4a/C-FB4.4a/C-PF4.4a have other impacts besides climate change mitigation/adaptation?

Yes

C-AC13.1a/C-FB13.1a/C-PF13.1a

(C-AC13.1a/C-FB13.1a/C-PF13.1a) Provide details on those management practices that have other impacts besides climate change mitigation/adaptation and on your management response.

Management practice reference number
MP1

Overall effect
Positive

Which of the following has been impacted?
Other, please specify (Community)

Description of impact
Our Integrated Forestry and Farming System (IFFS) forms a critical part of our fire strategy by reducing threats to the forest by supporting local communities to develop alternative livelihoods, thus, reducing dependency on forests and one of the driving forces behind fires – land clearance

Have you implemented any response(s) to these impacts?
Yes

Description of the response(s)
This program started in 2016 and currently implemented for 421 villages, Our target is 500 villages and around APP pulpwood suppliers concession area that has identified having high risk of forest fire.

Management practice reference number
MP2

Overall effect
Positive

Which of the following has been impacted?
Yield

Description of impact
This program sets out ways in which we can increase tree growth yield through the development of more robust seedlings, develop more area specific siviculture, improve disease & pest control, and reduce wood loss from harvesting and wood handling to mill sites

Have you implemented any response(s) to these impacts?
Yes

Description of the response(s)
Our current fibre supply is sufficient to support our planned growth and will further benefit from the efficiency and yield improvements we are making across our supply chain

---

Management practice reference number
MP3

Overall effect
Positive

Which of the following has been impacted?
Yield

Description of impact
Our current fibre supply is sufficient to support our planned growth and will further benefit from the efficiency and yield improvements we are making across our supply chain

Have you implemented any response(s) to these impacts?
Yes

Description of the response(s)
This program started 2016 and has improve our yield across supply chain. Based on the independent G&Y study indicates that Asia Pulp & Paper Group (APP) has sufficient plantation resource to meet the pulp requirements of its existing mills

---

Management practice reference number
MP4

Overall effect
Neutral

Which of the following has been impacted?
Biodiversity

Description of impact
APP committed to zero deforestation, we use 100% pulpwood plantation fiber as our raw material to produce our products. This commitment help to protect biodiversity on natural forest.

Have you implemented any response(s) to these impacts?
Yes

Description of the response(s)
We have implented Forest Consevation Policy (FCP) since 2012 and commited to zero deforestation. By implementing this, we also support biodiversity on forest.

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?
Yes

C-AC13.2a/C-FB13.2a/C-PF13.2a

(C-AC13.2a/C-FB13.2a/C-PF13.2a) Provide details of those management practices implemented by your suppliers that have other impacts besides climate change mitigation/adaptation.

Management practice reference number
MP1

Overall effect
Positive

Which of the following has been impacted?
Other, please specify (Community)

Description of impacts
Our Integrated Forestry and Farming System (IFFS) forms a critical part of our fire strategy by reducing threats to the forest by supporting local communities to develop alternative livelihoods, thus, reducing dependency on forests and one of the driving forces behind fires – land clearance

Have any response to these impacts been implemented?
Yes

Description of the response(s)
This program started in 2016 and currently implemented for 297 villages, Our target is 500 villages and around APP pulpwood suppliers concession area that has identified having high risk of forest fire. Implementation of the program target to be completed in the year 2020.

Management practice reference number
MP2

Overall effect
Positive

Which of the following has been impacted?
Yield

Description of impacts
This program sets out ways in which we can increase tree growth yield through the development of more robust seedlings, develop more area specific siviculture, improve disease & pest control, and reduce wood loss from harvesting and wood handling to mill sites

Have any response to these impacts been implemented?
Yes

Description of the response(s)
Our current fibre supply is sufficient to support our planned growth and will further benefit from the efficiency and yield improvements we are making across our supply chain

---

Management practice reference number
MP3

Overall effect
Positive

Which of the following has been impacted?
Yield

Description of impacts
Integrated Fire Management Strategy reduce fire at our concession as well as reduce wood losses. This program then can improve our supply chain yield and maintain raw material supply

Have any response to these impacts been implemented?
Yes

Description of the response(s)
This program started 2016 and has improve our yield across supply chain. Based on the independent G&Y study indicates that Asia Pulp & Paper Group (APP) has sufficient plantation resource to meet the pulp requirements of its existing mills as well as its future mill in OKI, South Sumatra

---

Management practice reference number
MP4

Overall effect
Neutral

Which of the following has been impacted?
Biodiversity

Description of impacts
APP committed to zero deforestation, we use 100% pulpwood plantation fiber as our raw material to produce our products. This commitment help to protect biodiversity on natural forest.

Have any response to these impacts been implemented?
Yes

Description of the response(s)
We have implented Forest Consevation Policy (FCP) since 2012 and commited to zero deforestation. By implementing this, we also support biodiversity conservation on forest.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, executive management-level responsibility	Chief sustainability officer responsible for managing conservation activity within supply chain including monitoring the implementation and achievement of biodiversity target that stated in APP Sustainability Roadmap Vision 2030.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Adoption of the mitigation hierarchy approach Commitment to not explore or develop in legally designated protected areas Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Commitment to no conversion of High Conservation Value areas Commitment to secure Free, Prior and Informed Consent (FPIC) of Indigenous Peoples Commitment to no trade of CITES listed species	SDG

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment
No, but we plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment
No, but we plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?
Yes

C15.4a

(C15.4a) Provide details of your organization's activities in the reporting year located in or near to biodiversity -sensitive areas.

Classification of biodiversity -sensitive area
Key Biodiversity Area (KBAs)

Country/area
Indonesia

Name of the biodiversity-sensitive area
Sumatra, Kalimantan

Proximity
Up to 5 km

Briefly describe your organization's activities in the reporting year located in or near to the selected area
As a global producer of pulp and paper products, APP is committed to protecting the existing natural forests across our pulpwood supplier concession areas in Sumatra and Kalimantan, also to restoring degraded areas inside these protected areas.

Indicate whether any of your organization's activities located in or near to the selected area could negatively affect biodiversity
Yes, but mitigation measures have been implemented

Mitigation measures implemented within the selected area
Please select

Explain how your organization's activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented
As a global producer of pulp and paper products, APP is committed to making a positive impact on biodiversity and sustainability by placing these values at the core of our business. Part of our SRV 2030 is aimed at protecting wildlife, restoring forests, and APP is not only committed to protecting the existing natural forests across our supplier concession areas in Sumatra and Kalimantan, but also to restoring degraded areas inside these protected areas.

Restoration is an effort to help restore ecosystems that have been degraded and to preserve ecosystems that are still intact. Restoration consists of 3 approaches: eradication, natural succession and enrichment planting. Natural succession was carried out in areas with young shrub to old shrub land cover types. Eradication is implemented in areas with acacia dominance. Enrichment planting is carried out in areas with open land cover and or shrubs.

In line with SRV 2030, our conservation and restoration efforts of HCS forests and HCV areas aim to reduce threats on Indonesia's diminishing natural forests in Sumatra and Kalimantan.

In 2022, APP collaborated with local communities to implement restoration efforts in the Musi Banyuasin Regency of South Sumatra. As of 2022, our total percentage of natural forests in good condition was 414,237 ha or 84%, which represents an increase compared to our baseline of 74%. In terms of restoration, we successfully restored 11,700 ha of HCS forests and HCV areas. However, we faced challenges such as encroachment and illegal mining, as well as limited access and scattered locations for implementation, monitoring, and evaluation of restoration efforts.

APP has also collaborated with the Center for Research and Development of Socio- Economic Policy and Climate Change (Pusat Penelitian dan Pengembangan Sosial Ekonomi Kebijakan dan Perubahan Iklim /P3SEKPI) for ecosystem restoration and development of mycorrhiza inoculants to increase the productivity of alternative species in peatlands. The collaboration in the restoration process in the form of developing restoration guidelines and strategies. The collaboration output in 2022 will be the publication of a book about Strategies and Techniques for Restoring Freshwater Swamp Forest Ecosystems. In addition, also publishing of a Brief Policy for the Restoration of Critical Peat Dome in Industrial Plantation Forest Areas. The brief policy provides input in the form of an evaluation of monitoring techniques and restoration strategies in the recovery area of the domed peak of the Industrial Plantation Forest planting area. Collaboration for the development of mycorrhiza inoculants in 2022 in the form of mass production of Arbuscular mycorrhiza Fungi (FMA), which has been applied to several alternative species, including Gelam (Meleleuca sp.), Geronggang (Cratoxylum sp.), and Leptostemon sp., and manufacture of Ectomycorrhizal Fungi inoculants for the Shorea balangeran species.

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Livelihood, economic & other incentives

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Response indicators

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Biodiversity strategy	Forest Restoration, Conservation of Locally Rare Tree Species, Mangrove Restoration, Wildlife Protection and Conservation, various Environmental Initiatives and Partnerships e.g.: Landscape conservation and livelihood program in Sungai Linau villages

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

Dear Stakeholders,

Together with APP's: Deputy CEO, Managing Director, Director of Corporate Affairs and Communications, Social Division Head, Human Resources Division Head, Business Unit Heads and Chief Sustainability Officer (CSO), our Chief Executive Officer (CEO) responsible to oversee our sustainability commitments implementation accross APP operations. This team named as "Sustainability Committee", previously mentioned as Sustainability Committee Board (SCB).

CEO responsible to lead the team on evaluating the assessment results on the adequacy and effectiveness of environment, social, and energy strategy including forestry according to APP's Sustainability Roadmap Vision (SRV) 2030, national regulations and global relevant standards. Our CEO also approved Sustainability Commitment and its' policies (such as Environmental Policy) to the reduce climate change impact.

Thank you for your ongoing support.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	The Sustainability Committee headed by APP's CEO, is responsible for addressing sustainability issues, including climate change, and plays a key role in driving APP's sustainability agenda.	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

Same as CC 0.1

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	9400000000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
Philip Morris International

Scope of emissions
Scope 1

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
<Not Applicable>

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
34679

Uncertainty (±%)
5

Major sources of emissions
Scope 1 includes direct emissions from fuel used in power generators, petrol for company vehicles, CaCO3 purchased for lime kiln, solid waste to landfill, refrigerant consumption from one of pulp & paper mill, PT Indah Kiat Serrang

Verified
Yes

Allocation method
Allocation based on the volume of products purchased

Market value or quantity of goods/services supplied to the requesting member
33000

Unit for market value or quantity of goods/services supplied
Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Scope 1 includes direct emissions from fuel used in power generators, petrol for company vehicles, CaCO3 purchased for lime kiln, solid waste to landfill, refrigerant consumption from one of pulp & paper mill, PT Indah Kiat Serang

The assessment of GHG emissions is based on the methodology of the Intergovernmental Panel on Climate Change (IPCC) and the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD)—Greenhouse Gas (GHG) Protocol.

Source emission factor and global warming potential (GWP) rates are based IPCC 5th assessment report

We supply product to PMI from our mills Indah Kiat Serang. Data of sold product is based on 2022 data. The scope of calculation is from gate to gate of manufacturing.

Requesting member
Philip Morris International

Scope of emissions
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
3001

Uncertainty (±%)
5

Major sources of emissions
Scope 2 includes indirect emissions from purchased electricity from one of pulp & paper mill, PT Indah Kiat Serang

Verified
Yes

Allocation method
Allocation based on the volume of products purchased

Market value or quantity of goods/services supplied to the requesting member
33000

Unit for market value or quantity of goods/services supplied
Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Scope 2 includes indirect emissions from purchased electricityfrom one of pulp & paper mill, PT Indah Kiat Serang

The assessment of GHG emissions is based on the methodology of the Intergovernmental Panel on Climate Change (IPCC) and the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD)—Greenhouse Gas (GHG) Protocol.

Source emission factor from National Grid (PLN)

We supply product to PMI from our mills Indah Kiat Serang. Data of sold product is based on 2022 data. The scope of calculation is from gate to gate of manufacturing.

Requesting member
Philip Morris International

Scope of emissions
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 9: Downstream transportation and distribution
Category 12: End-of-life treatment of sold products

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
16116

Uncertainty (±%)
5

Major sources of emissions
Scope 3 includes purchased goods and services, fuel and energy-related activities not covered by scope 1 or scope 2, upstream transportation and distribution, downstream transportation and distribution, processing of sold products, and end of-life treatment of sold products..

Verified
Yes

Allocation method
Allocation based on the volume of products purchased

Market value or quantity of goods/services supplied to the requesting member
33000

Unit for market value or quantity of goods/services supplied
Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Scope 3 includes purchased goods and services, fuel and energy-related activities not covered by scope 1 or scope 2, upstream transportation and distribution, downstream transportation and distribution, processing of sold products, and end of-life treatment of sold products.

Secondary data: Emissions factors (secondary data), cradle-to-gate emissions factors were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020).

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

We have disclosed as APP and for OJK Sustainability for Indah Kiat Pulp & Paper, which consist of 3 mills location : Indah Kiat Perawang Mill , Indah Kiat Tangerang Mill, Indah Kiat Serang Mill.

Only Indah Kiat Serang Mill that supplies product to PMI

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	A cost effective system that can continuously monitor GHG emission at the various production process steps at the different facilities to allow an accurate calculation of carbon footprint of product

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?
Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Conduct assessment carbon footprint of product for specific products as requested by customers

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
Philip Morris International

Group type of project
Relationship sustainability assessment

Type of project
Assessing products or services life cycle footprint to identify efficiencies

Emissions targeted
Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
Other, please specify (7)

Estimated lifetime CO2e savings
1500000

Estimated payback
3-5 years

Details of proposal
One of our pulps & paper mill, in Indah Kiat Serang, supplies product to PMI . The lifetime saving is calculated by initiatives reduction program up to 2030.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
Yes

SC2.2a

(SC2.2a) Specify the requesting member(s) that have driven organizational-level emissions reduction initiatives, and provide information on the initiatives.

Requesting member
Please select

Initiative ID
2023-ID1

Group type of project
Reduce Logistics Emissions

Type of project
Consolidated logistics

Description of the reduction initiative

Emissions reduction for the reporting year in metric tons of CO2e
0

Would you be happy for CDP supply chain members to highlight this work in their external communication?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms