Asia Pulp & Paper - Climate Change 2021

C0. Introduction

C0.1

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

Asia Pulp & Paper (APP) Sinar Mas is a trade name of pulp and paper manufacturing company which delivers quality products to meet the growing global demand for paper, tissue, and packaging. Beginning as a caustic soda producer in 1972, we have grown into a global business with operations across Indonesia and China with an annual combined pulp, paper, packaging product and converting capacity of over 20 million tons per annum. Today, Asia Pulp & Paper (APP) Sinar Mas markets its products in more than 150 countries across six continents. This growth is guided by our vision of a better future. It is what keeps us moving forward, creating new ways of living and innovating. Over the years, we have expanded our operations through the acquisition and expansion of our pulp and paper mills. It is our commitment to customer satisfaction that enables us to grow our share in paper sales worldwide and broaden our presence through offices in many countries.

Sustainability has always been at the core of our business. At APP, we create products and deliver services with care through responsible and sustainable innovations for every product life stage. For us 'Growing' is not only about business but also the purpose of improving the livelihoods of people around us. Our newest sustainability strategy is detailed in our Sustainability Roadmap: Vision (SRV) 2030. The strategy is broken down into three pillars—Production, Forest, and People. We have set ourselves targets for each of these pillars, intending to drive improvement in processes that concern our business, wider supply chain and environmental sustainability. Vision 2030 also details our efforts and strategy in our continued support of the UN's Sustainable Development Goals (SDGs) and the Paris Agreement on climate change.

Our sustainability strategy Vision 2030 has ten targets: Fibre Sourcing, Reforestation, Conservation & Biodiversity, Human Rights & Indigenous People, Community Empowerment, Climate Change, Emissions, Water Management, Solid Waste, and Employee Welfare. Vision 2030 affects all areas of our business. It is a minutely detailed strategy, with firm targets surrounding sustainability, that uses Company KPIs to monitor progress. Contrasts between Vision 2030 and its predecessor --Vision 2020 -- include a focus on a broader range of sustainability issues and tighter alignment with both the UN SDGs and the Paris Agreement, increased stakeholder engagement.

More information can be found at www.asiapulppaper.com and https://sustainability-dashboard.com/

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2020	December 31 2020	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

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	Own land only [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
Raw material of our product highly depended on timber that sourced from our pulpwood plantations.

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(s)	Please explain
Chief Executive Officer (CEO)	The License, Government Relation and Sustainability Committee Board is headed by APP's CEO, members include APP's Deputy CEO, Managing Director, Business Unit heads and the CSO. The committee meets monthly, reviewing sustainability performance, overall direction and strategy, as well as any issues raised from stakeholders. 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 2020 targets and we encourage a culture of sharing good practice and working collaboratively where further improvement is required. For example, we have finished the development of APP Sustainability Vision 2030, in the progress of development the Sustainability Committee report carbon emission and energy reduction target to CEO. CEO involvement includes approving the target to be implemented in our operations as well as advisory on the strategy to achieve the target.
Director on board	Our Managing Director develops sustainability related strategy, policy and financial across APP operations and that of its supply chain globally. The Director engages with these issues on a daily basis and reports the progress to APP's Managing Director. For example, director on board direct 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.
Board-level committee	APP Sustainability Committee Board headed by APP's CEO, members include APP's Deputy CEO, Managing Director, Business Unit heads and the Director of Sustainability and Stakeholder Engagement. This committee responsible for sustainability issue including climate change. For example, to achieve sustainability target our sustainability committee held a meeting periodically to discuss progress and challenges we faced including energy and carbon emission reduction target,

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 strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	Our sustainability committee held monthly meeting to discuss sustainability issue including climate change. Result of the discussion then will be shared to board management. We also held FCP (forest conservation policy) annual meetings together with sustainability team and board as well as conduct regular meetings with our stakeholder related to FCP. This FCP meeting discuss progress and monitoring related to forest conservation, climate issue, environmental, social and supply chain.

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Sustainability and stakeholder engagement division led by a Sustainability Chief Officer and Managing Director. They responsible for managing sustainability activity including climate change and energy strategy at APP such as target set up, monitoring, evaluation, stakeholder engagement and report the progress to board (shareholders)

On governance structure, Sustainability Committee Board (SCB) headed by APP's CEO, members include APP's Deputy CEO, Managing Director, Business Unit heads and Chief Sustainability Officer (CSO which responsible to oversee our sustainability commitments in APP operations. The SCB meets monthly, reviewing performance, overall direction and strategy, as well as any issues raised from stakeholders. The responsibility of CEO includes monitoring and assessment KPI sustainability of CSO, supervise SCB and approval of target and strategy to achieve our sustainability goals.

Climate change and energy use is the importance issues on our operations based on materiality analysis which we held previously. Materiality analysis was conducted to mapping the relevant and most important issue related to our operations, this materiality is based on external stakeholders perspective and also consider to APP business . Climate change and energy then embedded to our sustainability target in 2020 and our newly 2030 vision. CSO and Managing Director set up strategy as well as monitors climate change and energy performance periodically and evaluate them each semester through KPI monitoring system. CEO and Deputy CEO headed all managing director and responsible in managing corporate level strategy including support implementation climate change and energy strategy. Carbon emission reduction is part of our Vision 2030 which included to KPI of director and CSO, once they succeed in achieving target they will awarded incentives.

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	

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	Type of incentive	Activity inventivized	Comment
Chief Sustainability Officer (CSO)	Monetary reward	Emissions reduction target	In 2019 we launch sustainability vision 2030 where one of the goals is to reduce greenhouse gas emission 30% in our operations. This embedded to KPI target of our sustainability director and managing director. Once they meet the target, they will receive incentives.
Facilities manager	Monetary reward	Energy reduction project Energy reduction target Efficiency project Efficiency target	One of main KPI of our facility manager at mills is to reduce energy cost which means reduction in energy consumption. Our management monitor and evaluate periodically their KPI against the target. Once they succeed meet the target, they receive incentive which embedded to end year KPI review.
Energy manager	Monetary reward	Energy reduction project Energy reduction target Efficiency project Efficiency target	Our energy manager responsible in maintaining mill energy performance and energy reduction. Energy manager also has KPI target to meet energy reduction based on energy audit and energy management system (ISO 50001). They will receive incentives once they meet that target.
All employees	Monetary reward	Energy reduction project Energy reduction target Efficiency project Efficiency target	We use Key Performance Indicators (KPIs) to measure performance against various KPIs including the ones relevant with our Sustainability Roadmap Vision 2030 goals. We have also aligned these scorecards with our new Vision 2030. Our internal management system encourages competition to achieve the goals between mills within our group. We set baseline targets for each mill individually to ensure progress is relative and keep mills appraised of their progress compared to their peers. We provide incentives for individual and team which successful on energy project.

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	2	
Medium-term	2	5	
Long-term	6	10	

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 management forest. 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 one million dollars.

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
Medium-term
Long-term

Description of process
The Sustainability Committee Board (SCB), headed by APP's CEO, takes into consideration climate change as one of the issues discussed on a regular basis. The SCB 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 Board will make provide material to the Management Board to inform strategic Board decisions. We recognise the potential for climate change to affect APP's operations and business. These risks and opportunities are both short and long term. Our pulp and paper mills require energy resulting in GHG emissions. Our 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 recognise that Governments in both our local and international markets will progressively adjust policies and regulations to tackle climate change. Extreme weather conditions such as droughts can increase the incidence of fires and reduce yields, affecting our forestry suppliers. APP takes account of climate change (both transition risks and direct physical risks) through corporate risk management processes. Floods and droughts are a common issue in Indonesia and are 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, and how risks to power supplies or telecommunications could impact those critical products and services that our business relies upon. The investment implications of these plans are considered within our long-term financial planning processes. We take opportunities from relevant risk, for example extreme weather conditions can increase opportunity and demand for solutions to improve crop resilience such as water efficiency, drought and heat tolerance, as well as soil carbon sequestration. Another 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.

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	Current regulation is included to risk assessment. For example, ministry of minerals and energy require companies to report energy consumption annually, while another ministry, Ministry of Industry, require companies to report carbon emission on their platform. Breaking law regulation, mills will get disincentive such as warning letter, published on media, get penalty and energy supply reduction.
Emerging regulation	Relevant, always included	Europe launched product environmental footprint category standard to regulate environmental impact of paper product marketed in Europe. One of environmental impact included in this standard is the limitation of carbon footprint of product. This standard currently still voluntary for Europe companies, but probably to be mandatory in future. Should this standard changed to mandatory, our product with higher carbon footprint will not accepted by Europe market then this affected to company revenue.
Technology	Relevant, always included	APP always conduct benchmark on technology to the most best available technology (BAT) and included to our climate or energy risk assessment. We make sure to adapt and adopt proper technology in the operation lines to not only gaining better efficiency but also preserving the resources. For example, we realize that old equipment on some aged paper machine will affected to high energy consumption. Higher energy consumption will affect to our carbon footprint as well as carbon product itself. As nowadays customers or stakeholders take concern on low environmental impact of product, we should respond this by creating improvement through technology upgrade. This is why we include technology as risk to climate change.
Legal	Relevant, not included	The scope of legal is part of wide company. Our mills is certified ISO 14001 then the regulation is always monitored and evaluated through the system. We are also certified sustainable management forest which required us to follow legal regulation.
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 item is carbon footprint of product. This parameter can be a potential preference of customers to chose 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	Long-term climatic changes in mean temperatures and precipitation patterns. Potential impact on revenues due to impacts on crop quality, yields and length of harvesting periods resulting in changes to production capacity. Also creates potential opportunities for use of new species. Rising sea levels affecting water intake quality.

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 1

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

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

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

Company-specific description
We sold our product to overseas both of developing and develop countries. Our product 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.

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)
2500000

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

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

Explanation of financial impact figure
Currently carbon price is estimated 5 USD per tonne on medium price, our carbon footprint product vary from 0.5 to 3 tonne CO2 per tonne which relatives to specific product. Possibility the increment of company expense to do this off-sett is 12 USD per tonne of product on maximum. We identified market with commitment to carbon neutral is around 210,000 ton then result 2,5 million USD of indirect cost.

Cost of response to risk
35000000

Description of response and explanation of cost calculation
Reducing carbon footprint of product impacted to the reduction of indirect cost as lower carbon off-set put on product to be carbon neutral. We took several activities to reduce energy consumption as well as to reduce carbon emission in our mills. These include: -Appointed Energy Manager for each of our major operations and develop integrated sustainable energy management accordingly - Investment to replace inefficient facility equipment - energy efficiency projects in key operation lines such as replace inefficient equipment, reduce leakage, etc. - Regular Carbon Footprint Assessment for APP major mills are developed to monitor GHG emission of each operations and identify potential energy saving points - Implement energy management system (ISO 50001) in APP major operations The impact of action plan, we can reduce carbon emission intensity significantly in 2020 from baseline 2018.

Comment

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 direct costs

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

Company-specific description
Some our pulp and paper machine is operated of more than ten years. We realize that old equipment on our aged paper machine will affected to higher energy consumption. Higher energy consumption will affect to our carbon footprint as well as carbon product itself. As nowadays customer or stakeholder take concern on low environmental impact of product, we should consider to reduce carbon footprint of product by replacing inefficient equipment with best available technology. This is why technology is included as risk to climate change. The potential financial impact could be reduce energy efficiency of aged paper machine. Based on our assessment, paper machine efficiency reduce 1% every year as impact of aging.

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)
93700000

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

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

Explanation of financial impact figure
According to our assessment, our pulp & paper machine efficiency reduce 1% every year due to aging. Estimated our mills aged 20 years approx., then possibility reduction in machine or energy efficiency is 20%. Reduction 20% energy efficiency of our pulp & paper machine equal to the increment 20% of energy consumption. Our energy intake is 277 million GJ, increment of 20% of energy intake equal to 50 million GJ. Assume we use coal as main fuel, 1 ton coal assume 29 GJ, then 50 million GJ energy equal to 1,9 million ton of coal. Assume coal price is 49 USD/ton then price of 1,9 million tonnes of coal is USD 93,7 million. This is the cost for financial impact of our inefficient pulp & paper machine.

Cost of response to risk
51000000

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, 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 impact of action plan, we can reduce carbon emission intensity significantly in 2020 from baseline 2018.

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 Australia, Singapore, etc. require us to fulfill ecolabel standard where one of its item is carbon footprint of product. This parameter can be a potential preference of customers to chose low environmental impact of product. Product with higher carbon footprint will not a good preference in market. Currently three of our mills require to get ecolabel standard from market. Should our mills failed to follow the ecolabel requirement will impacted to reduction of revenues.

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)
500000000

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

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

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

Cost of response to risk

1000000

Description of response and explanation of cost calculation
Several actions taken to reduce carbon footprint of product at our pulp & paper facilities, includes: - Benchmark with global best practices and adoption of relevant sustainability standards - Energy efficiency to reduce greenhouse gas such as replace inefficient equipment e.g replace motors, reduce leakage - Implement energy management system For example : our mill Pindo Deli has certified ecolabel. Pindo Deli working with IDH to reduce energy consumption in paper production. Several action have been implemented such as : - steam optimization (reducing steam and condensate leakage, decreasing hood temperature, heat exchanger improvement, etc.) - electricity optimization (optimization of refiners operation, minimize loss, modification of steam turbine, etc.) This project has succeed in reducing electricity and steam consumption. Total saving is 1,000 MWH/ton for electricty and 4,000 ton steam/ton for steam consumption. The impact of action plan, we can reduce carbon emission intensity significantly in 2020 from baseline 2018.

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
Opp1

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 product to overseas such as Australia, Singapore, etc. Our customers in these 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.

Time horizon
Short-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)
100000000

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

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

Explanation of financial impact figure
We have marketed some certified product to both of regional and overseas market and gain positive revenue. Product price of ecolabel certifed is higher compare to product with non-certified low environmental impact. The price can different vary from 50% to more than 100%. Financial calculation includes achievement of ecolabel certification on other mills and the increase of certified product to 20% then our revenue can be increased

Cost to realize opportunity
201000000

Strategy to realize opportunity and explanation of cost calculation
To get access on new market, we need to place more of our products on ecolable 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 - implement energy management system - conduct third party certification For example : our mill Pindo Deli has certified ecolabel. Pindo Deli working with IDH to reduce energy consumption in paper production. Several action have been implemented such as : - steam optimization (reducing steam and condensate leakage, decreasing hood temperature, heat exchanger improvement, etc.) - electricity optimization (optimization of refiners operation, minimize loss, modification of steam turbine, etc.) This project has succeed in reducing electricity and steam consumption. Total saving is 1,000 MWH/ton for electricty and 4,000 ton steam/ton for steam consumption.

Comment

Identifier
Opp2

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

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

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 include investment for new equipment facility and the use of better technology in our operations. Facility of aged mills need to upgrade in order to maintain or even to increase process efficiency. According to our assessment, our pulp and paper machine efficiency will decease 1% every year due to aging if there is no actions taken to upgrade. For example, one of our old pulp and paper mill, Indah Kiat Perawang, energy consumption was higher in 2011 compare to 2006 due to some old equipment has reach its inefficiency. To increase pup and paper machine efficiency, mill upgrade some old equipment with new one with better technology. This actions succeed in reducing energy consumption significantly from 45 GJ per tonne of energy intake to 38 GJ per tonne of product.

Time horizon
Medium-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)
33000000

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

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

Explanation of financial impact figure
Energy consumption of our mill Indah Kiat Perawang in 2011 was higher compare to 2006 due to some old equipment has reach its inefficiency. To increase pup and paper machine efficiency, mill upgrade some old equipment with new one with better technology. This actions succeed in reducing energy consumption significantly from 45 GJ per tonne of energy intake to 38 GJ per tonne of product. This equal to 6 GJ/ton of energy reduction, if multiply with our production then result absolute energy around 20 GJ which is equal to reduction of coal consumption.

Cost to realize opportunity
100000000

Strategy to realize opportunity and explanation of cost calculation
In case of Indah Kiat Perawang mill, some of actions taken to improve machine efficiency which includes: - replacement old boiler equipment. Some of equipment has been upgraded previously, currently mill plan to replace another old boiler to new boiler which started in 2021 - energy efficiency such as replacement of inefficient motors and electrical equipment which already did previously. In other case, another our mill, OKI in South Sumatera, operated in 2018, is a new mill equipped with high technology equipment such as; - Bark Gasification, OKI mill applies bark gasification technology within its manufacturing operations, which will significantly reduce the need the use of oil and gas in lime kilns up to 80%. - Multiple-effects evaporators. Pulp processing in OKI mill uses 7 effect evaporator. Multiple-effects evaporators are used to utilize heat more efficiently, thus reduce energy requirement and fuel consumption. The use of the 7 effect evaporator will lead to more than 80% dry solid compared to 70% dry solid from the conventional 6 effect evaporator. - Methanol for lime kiln. LK uses Methanol (by product of VE plant), substituted fuel oil - Modification of combustion system. To further optimize the use of energy within its operations, OKI had also done several modification of its combustion system in its power boiler - High Energy Recovery Boiler. OKI installed High Energy Recovery Boiler. The total capacity of High Energy Recovery Boiler (HERB) is about 50% higher than of any other recovery boiler in operation today worldwide. With all these new technology, OKI became our mill with the highest efficiency, if compare to another of APP pulp & paper mills, efficiency of OKI is higher 50%.

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)
20000000

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

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

Explanation of financial impact figure
Recycled material contribute to reduction of operating cost due to the price of virgin pulp is higher recently. Price of pulp is around 700 USD/tonne and price of recycled paper material is around 100 USD/ton then operating cost can reduce significantly. Our mill Tjiwi Kimia use recycled paper material on such amount, if compare to the cost virgin pulp material, then operational cost of using recycled material will be reduced

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 and Indah Kiat Serang 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) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?
Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, and we do not intend it to become a scheduled resolution item within the next two years	

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?
Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
Nationally determined contributions (NDCs)	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. Indonesia committed to reduce unconditionally 29% of its greenhouse gasses emissions against the business as usual scenario by the year of 2030. The BAU scenario is projected approximately 2,869 GtCO2e in 2030 which is updated from the BAU scenario on the INDC due to current condition on energy policy development. Indonesia could increase its contribution up to 41% reduction of emissions by 2030, subject to availability of international support for finance, technology transfer and development and capacity building. The most affected for GHG reduction are energy and forestry with 11% and 17% reduction respectively. APP have sustainability target vision 2020 published in 2012 with 10% reduction in carbon emission and energy intensity, these target are aligned with previous government target on 2020. As vision 2020 is almost completed, we published our long term target vision 2030 with 30% carbon intensity reduction and 25% reduction on energy intensity. Our 2030 target analyzed by considering business expansion in 2030, possibility energy reduction project made by mills as well as investment planning. We developed this target by working together with related function and mills management. This target was also aligned with Indonesia NDC target in 2030 . APP develop strategy to achieve carbon and energy reduction target which includes investment in our process production such as improve pulp and paper machine efficiency, investment on high efficiency boiler, improve capacity building etc. For forestry operations, we achieve carbon balance through implementation sustainable management forest in all our concessions as well as our external supply chain

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, ecolable product of our product impacted to higher revenues as ecolable product price higher than non-certified product. The magnitude of this impact is high as this affected to company revenue.
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 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.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

No additional information

C4. Targets and performance

C4.1

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

C4.1b

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

Target reference number
Int 1

Year target was set
2018

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (location-based)

Intensity metric
Metric tons CO2e per metric ton of product

Base year
2018

Intensity figure in base year (metric tons CO2e per unit of activity)
1.118

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
100

Target year
2030

Targeted reduction from base year (%)
30

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]
0.7826

% change anticipated in absolute Scope 1+2 emissions
38

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year (metric tons CO2e per unit of activity)
0.977

% of target achieved [auto-calculated]
42.0393559928444

Target status in reporting year
Achieved

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain (including target coverage)
We are setting the target based on our capability and available condition in Indonesia. We follow Indonesia's NDC guideline for carbon emission reduction. Carbon reduction target is applied for all of our manufacturing pulp & paper mills in Indonesia which operationally controlled by APP. We already announce our another long term target, sustainability vision 2030, which commit to reduce carbon footprint emission 30% from 2018 baseline. We breakdown our long term target to yearly target. Regarding to science based target, we are currently still assess the possibility to follow this scheme. Our company operated in developing country where access to renewable energy source is limited due to lack of infrastructure and supporting facility of renewable energy.

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

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: absolute or intensity
Intensity

Target type: energy carrier
All energy carriers

Target type: activity
Consumption

Target type: energy source
Low-carbon energy source(s)

Metric (target numerator if reporting an intensity target)
MWh

Target denominator (intensity targets only)
metric ton of product

Base year
2018

Figure or percentage in base year
6.91

Target year
2030

Figure or percentage in target year
5.19

Figure or percentage in reporting year
6.79

% of target achieved [auto-calculated]
6.97674418604652

Target status in reporting year
Underway

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?
Other, please specify (support Indonesia NDC to reduce GHG emission from energy sectors)

Please explain (including target coverage)
This target is our commitment to sustainability as well as support government to reduce GHG emission on energy sector. The scope is whole APP pulp and paper operations.

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	5	924284
To be implemented*	10	582528
Implementation commenced*	3	142253
Implemented*	10	2350228
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)
83891

Scope(s)
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1437290

Investment required (unit currency – as specified in C0.4)
287458

Payback period
No payback

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Low-carbon energy consumption	Solid biofuels

Estimated annual CO2e savings (metric tonnes CO2e)
2266337

Scope(s)
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
0

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment

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 adaption 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 or do they enable a third party to avoid GHG emissions?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation
Group of products

Description of product/Group of products
We have paper and packaging product that is made from recycle material. Around of 40% of our paper and packaging raw material is made from recycle material. These products can be classified as low-carbon products because manufacturing of them requires less raw materials and therefore lower emissions are embedded in the products.

Are these low-carbon product(s) or do they enable avoided emissions?
Low-carbon product

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Climate Bonds Taxonomy

% revenue from low carbon product(s) in the reporting year
17

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
10899614

Comment
NA

Scope 2 (location-based)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
750945

Comment
NA

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.2

(C5.2) 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)
Other, please specify (Calculation Tools for GHG pulp & paper)

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

We are using below methodology to calculate carbon footprint :

- IPCC : Intergovernmental Panel on Climate Change

- WRI/WBCSD GHG Protocol Corporate Accounting and Reporting Standard

- Calculation Tools for Estimating Greenhouse Gas Emissions from Pulp and Paper Mills by ICPFA

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)
10899614

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
NA

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
NA

C6.3

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

Reporting year

Scope 2, location-based
750945

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

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
NA

C6.4

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

No

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

Metric tonnes CO2e

2083038

Emissions calculation methodology

- 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

Not relevant, explanation provided

Metric tonnes 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 category and not considered as a relevant category in terms of emissions. Our assessment 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.

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

613692

Emissions calculation methodology

- 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

Metric tonnes CO2e

61253

Emissions calculation methodology

- 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 raw materials, distances between suppliers and 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
Not relevant, explanation provided

Metric tonnes 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 category. Our pulp mill which has landfill emission is included to scope 1 emission as it is controlled by APP. While waste disposal emission of scope 3 is not significant compare to total emission, only 0,04% based on LCA study in 2017.

Business travel

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
No travel in 2020 due to pandemic

Employee commuting

Evaluation status
Not relevant, explanation provided

Metric tonnes 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 and lack of data. Our assessment showed 0.03% of total emissions for employee commuting.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes 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 category in terms of emissions. Our assessment showed 0.4% of total emissions for machines and buildings. 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

Metric tonnes CO2e
493822

Emissions calculation methodology
- 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
90

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

Metric tonnes CO2e
6315606

Emissions calculation methodology
- 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

Metric tonnes 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
Not relevant, calculated

Metric tonnes CO2e
73925

Emissions calculation methodology
- 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: 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

Metric tonnes 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 category in terms of emissions. Our assessment 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.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes 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 applicable, as we do not own or operate franchises.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes 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 applicable. No investments of APP generate emissions.

Other (upstream)

Evaluation status

Metric tonnes 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

Metric tonnes 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)

Methodology

Please explain

CO2 removals from land use management

Emissions (metric tons CO2)

Methodology

Please explain

Sequestration during land use change

Emissions (metric tons CO2)

Methodology

Please explain

CO2 emissions from biofuel combustion (land machinery)

Emissions (metric tons CO2)
170938289

Methodology
Field measurements

Please explain
Primary data: quantity of black liquor, bark and palm fiber Secondary data: Emissions factors from IPCC

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)

Methodology

Please explain

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?
Yes

Please explain
We implement sustainable management forest in our forestry operations then carbon stock on our forestry is neutral. Meanwhile carbon emission from forestry activities such as the use of fertilizer, planting, maintenance and harvesting activities are not significant compare to total emission of manufacturing operations.

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

(C-AC6.9a/C-FB6.9a/C-PF6.9a) Report your greenhouse gas emissions figure(s) for your disclosing commodity(ies), explain your methodology, and include any exclusions.

Timber

Reporting emissions by
Total

Emissions (metric tons CO2e)
24214

Denominator: unit of production
<Not Applicable>

Change from last reporting year
About the same

Please explain
We reporting pulpwood emission this year through life cycle assessment. Primary data: wood sourced by APP mills Secondary data: Emissions factors (secondary data) were obtained from commercially and publicly available databases SimaPro (Pre) and ecoinvent (updated database 2020). This emission is not included to scope 1 emission due to most of transport activities did by contractors.

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
0.977

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
11650558

Metric denominator
metric ton of product

Metric denominator: Unit total
11930215

Scope 2 figure used
Location-based

% change from previous year
9

Direction of change
Decreased

Reason for change
We succeed to increase our renewable energy from 148 million GJ in 2019 to 171 million GJ in 2020. We also implemented energy efficiency program across our mills as addressed in previous question.

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	10776713	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	18332	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	42277	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	62292	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Indonesia	

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	117558	-7.975985	112.626878
Indah Kiat Pulp & Paper, Serang Mill	1899371	-6.12	106.15028
Indah Kiat Pulp & Paper, Tangerang Mill	91322	-6.17833	106.63194
Indah Kiat Pulp & Paper, Perawang Mill	3707570	0.664278	101.595668
Tjiwi Kimia	2152276	-7.4716	112.44
Pindo Deli Karawang, Mill 1	404967	-6.3125	107.295
Pindo Deli Karawang, Mill 2	643250	-6.3125	107.295
Pindo Deli Karawang, Mill 3	189174	-6.3125	107.295
Pindo Deli Perawang	102790	0.664278	101.595668
The Univenus Perawang	1706	0.664278	101.595668
Lontar Papyrus	898789	-1.01	103.08
OKI Pulp & Paper	135363	-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?

No

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

(C-AC7.4c/C-FB7.4c/C-PF7.4c) Why do you not include greenhouse gas emissions pertaining your business activity(ies) in your direct operations as part of your global gross Scope 1 figure? Describe any plans to do so in the future.

	Primary reason	Please explain
Row 1	Other, please specify (sustainable forest management)	We are not including emission from forestry due to our forestry managed with sustainable forest management (SFM) so we assume carbon stock is neutral.

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Indonesia	750945	0	757985	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	81324	0
Indah Kiat Serang Mill	170145	0
Indah Kiat Tangerang Mill	31289	0
Tjiwi Kimia	132405	0
Pindo Deli Karawang Mill 1	54427	0
Pindo Deli Karawang Mill 2	228522	0
Pindo Deli Karawang Mill 3	52832	0
Pindo Deli Perawang Mill	0	0
The Univenus Perawang	0	0

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?

Increased

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	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	2266337	Decreased	19	Our renewable consumption increase from 148 million GJ to 171 million GJ which equal to reduce emission 2,266,337 tCO2, this number compare to our total previous emission 11,5 million tCO2e result 20%
Other emissions reduction activities	83891	Decreased	1	We succeed implement energy reduction activity and save 83,891 tCO2, if we compare to total previous emission around 11,5 million tCO2 the result 1%
Divestment	0	No change	0	No emission from divestment
Acquisitions	0	No change	0	No emission from acquisitions
Mergers	0	No change	0	NA
Change in output	2447239	Increased	21	our production output increase from previous year, this affected to increasing of carbon emission around 2,447,239 tCO2e, if compare to total previous emission 11,5 million tCO2e result 21%
Change in methodology	0	No change	0	no change
Change in boundary	0	No change	0	no change
Change in physical operating conditions	0	No change	0	no change
Unidentified	0	No change	0	no change
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)	47586145	32611397	80197543
Consumption of purchased or acquired electricity	<Not Applicable>	0	757985	757985
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>	47586145	33369383	80955528

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.

Fuels (excluding feedstocks)
Subbituminous Coal

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
27811366

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
27811366

Emission factor
0.0961

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)

Wood Waste

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
8705674

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
8705674

Emission factor
0.112

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Black Liquor

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
38049043

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
38049043

Emission factor
0.0953

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Other, please specify (Palmshell, RCO (rubber coumpound oil))

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
625016

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

625016

Emission factor
0.1

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Dried Sewage Sludge

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
69069

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
69069

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

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

Emission factor
0.1

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Biogas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
34218

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
34218

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

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

Emission factor
0.0546

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Liquid Biofuel

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization

103124

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
103124

Emission factor
0.0796

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Diesel

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
246226

MWh fuel consumed for self-generation of electricity
246226

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

Emission factor
0.074

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Marine Fuel Oil

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
228860

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

Emission factor
0.077

Unit

metric tons CO2 per GJ

Emissions factor source
IPCC

Comment

Fuels (excluding feedstocks)
Natural Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
4324946

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
4324946

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

Emission factor
0.056

Unit
metric tons CO2 per GJ

Emissions factor source
IPCC

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	17792757	17787366	10921057	10921057
Heat	4324946	4324946	0	0
Steam	58079839	58079839	36665088	36665088
Cooling	0	0	0	0

C9. Additional metrics

C9.1

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

Description
Waste

Metric value

Metric numerator

Metric denominator (intensity metric only)

% 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
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/ section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

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
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/ section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

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
Scope 3: Purchased goods and services

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Upstream transportation and distribution

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Downstream transportation and distribution

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Processing of sold products

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
APP Sustainability Report 2020.pdf

Page/section reference
page 175-177, section : assurance statement

Relevant standard
AA1000AS

Proportion of reported emissions verified (%)
100

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?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	AA1000AS	we disclose this this as a part of our commitment APP Sustainability Report 2020.pdf
C8. Energy	Energy consumption	AA1000AS	we disclose this this as a part of our commitment APP Sustainability Report 2020.pdf

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, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

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

No, and we do not currently 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

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

% of suppliers by number
70

% total procurement spend (direct and indirect)
70

% of supplier-related Scope 3 emissions as reported in C6.5
50

Rationale for the coverage of your engagement
coverage of engagement mainly on pulpwood supplier as this is our main raw material, the others is chemical suppliers which are the second highest of expenses cost related to raw material.

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).

Comment

C12.1b

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

Type of engagement
Education/information sharing

Details of engagement
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
50

Portfolio coverage (total or outstanding)
<Not Applicable>

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.

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.

C12.1d

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

APP communicates its sustainability strategy which includes climate change mitigation efforts to its various stakeholders including customers and suppliers. Constructive and relevant feedback from the stakeholder engagement process then feed into the strategy that implemented within APP operations and the operations of its pulpwood suppliers. The progress of the implementation is monitored and publicly reported regularly. APP take active role in supporting its pulpwood suppliers to comply with its climate change commitments, from providing technical assistance, support certification process to engage external experts to support implementation of its climate change strategy. Besides that APP also apply supplier compliance audit which assess the performance of energy efficiency and carbon emission reduction initiative for all our suppliers.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?
Direct engagement with policy makers
Trade associations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify	Support	Supporting the Ministry of Economy in developing a Standard for Fire Prevention by providing relevant material and study case including site visit in our area of operation as one of the pilots in developing and testing the standard.	The Standard is distributed to relevant ministries, local government and concession holders as operational guideline in fire prevention and reporting
Adaptation or resilience	Support	Through its Social-Forestry Programs, The Ministry of Environment and Forestry (MOEF) is encouraging the involvement of forest community in forest protection and climate change mitigation. Our Integrated Forest & Farming System,(IFFS) aim to provide alternative sustainable livelihood for community living in & around the concession area, to prevent them from opening land using fire or other illegal activities. This program is designed to be in line with MOEF Social-Forestry program, and implemented to support and align with MOEF program.	The design and implementation of APP IFFS Program is in line with MOEF Social-Forestry program, and implemented to support MOEF program
Other, please specify (Solid Waste re-utilization)	Support	Most of integrated pulp & paper mills in Indonesia have their own on-site power boiler. Due to inconsistent supply of biomass, some of these boilers still using coal feed, which ash is usually go to landfill. Through efforts in waste reduction and re-utilization initiatives, it was identified that coal ash can be used for other purposes such as soil conditioner for pulpwood plantation. Currently the utilization of this type of solid waste is difficult to be implemented due to the status of the waste, which is included as hazardous waste as per government requlation. APP through the Indonesia Pulp & Paper Association initiates a study to assess the possibility of excluding this particular type of waste from the hazardous waste category, to allow for a more effective procedure for re-utilization, therefore reduce the amount of waste goes to landfill. The result of the assessment will then discussed with the Ministry of Environment and Forestry for the possibility of delisting. If the waste is no longer categorized as hazardous waste and can be re-utilized using a more effective procedure, this will significantly reduce amount of solid waste goes to landfill for the pulp and paper industry in Indonesia.	Delisting of pulp and paper coal ash from hazardous waste category to enable reutilization thus reducing amount of waste goes to landfill
Adaptation or resilience	Support	As a part of APP initiative in developing best management practice for peatland area, APP worked together with Forestry Research and Development Agency (FORDA) on a 5-year mychorriza research. Mycorrhiza arbuskula is symbiotic association composed of a fungus and roots of a vascular plant.It helps to absorb nutrients, improve immunity to root diseases, and can survive in extreme condition. Mycorrhiza innoculant is expected to help the growth of the 10 alternative plant species chosen based on its ability to grow productively on peat. It is expected that, by the completion of this project, APP would be able to produce mycorrhiza innoculants independently in order to sustainably produce the seedlings of native tree species that can grow well on wet condition in peatland area.	This initiative is supporting government effort for peatland protection.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Indonesian Pulp & Paper Association (APKI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The association encourages initiatives related to reduction in climate change impact within their members operations. APKI also provide support in engaging relevant ministries and government bodies in supporting the implementation of such initiatives and in advocating relevant regulations.

How have you influenced, or are you attempting to influence their position?

By engaging APKI representatives with discussions around climate change initiatives within our operations and supporting their programs and initiatives relevant with our objectives in reducing climate change impacts

Trade association

United Nations Global Compact Network

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

UN Global Compact Network exists to assist the private sector in the management of increasingly complex risks and opportunities in the environmental, social and governance realms, seeking to embed markets and societies with universal principles and values for the benefit of all

How have you influenced, or are you attempting to influence their position?

Lead or actively involved in various Global Compact initiatives relevant with APP Vision 2020 Roadmap - Share our internal strategy and initiatives as study case for discussions around climate change mitigation actions for corporations relevant to Global Compact principles. APP is the Chair of Indonesia Water Mandate Working Group and a Steering Committee of the UN CEO Water Mandate initiative under UNGC Through these positions we are influencing the organization to reach more area to address water challenges both in industrial and community level.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

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.

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
APP Sustainability Report 2020.pdf

Page/Section reference
Page 93, section: production

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

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 386 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 2021.

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

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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 as well as its future mill in OKI, South Sumatra

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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.

C15. 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.

No additional information

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Sustainability Officer	Director on board

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	7112209000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

No

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

Allocation level
Facility

Allocation level detail
Our product to Philip Moris International sourced from our mills facility Indah Kiat Serang

Emissions in metric tonnes of CO2e
25534

Uncertainty (±%)
5

Major sources of emissions
coal, diesel oil

Verified
No

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emission of products calculated from energy use for product multiply by emission factor from fuel used in power generation. Data activity of fuels and energy taken from facility primary data. We supply product to PMI from our mills Indah Kiat Serang. Data of sold product is based on 2020 data. The scope of calculation is from gate to gate of manufacturing.

Requesting member
Avery Dennison Corporation

Scope of emissions
Scope 1

Allocation level
Facility

Allocation level detail
Our product to Avery Dennison sourced from our mills facility Pindo Deli Karawang

Emissions in metric tonnes of CO2e
2380

Uncertainty (±%)
5

Major sources of emissions
coal, diesel oil

Verified
No

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emission of products calculated from energy use for product multiply by emission factor from fuel used in power generation. Data activity of fuels and energy taken from facility primary data. We supply product to PMI from our mills Pindo Deli Karawang. Data of sold product is based on 2020 data. The scope of calculation is from gate to gate of manufacturing.

SC1.2

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

Sustainability reports - http://www.asiapulppaper.com

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
Avery Dennison Corporation

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings
6000

Estimated payback
1-3 years

Details of proposal
Develop carbon in-setting program. This program is to reduce product carbon footprint by in-setting it with carbon sequestration from our conservation program. This would be possible action to meet customer commitment on carbon neutral. We are currently assess potential conservation program to be able for balancing our product emission. This scheme is also available on VCS and other carbon off-setting mechanism.

Requesting member
Philip Morris International

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
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SC2.2

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

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 am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

Please confirm below

I have read and accept the applicable Terms