Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

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

Graphic Packaging Holding Company (together with its subsidiaries, “Graphic Packaging” or the “Company” or “GPI”) is committed to providing consumer packaging that makes a world of difference. The Company is a leading provider of paper-based packaging solutions for a wide variety of products to food, beverage, foodservice, and other consumer products companies. The Company operates on a global basis, is one of the largest producers of folding cartons and fiber-based foodservice products in the United States ("U.S.") and Europe and holds leading market positions in coated unbleached kraft paperboard (“CUK”), coated-recycled paperboard (“CRB”) and solid bleached sulfate paperboard ("SBS").

The Company’s customers include many of the world’s most widely recognized companies and brands with prominent market positions in beverage, food, food service, and other consumer products. The Company strives to provide its customers with packaging solutions designed to deliver marketing and performance benefits at a competitive cost by capitalizing on its low-cost paperboard mills and carton manufacturing plants, its proprietary carton, container and packaging designs, and its commitment to quality and service.

We have a long history of environmental and social responsibility practices at the Company and we continue to improve our manufacturing processes. At Graphic Packaging, our packaging solutions are made primarily from renewable wood fiber, and most of our paperboard packaging and food service products can be recycled today. We intend to leverage our industry-leading sustainability profile and continue to reduce our impact on the environment through our own operations and through innovative paperboard solutions. As part of our Vision 2025, we challenged our team to achieve significant

improvements. In the next few years, we intend to reduce greenhouse gas emissions intensity, non-renewable energy usage intensity, and mill water effluents intensity by 15%, and reduce the use of low-density polyethylene (LDPE) by 40%.

In addition, we have established a goal for 100% of Graphic Packaging revenues to come from Graphic Packaging products that are recyclable. We are committed to continuous improvement to benefit the communities in which we live and work, and we will provide updates on milestones achieved in our annual sustainability reports.

Certain statements regarding the expectations of Graphic Packaging, including, but not limited to, the Company's plans or estimates with respect to energy use reductions, water usage and climate related events in this report constitute "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. Such statements are based on currently available operating, financial and competitive information and are subject to various risks and uncertainties that could cause actual results to differ materially from the Company's historical experience and its present expectations. These risks and uncertainties include, but are not limited to, the Company's ability to obtain permits and other administrative approvals, changes in revenue due to climate related concerns, and supply chain disruptions. Undue reliance should not be placed on such forward-looking statements, as such statements speak only as of the date on which they are made, and the Company undertakes no obligation to update such statements, except as may be required by law. Additional information regarding these and other risks is contained in Part I, "Item 1A., Risk Factors" of the Company's 2021 Annual Report on Form 10-K, and in other filings with the Securities and Exchange Commission.

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
Reporting year	January 1, 2021	December 31, 2021	No

C0.3

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

Australia
Austria
Brazil

Canada
Croatia
Estonia
Finland
France
Germany
Indonesia
Ireland
Mexico
Netherlands
New Zealand
Nigeria
Poland
Russian Federation
Spain
Sweden
Switzerland
United Kingdom of Great Britain and Northern Ireland
United States of America

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	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]
Processing/Manufacturing	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Distribution	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Consumption	Yes [Consumption only]

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

(C-AC0.6b/C-FB0.6b/C-PF0.6b) Why are emissions from agricultural/forestry activities undertaken on your own land not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Evaluated but judged to be unimportant

Please explain

Graphic Packaging owns and manages less than 2,500 hectares of forest land. We estimate that our wood basket is represented by 5 million hectares. Therefore, our managed land represents 0.05% of the forest land required to service the Company's mills. Graphic Packaging has no material direct emissions associated with the agricultural/forestry activities undertaken to harvest the resources used at our facilities.

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

60-80%

Produced or sourced

Sourced

Please explain

Graphic Packaging manufactures paperboard and paperboard packaging using both virgin tree fiber and recycled paper materials. Approximately 70% of the paperboard and paperboard packaging we sell is manufactured using virgin wood/wood products as a starting material. The remaining balance of product sales (~30%) is from coated recycled paperboard packaging products, plastic packaging products, and packaging machinery.

C0.8

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

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	US3886891015
Yes, a CUSIP number	388689101
Yes, a Ticker symbol	GPK

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
Board-level committee	Our Board of Directors, which includes our President and CEO, guides our purpose, values, and sustainability strategy, including climate-change matters. In recognition of the importance of sustainability matters to the Company, we believe that a two-tiered level of oversight provides the best structure to integrate consideration of ESG and climate risks/opportunities into our overall business strategy and help us meet the changing demands of all our stakeholders. As set forth in our Corporate Governance Guidelines, our Board is responsible for reviewing, approving, and monitoring business strategies and financial performance and ensuring appropriate oversight is in place. The Board fulfills these responsibilities through a number of practices, including: approval of the annual operating and strategic long-range plans, review of results against such plans and review and approval of significant corporate actions. In addition, the Board is responsible for the oversight of our sustainability and climate strategy, governance standards, goals and performance, and has assigned principal oversight of our sustainability policy and practices to the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee (NCGC) of the Board considers current and emerging social and environmental trends, as well as major legislative and regulatory developments and other public policy issues that may impact our business operations or stakeholders. The Committee also reviews the Company's policy and practices for consistency with its ESG and climate commitments, including goals, performance metrics, mitigation plans, and public reporting and makes recommendations to the Board and management. Oversight of governance matters such as enterprise risk management, including climate risk, is assigned to the Audit Committee. An example of a

	climate-related decision made by the Committee: In 2021, the NCGC endorsed hiring a Chief Sustainability Officer to provide more focus for managing and addressing climate-related matters.

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	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures	Our Board of Directors, which includes our President and CEO, guides our purpose, values, and sustainability strategy, including climate-change matters. In recognition of the importance of sustainability matters to the Company, we believe that a two-tiered level of oversight provides the best structure to integrate consideration of ESG and climate risks/opportunities into our overall business strategy and help us meet the changing demands of all our stakeholders. As set forth in our Corporate Governance Guidelines, our Board is responsible for reviewing, approving, and monitoring business strategies and financial performance and ensuring appropriate oversight is in place. The Board fulfills these responsibilities through a number of practices, including: approval of the annual operating and strategic long-range plans, review of results against such plans and review and approval of significant corporate actions. In addition, the Board is responsible for the oversight of our sustainability and climate strategy, governance standards, goals and performance and has assigned principal oversight of our sustainability policy and practices to the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee (NCGC) of the Board considers current and emerging social and environmental trends, as well as major legislative and regulatory developments and other public policy issues that may impact our business operations or stakeholders. The Committee also reviews the Company's policy and practices for consistency with its ESG and climate commitments, including goals, performance metrics, mitigation plans,

		and public reporting and makes recommendations to the Board and management. The Audit Committee of the Company's Board of Directors oversees our integrated risk management framework that is designed to identify, prioritize, address, manage, monitor and communicate our top strategic, financial, operating, business, compliance, safety, reputational and other risks, including climate-related risks across the organization. The NCGC makes recommendations to the Board and management as it deems advisable and has sustainability and ESG as standard agenda items at certain of its meetings. In 2021, Management updated the Board and the NCGC as part of routine sustainability updates and reviewed and approved the Company's sustainability report in July 2021. The Board also oversees major capital expenditures, like the installation of a new coated recycled board (CRB) machine at our Kalamazoo, Michigan site as part of our transformational CRB platform optimization project. The optimization of our platform is expected to reduce greenhouse gas intensity, purchased fossil fuel energy intensity, and water effluent intensity in our CRB platform. The Board reviews the company-wide long-range plan and budget each September.

C1.1d

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

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	The Nominating and Corporate Governance Committee is responsible for identifying and recommending to the Board individuals for nomination as members of the Board and its committees and, in this regard, reviewing with the Board on an annual basis the current skills, background and expertise of the members of the Board, as well as the Company's future and ongoing needs. This assessment is used to establish criteria for identifying and evaluating potential candidates for the Board. However, as a general matter, the Nominating and Corporate Governance Committee seeks individuals with significant and relevant business experience who demonstrate: • The highest personal and professional integrity;

		• Commitment to driving the Company's success; • An ability to provide informed and thoughtful counsel on a range of issues, including climate-related issues; and • Exceptional ability and judgment. The Nominating and Corporate Governance Committee regularly assesses the skills, background and expertise of the members of the Board and identifies the Company's needs, including skills and experience related to environmental matters important to the company like climate and water-related matters. As part of this process, the Nominating and Corporate Governance Committee strives to select nominees with relevant business experience, the personal characteristics described above, and a wide variety of skills and viewpoints, informed by diversity of race, ethnicity and gender.

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)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify EVP, General Counsel & Secretary	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify The Executive Leadership Team	Managing climate-related risks and opportunities	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).

The President and CEO has ultimate responsibility for the implementation of sustainability practices across the Company. Together with members of the Executive Team, the President and CEO is responsible for embedding consideration of ESG risks and opportunities, including climate-related issues, into our business strategy, plans and budgets; merger, acquisition, and divestiture decisions; and achieving our Vision 2025 goals. The CEO and members of the Executive Team meet at least quarterly to monitor progress towards the Vision 2025 goals and regularly report to the board on a variety of topics that directly or indirectly involve climate-related issues (such as the Company's climate-related initiatives, progress against climate-related goals and targets; and capital expenditures). Placing responsibility for environmental, social, and governance issues, including climate-related issues, with the Executive Leadership Team enhances the visibility and importance of these issues and effectively integrates them into our business practices to drive progress.

The Executive Leadership Team (ELT) operationalizes governance of ESG matters, including climate-related issues, through the newly appointed VP, Chief Sustainability Officer (CSO). The CSO works with the ELT and senior leaders from each of our business segments and major corporate functions (e.g., operations, research and development, finance, legal, HR, investor relations, procurement, EHS, marketing, etc.) to advance ESG and climate-related initiatives. Our president/CEO will serve as executive sponsor of sustainability and the ELT serves as our ESG Steering Team. Together the President/CEO and ELT are dedicated to accelerating our sustainability journey— growing our Company by driving a sustainable, recyclable product portfolio, effectively managing all our resources, and enhancing social and environmental value.

Graphic Packaging's Executive Vice President, General Counsel and Secretary is the highest management-level and C-Suite Officer within the organization to hold responsibility for climate-related issues below the CEO and Company's Board of Directors. She has direct oversight of the CSO, who is a member of the extended Executive Leadership Team. Together they are accountable for aligning the Company's Leadership Team on strategic decisions regarding mitigating climate risks, enhancing our reputation and positioning the Company for future success.

The CSO is accountable for developing strategy and executing the day-to-day requirements to meet the Company's sustainability goals. Further, the CSO is uniquely qualified to engage with investors, customers, suppliers, and other external stakeholders to ensure comprehensive value chain execution of the sustainability program.

Climate-related issues are formally monitored on a monthly basis and also in real time. A report on water, energy and GHG emissions is generated, which provides insight into the amount consumed or generated year to date as compared to both previous year and planned metrics. The Company develops and executes countermeasures as appropriate based on monthly trends. The Company also monitors wood purchases monthly. These purchases, as well as wood balances and availability, are reviewed by a multi-stakeholder team. For example, in 2021, due to an extremely wet period, access to forests for harvesting activities servicing certain virgin mills was virtually impossible. This combined with a very tight supply chain led the Company to identify and access alternative wood sources outside the traditional wood basket to supply the mills. The countermeasures were identified in real time with the data from the monthly review.

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 incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction project Other (please specify) Operational Performance	Targets are established for key environmental metrics. These environmental metrics are monitored and support financial and productivity metrics, which have individual performance goals for the senior leadership team and others associated with them. The assessment of these individual performance goals is factored into determining merit increases annually. The environmental metrics are monitored monthly in our Mill division as that business unit represents a significant percentage of the Graphic Packaging environmental profile.
All employees	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Other (please specify)	Environmental KPIs are embedded into the performance management framework for applicable employees and – along with other metrics – serve as a basis for remuneration and salary reviews.

		New product offerings	

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	1	Graphic Packaging has adopted an annual work execution cycle. Company performance objectives, budget targets, individual employee goals, risk management objectives, R&D goals, etc. are tracked and reported on an annual basis. Decisions regarding climate-related risks and opportunities are made in real time as risks are identified and assessed or as the business requires. Management is responsible for identifying, mitigating, and managing risks across the organization. Risks or opportunities are identified using a variety of methods and tools.
Medium-term	1	3	Graphic Packaging follows a three-year planning horizon in developing investor commitments, R&D priorities, risk/opportunity assessments, budget and resource allocations, etc. We align our business processes to the three-year plan to drive execution and deliver business results. Climate related risks and opportunities are identified, assessed, and planned for in two distinct processes: during the annual enterprise strategic risk assessment process and then during development of the long-range strategic business plan for the 1 – 3 year forward outlook. Any identified risk or opportunity is incorporated in the plans, including mitigation and monitoring strategies, planning and budgeting, and continued risk reporting, as appropriate.

Long-term	3		As part of our long-range strategic planning any risks or opportunities that may be identified that are longer than 3 years will be assessed. Longer term risk management or business opportunity strategies may be developed for specific capital investments for long-lived assets, valuable intellectual property, or specific environmental, social, or governance topics due to the time scale for these issue areas. All major investment decisions, portfolio reviews, acquisitions and divestitures are reviewed in the light of long-term trends, opportunities and threats. Those reviews consider the evolution of global trends in regulations, climate change, energy and raw material markets, and consumer demands.

C2.1b

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

Substantive financial or strategic impacts are events that could impact our business or operations and require management attention to either mitigate risk or capitalize on new opportunities. To identify and rank substantive financial and strategic impacts we consider both qualitative and quantitative measures. The quantitative measures evaluated include potential impacts to revenue, earnings and assets. Qualitative measures include but are not limited to consideration of impacts to employee/community safety, regulatory requirements, our reputation, business continuity, trends in the underlying business, and suppliers and customers. Substantive impacts would include those that would have a high likelihood to result in a loss of key suppliers or customers, sustained serious loss in market share or Company value, death, serious breaches of legal and regulatory compliance, customer market disintegration, significant impact on shareholders, catastrophic business continuity exposure and financial losses/opportunities. The impacts considered include those related to our direct operations as well as possible impacts to the continuity of our supply chain and our ability to meet customer commitments. These factors are weighed against: (a) The proportion of business units affected; (b) The size of the impact on those business units, and (c) The potential for shareholder, customer or other stakeholder concern. A potential substantive financial impact could occur because of a large change in one of these aspects, or small changes in multiple aspects combining to create a larger impact. A specific climate-related risk or opportunity may be considered as having a potential substantive financial impact if it would reasonably be expected to affect the company's expected revenues, earnings or assets positively or negatively by a certain quantitative amount that varies as the company grows. However, magnitude of the issue, by itself, without regard to the nature of the specific risk or opportunity and the circumstances in which the judgment has to be made, will not generally be a sufficient basis for the judgment. Graphic Packaging considers both qualitative and quantitative factors together when evaluating whether a specific climate-related risk or opportunity would have a substantive financial or strategic impact on the Company.

Through our risk management process, Graphic Packaging assigns a quantitative score to define a potential substantive financial or strategic impact for each risk/opportunity as follows: a risk magnitude impact factor of 1-5 (with the number corresponding to a range of financial impacts with 1 being low impact and 5 being high impact), and a risk probability impact factor of 1-5 (with risk level 1 corresponding to a risk that rarely occurs within a two-

year time period and level 5 corresponding to a risk that is almost certain to occur within a two-year time period). When risk magnitude (financial impact) is multiplied by risk probability (likelihood of the event) and this results in a figure equal to or higher than 10, a risk/opportunity is considered to have a substantive financial or strategic impact.
The Company discloses financial and strategic impacts in its filings with the SEC and communications with investors as appropriate to provide context on the business implications of extreme weather-related events. We do this to be transparent with our stakeholders. For instance, in 2019 the Company disclosed the financial implications of the tornado that destroyed parts of the wood conveying system at our West Monroe, Louisiana mill. The publicly disclosed financial cost was approximately $10 million. The extreme winter storm and damaging ice during the period of February 12-16, 2021 resulted in impacts to our Texarkana, Texas and West Monroe, Louisiana mill facilities. The Company filed an 8-K on February 24, 2021 detailing the damages and provided an early anticipated impact to first quarter of 2021 financial results. When the Company reported quarterly results, the total financial impact to the Company from outages and storm related costs was quantified at $29 million.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term

Long-term

Description of process

Graphic Packaging uses a comprehensive, integrated Enterprise Risk Management (ERM) system that includes a formal governance process that defines and communicates our policy and expectations regarding risk management and oversight. It assures effective, systematic identification, analysis, prioritization, and management of risks that have the potential to affect our company on a short-, medium-, and long-term basis and provides necessary input to inform our strategic planning and business improvement goals.

Graphic Packaging defines major risks and opportunities (R/Os) as those that could have a substantive financial or reputational impact on the company. The corporate risk management team conducts an annual risk analysis process to validate existing, known risks and identify new and emerging R/Os facing the Company – including considerations for physical and transition R/Os related to climate change. The R/O analysis process considers input from the Board of Directors (Board), executive leadership team (ELT), internal business and function leaders, as well as inputs collected through the strategy, budget, and ESG issue prioritization processes. Potential R/Os may also be identified through external inputs such as professional and trade business associations, professional services firms, industry alerts, government agency communications, the Company Alert line and various conferences or industry round tables. Active programs are also in place to monitor the Company's customer base and end-consumer sentiment to identify potential downstream R/Os.

Each risk is reviewed, evaluated, and prioritized using a scaled, weighted approach that considers the potential likelihood the risk will occur, speed of risk impact, and the degree of impact a given risk could have on the Company. Potential impacts evaluated include those related to our direct operations (e.g., financial impacts, threats to our right to operate, Company reputational damage, environment or community impact, etc.) as well as possible impacts to our supply chain continuity, ability to meet customer commitments, or impacts to our customers' operations. This prioritization is conducted by internal subject matter experts working with the risk management team. The resulting prioritized risk inventory is reviewed with the ELT for final alignment, and then communicated to the Board. Any significant new or emerging risks that arise throughout the year are analyzed, prioritized, and added to the risk management process. Climate change-related opportunities for new products or product applications are evaluated by the Innovation team using the same criteria applied to all new product opportunities. Market assessments are completed, a determination is made on the viability of the opportunity following corporate investment criteria, and the findings are integrated into business strategy development.

The Board is responsible for overseeing the overall ERM process, and its leadership structure supports its effective oversight. In fulfilling its oversight responsibility, the Board receives various management and board committee reports and engages in periodic discussions with the

company's officers, as it may deem appropriate. Specifically, the Board Audit Committee oversees the policies and practices that govern the processes by which major risk exposures are identified, assessed, managed and controlled on an enterprise-wide basis. Responsibility for managing risk rests with the President/CEO and the ELT. The appropriate Company function or business leaders are appointed as risk owners and sponsors for each major risk. Risk mitigation plans are developed and implemented by the risk owner with support from their respective team and risk sponsor. The risk owner develops and monitors key risk indicators to track progress managing the risk and determine if intervention or corrective action is needed. The risk management progress is periodically communicated to the ELT, with a formal, annual review with the Board of Directors and the Audit Committee. Additionally, all risks, including both climate-related physical and transition risks, are reviewed and reassessed on at least a semi-annual basis to identify changes in the internal or external environment which may cause certain risks to recede or others to appear. The process includes robust internal controls and seeks feedback on the effectiveness of applicable controls over material risks. In May 2021, the Audit Committee received its annual update of the ERM program. In November 2021, the Audit Committee received its revised risk registry and provided feedback as part of that committee's oversight responsibilities.

Graphic Packaging currently utilizes a formal risk assessment process to help identify and mitigate risks associated with physical climate-related impacts that may cause significant disruption to our operations, transportation logistics, supply of certain raw materials, or our customer operations. These events happen, on average, every 1-3 years. The Company recently conducted a case study focused on sites located in Louisiana, Missouri, and Pennsylvania, all of which have experienced flooding events in the past few years, which have caused us to take measures to ensure we're mitigating property damages and minimizing production disruptions. We also regularly assess appropriate levels of property insurance to minimize financial implications related to damages from flooding and other natural disasters. In particular, one of the wood baskets upon which Graphic Packaging relies to source wood was negatively impacted by excessive rain. As a result, Graphic Packaging had to temporarily shift sourcing for raw materials to another wood basket outside our traditional wood basket.

Graphic Packaging also understands that we could face potential transitional risks related to GHG emissions. To mitigate these risks, we work to improve energy efficiency within our operations by investing capital and resources in a variety of energy efficiency initiatives across our operations so that we will be well positioned if there are market and/or cost implications related to increasing regulations governing GHG emissions. For example: in 2020 we began the installation of a new world-class Coated Recycled Board (CRB) machine in our Kalamazoo, MI site and mechanically completed construction in late 2021. The new machine is part of our CRB platform optimization investment and will have a positive environmental impact by reducing greenhouse gas emissions, water usage, purchased energy, and associated transitional risks.

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	Graphic Packaging is subject to a broad range of international, federal, state and local environmental, health and safety laws and regulations, including those governing GHG emissions and other discharges to air, soil and water. As an energy- and emissions-intensive company, Graphic Packaging may be subject to current and emerging regulations targeting energy use and efficiency as well as reduction of emissions. The Company is tracking and taking actions to reduce our GHG and other air and water emissions to decrease the potential future impact of these regulatory matters. Graphic Packaging includes current regulation risks related to climate change in our annual risk assessment. For example, our converting plants in the UK are required disclose GHG information under the UK SECR scheme. Non-compliance may lead to penalties up to 40K GBP. In addition, our East Angus mill is subject to the Quebec ETS. Changes in future available allowances under the ETS could lead to increased operating costs should the mill need to purchase allowances. Graphic Packaging's business practices ensure that these penalties will not be realized, thus these risks were deemed insignificant to the business. The Company will continue to mitigate these risks through its methodology. Graphic Packaging's government affairs team follows all changes in regulations, laws and commitments that may impact our business. Changes are reported/informed to all relevant personnel and included in the company's enterprise risk management process for further analysis and action as needed.
Emerging regulation	Relevant, always included	The Company is subject to a broad range of international, federal, state and local environmental, health and safety laws and regulations, including those governing GHG emissions and other discharges to air, soil and water. As an energy- and emissions-intensive company, Graphic Packaging may be subject to current and emerging regulations targeting energy use and efficiency as well as reduction of emissions. These laws and regulations, particularly those that relate to GHG emissions, are evolving and expected to become more stringent over time, which could result in significant additional compliance costs (such as the installation or modification of emission control equipment), increased costs of purchased energy or other raw materials, increased transportation costs, restrictions on our operations, or other additional direct costs (such as cap-and-trade systems or carbon taxes) associated with GHG emissions. The Company is tracking and taking actions to reduce our GHG and other air and water emissions to decrease the potential future impact of these regulatory

		matters. Graphic Packaging includes emerging regulation risks related to climate change in our risk assessments and continues to evaluate these risks through ongoing informal reviews that occur as part of normal business practices and has processes in place through Government Affairs to track regulations and provide input for consideration in the Enterprise Risk Management process. For example, single-use packaging regulation in the United States could emerge and impact the Company's Foodservice business which was approximately 20% of the Company's 2021 revenue. Graphic Packaging continues to monitor the developments of regulations, both in the US and in Europe regarding single use packaging closely due to the proportion of the business that new regulation could impact. However, Graphic Packaging is engaged with industry associations and elected officials on advocacy to increase the recycling of single use packaging, including paper cups, and has made product innovations that will allow the Company to move swiftly and react to any market changes quickly. This flexibility strengthens the Company's position as a leader in the sector.
Technology	Relevant, always included	Graphic Packaging includes technology-related risks related to climate change in our risk assessments and evaluates these risks through ongoing informal reviews that occur as part of normal business practices. Although a relatively small number of large competitors hold a significant portion of the paperboard packaging market, our business is subject to strong competition. As consumer's preferences shift towards more sustainable packaging, we may face increased competition. If we do not invest resources to upgrade or replace aging equipment to ensure we're utilizing the most efficient technologies to manufacture our products, we could experience higher operational costs, decreased cost competitiveness, and potential deselection by customers seeking low-carbon footprint materials. Therefore, in 2020 we began the installation of and in 2021 mechanically completed a new world-class Coated Recycled Board (CRB) machine in our Kalamazoo, MI site that will result in cost and quality advantages for years to come. The $600+ million investment will have a positive environmental impact by reducing greenhouse gas emissions, as well as water usage and purchased energy use. The Company has a strong innovation pipeline with new technologies that are designed to reduce impacts on the environment and positioned to meet market expectations.
Legal	Relevant, always included	Graphic Packaging includes legal risks related to climate change in our risk assessments and evaluates these risks through ongoing informal reviews that occur as part of normal business practices. As a publicly traded company, Graphic Packaging is required to disclose detailed financial filings in accordance with the Securities Exchange Commission, which include descriptions of material risks that are identified through the company's enterprise risk management approach. Legal risks, including regulatory issues, are closely monitored and managed with respect to ensuring transparent and consistent information is available for shareholders including such matters that may be relevant and related to climate change. Our legal team monitors legal risks and provides input for consideration in the Enterprise Risk Management process.

		For example, we are subject to a range of foreign, federal, state, and local environmental regulations. We face risks both in terms of tangible costs from environmental litigation and as reputational risks. The magnitude of this risk has been evaluated and determined to be insignificant in relation to other current business-related risks. Historically, litigation claims made against Graphic Packaging have been insignificant.
Market	Relevant, always included	Graphic Packaging includes market-related risks related to climate change in our risk assessments and these risks are evaluated through ongoing informal reviews that occur as part of normal business practices. As a paperboard manufacturer, we use a variety of raw materials in the production of our products. We face risks related to both the volatility of prices as well as the availability of our raw materials. The Company is also exposed to market shifts from one material to another. Each business unit conducts impact assessments of raw material pricing and availability along with market trends, integrates the findings into business strategy development, and reports impacts to the enterprise risk management team for consideration in the enterprise risk management process. For example, in 2020 we continued to analyze the market expectation for alternatives to Low Density Polyethylene (LDPE). This material is applied to foodservice packaging and paper cups. Recyclability of foodservice packaging and paper cups is an important environmental concern and with LDPE applied to this packaging it is less desirable in the recycling system. We set a goal of reducing our LDPE purchases by 40% by 2025. The reduction will be in the form of substituting the LDPE with an advanced barrier technology. With the market expectation for an alternative to LDPE, there is both a risk and an opportunity. If we were unable to develop and commercialize an alternative advanced coating or another packaging supplier developed and implemented an alternative coating before Graphic Packaging this could impact the Company's Foodservice business which was approximately 20% of 2021 revenue.
Reputation	Relevant, always included	Graphic Packaging includes reputational risks related to climate change in our risk assessments and these risks are evaluated through ongoing informal reviews that occur as part of normal business practices. Our stakeholders expect Graphic Packaging to operate responsibly and act proactively on the challenges of climate change. Some major investors are becoming increasingly outspoken about the risk of climate change. If major investors or sustainability-oriented customers perceive Graphic Packaging business activities to be misaligned with the growing global momentum to act against climate change, this could pose a reputational risk to the company that could lead to customer deselection, and ultimately to lower sales and a reduced market valuation. This aspect of our reputation could also be significant from an employer branding perspective, impacting our ability to attract and retain new, especially young, employees. Graphic Packaging's recent commitment to develop climate goals in-line with science-based targets combined with actions taken to

		mitigate the company's contributions to climate change help reduce associated reputational risks. Graphic Packaging has processes in place through our Investor Relations, Environment, Health and Safety, Marketing, Product Innovation, and Talent Acquisition teams to collect external stakeholder feedback and provide input for consideration in the Enterprise Risk Management process. Reputation risk is one of our evaluation criteria in our Enterprise Risk Management process used to evaluate whether or not a risk is a major risk to the Company. For example: There is increasing concern about deforestation and the potential impact on climate change and biodiversity. There is a risk that consumers, customers and investors may consider logging of trees and the use of virgin fiber as a less environmentally friendly option than the use of recycled fiber. Graphic Packaging is mitigating this risk by supplying wood fiber from sustainably managed forests. The majority of the wood we purchase for our virgin mills is sourced in the southeast U.S. and is typically from within a 100-mile radius of our mills. This region is low risk for deforestation. The wood used by Graphic Packaging meets the criteria for at least SFI™ Sustainable Sourcing, PEFC™ Controlled Sources, and FSC® Controlled Wood. Responsible use of forests and recyclable packaging products help give the company a good reputation among customers and investors.
Acute physical	Relevant, always included	Graphic Packaging includes acute physical risks related to climate change in our risk assessments and these risks are evaluated through ongoing informal reviews that occur as part of normal business practices. Graphic Packaging operates mills and converting plants in regions that are prone to the acute physical impacts of climate change including severe weather events and increased frequency of high intensity rainfall events, tornados, extreme temperature events, or river flooding. Respective changes in physical climate parameters can lead to more extreme weather conditions, which represent an inherent risk for our production capacity and supply chains. Potential impacts arising from severe weather events are considered in the Enterprise Risk Management process. While we take appropriate measures to minimize the risk and effect of material disruptions to the business conducted at our facilities, climate-related natural disasters such as hurricanes, tornadoes, floods, and fires can impact production, increase our manufacturing costs, and potentially impact our customer’s ability to operate. As an example, the Graphic Packaging paperboard mill in West Monroe, Louisiana was damaged by a tornado. The impact on operations was minimal and the costs of the damage were approximately $10 million. The 2021 winter storm Uri and freezing conditions that impacted Texas and Louisiana in 2021 impacted our regional supply chain, caused a disruption at our Texarkana mill, and resulted in $21 million in related downtime and mitigation costs. We were also exposed to acute physical risk related to floods at our

		Pacific, Missouri carton plant. The facility experienced two one-hundred-year floods in a three-year time frame. During each flood, the Company minimized the impact by elevating equipment and inventory to prevent water damage and relocated manufacturing until the flood receded. The Company has also invested in an AquaDam to place around the facility in the case of another flood. The cost was less than $1 million for the AquaDam. As shown in our response to these events, Graphic Packaging is well-positioned to react to extreme weather events and is well prepared to ensure that the impact from the next event is minimal.
Chronic physical	Relevant, always included	Graphic Packaging includes chronic physical risks related to climate change in our risk assessments and these risks are evaluated through ongoing informal reviews that occur as part of normal business practices. While we take appropriate measures to minimize the risk and effect of material disruptions to the business conducted at our facilities, climate-related natural disasters such as heavy rain can impact production, increase our manufacturing costs, disrupt transportation routes, and potentially impact our suppliers and/or our customer's ability to operate. For example: Global warming will create rising temperatures, changes in precipitation, and water shortages in certain regions. In our US wood basket these kinds of risks consist typically of heavy thunderstorms, flooding, and increased numbers or severity of tornados which can all impact tree viability and/or harvestability. Milder, wetter winters make harvesting conditions more difficult due to wet and soft soil in the forests. This may cause the need to i) increase the wood stock levels during the winter months to ensure wood availability (causing additional capital costs), ii) supply wood from new forest areas (additional costs in the form of extra transportation costs) or iii) in the worst scenario, curtail pulp and paperboard production due to temporary shortage of wood raw material. In 2021, one of the wood baskets that Graphic Packaging relies upon to source wood was negatively impacted by excessive rain. Graphic Packaging had to shift sourcing for raw materials to another wood basket outside our traditional wood supply region. The shift was executed in real-time and did not have a negative impact.

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?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased direct costs

Company-specific description

Graphic Packaging's operations face climate-related physical risks related to extreme weather events and increased flooding. As the severity and/or frequency of extreme weather events increases, as predicted under different climate scenarios, this could impact our operations by causing one or more of our facilities to become inoperable resulting in a direct impact on our production, sales, and/or costs. Many of our operating sites are located near rivers, and the risk of flooding may increase due to surface water flooding following extreme rainfall or rapid snow melting events. For example, sites located in Louisiana, Missouri, and Pennsylvania have all experienced acute flooding events in the past few years, which has caused us to take measures to ensure we are mitigating property damages and minimizing production disruptions. Graphic Packaging has taken specific actions to prepare its operating locations to minimize financial impact and maintain business continuity during extreme, acute weather events. Insurance policies are in place to mitigate potential loss or damage and recovery time. Crisis management procedures have been established and tested to ensure personnel understand what to do to respond during a weather-related emergency. Multiple sites have been qualified to produce the same products, providing manufacturing redundancy to ensure business continuity to meet customer orders should a location become inoperable. Reliability Center Maintenance teams are in place to monitor and perform

maintenance over assets. Flood mitigating controls are at the ready to prevent or limit damages. Inventory of critical spare parts is managed based on lead time. Back-up plans are in place in the event resources cannot get to the worksite. In addition, we regularly review physical controls and additional insurance coverage needs at these locations to test adequacy.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

2,000,000

Potential financial impact figure – maximum (currency)

13,000,000

Explanation of financial impact figure

Financial implications from climate related events are difficult to quantify due to unforeseen variables that can impact the overall significance of these risks and the fact that Graphic Packaging reacts and deploys mitigation measures in real time. As such, the impact has not been quantified financially. We do have experience with prior events and as indicated the financial implications have ranged up to $13 million. Financial implications could impact our overall costs of operations as well as our ability to fund capital expenses. These financial implications are considered immaterial. Estimating one climate-related adverse event yearly, and assuming the cost of the adverse event will range from

$2,000,000 to $13,000,000 based on costs of prior adverse climate-related weather events, the financial impact figure is between 1*$2,000,000 = $2,000,000 and 1*$13,000,000 = $13,000,000

Cost of response to risk

5,000,000

Description of response and explanation of cost calculation

Situation: Extreme weather events and flooding pose a risk to Graphic Packaging's sites, many of which are located near rivers.
Task: We have taken actions to prepare locations to minimize financial impact and maintain business continuity during extreme weather events. These include establishing appropriate insurance policies, manufacturing redundancy, and crisis management procedures.
Action: It is expected that financial impacts related to extreme weather events are managed such that the Graphic Packaging's performance is not severely impacted. We manage this risk via our enterprise risk management process control plan. The risk owner ensures that appropriate insurance is in place and adequate coverage levels are maintained. We perform an annual insurance review that is reported to the Audit Committee, and will purchase additional flood insurance coverage as needed for our manufacturing facilities.
Proactive site protection actions have been taken by operations to minimize potential flood-related impacts to facilities and inventory. The organization has purchased temporary barriers (AquaDams) to deploy as necessary to create an artificial levee/dam around a key facility to prevent floodwater intrusion. Anti-flood protection devices such as pumps are stored and ready when needed to reduce the impact of rising flood water. Reliability experts and maintenance personnel are trained, staffed and ready, and critical parts are maintained in inventory to ensure production is restored as quickly as possible following an event.
Result: Several of Graphic Packaging's plants have experienced a flood event in the past few years. Each event was addressed effectively via redundant capacity and proactive measures where possible. The cost response figure is an estimate based on learnings from historic weather events which have impacted our operations. Most notably is the incident at the site in Pacific, Missouri. The flood caused significant damage to the site, requiring us to move production equipment and redirect resources to repair the damage. Graphic Packaging has invested in flood mitigation measures as appropriate and the risk management program is monitored and reviewed on an annual basis.
Cost: The cost of administering our risk management program, which includes the internal costs of administering the program, the annual cost of the insurance premiums, and other site preparedness activities is $5,000,000 annually: 1 year * $5,000,000 = $5,000,000

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?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Concerns about climate change, the need to reduce waste (particularly fossil fuel based plastic waste), and shifts towards a circular economy are shaping how companies think about their packaging products. Customers are looking to lessen the environmental impact of their packaging by following the reduce, reuse, recycle approach as they evolve their packaging design and materials selection. Graphic Packaging is well

positioned in the market, as a wood fiber-based packaging company, to be a solution provider to respond to these growing external pressures. The Company's business model is based on developing resource-efficient manufacturing processes that run on renewable energy to produce sustainable, recyclable packaging products that are predominantly made from renewable raw materials. Graphic Packaging incorporates sustainability criteria and design for the environment thinking into its SOAR product development innovation process to create new packaging solutions for its customers – helping them reduce the materials they use and ship while generating less waste for their customers. Throughout our process, we consider the full life cycle of the package and its impact from material sourcing to manufacture through end of life. We have developed patented packaging alternatives that provide equivalent performance and protection but use less materials – reducing life cycle carbon emissions and raw material resource consumption. We partner with suppliers to develop new barrier materials that provide the same performance while improving the recyclability and/or compostability of the packaging – reducing potential waste from the packaging and improving circularity. Lastly, our team works to innovate paper-based packaging solutions that can be substituted for hard to recycle/non-recyclable fossil-fuel based packaging – supporting the transition to a lower-carbon, circular economy that relies on tree-based renewable materials to create easily recycled products. Our innovation teams also incorporate features that enhance customer brand building opportunities in the design as well as delight the end-consumer by offering potential to reuse the packaging in new ways.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

400,000,000

Potential financial impact figure – maximum (currency)

700,000,000

Explanation of financial impact figure

In our 2025 Vision we anticipate adding revenue growth of $400 - $700 million (over the period of 2020 – 2025) that is directly attributed to our innovation efforts. This figure has been based on assessment of the addressable market opportunity demand for substitution by more sustainable packaging solutions. Graphic Packaging conservatively estimated a range for percent adoption of our new packaging products to replace existing, less sustainable packaging when developing the minimum and maximum range for opportunity values. Addressable market value and conversion assumptions are not provided for business confidentiality reasons. Minimum Opportunity: ($400,000,000 * 100%) targeted revenue = $400,000,000. Maximum Opportunity: ($700,000,000 * 100%) targeted revenue = $700,000,000.

Cost to realize opportunity

29,000,000

Strategy to realize opportunity and explanation of cost calculation

Situation: Customers are looking to lessen the environmental impact of their packaging as they evolve their packaging design and materials selection. We are well positioned, as a wood fiber-based packaging company, to be a solution provider to respond to these growing external pressures.

Task: Graphic Packaging is committed to sustainable innovation and has allocated investments both in terms of research and development as well as capital allocation to ensure that we have the appropriate resources to develop packaging solutions that will improve the environmental metrics of our customers' products. We keep abreast of consumer expectations to ensure that we're meeting preferences as they continue to shift towards more sustainable packaging.

Action: We have established 8 R&D innovation centers in the US and the EU and have expanded our packaging innovation "toolset" as part of our recent acquisition of AR Packaging in November 2021. Over the past 2-3 years, our Chief Innovation Leader has restructured our R&D and marketing teams to improve market sensing capabilities as well as foster collaboration, ideation, and leveraging solutions from one global region to another. We have invested in innovation, research and development, and digital capabilities to allow us to capture sustainability supported organic growth. Throughout 2021 we have continued to develop products which look to have a positive environmental impact. We are focusing on providing fiber-based solutions to the problems surrounding single-use plastics. Example products we have commercialized include KeelClip™, Cap-It™, and EnviroClip™ beverage packaging solutions, PaperSeal™ and ProducePack™ food packaging solutions, the Ecotainer™ and OptiCycle™ foodservice solutions, and the ZFlute™ and IntegraFlute™ strength packaging solutions.

Result: These products are a representative sample of the many sustainable packaging solutions our innovation teams are developing that are expected to deliver $400 - $700 million in revenue growth over 2020 – 2025.
GPI has realized $275 million in net new product sales during 2020-2021 attributed to customer conversion to our new, innovative packaging designs. As detailed in our 2021 Annual Report on Form 10k, our cumulative investment in Research and Development for the past 3 years has totaled $29 million, all of which contributes to developing and commercializing new innovative paperboard solutions and practices. 100% * $29,000,000 = $29,000,000

Comment

Graphic Packaging continues to invest in R&D and innovation across the world which is considered part of normal business practices.

C3. Business Strategy

C3.1

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

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

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

Graphic Packaging has a history of setting and meeting GHG emission reduction targets and improving our energy efficiency; however, the company was not prepared to develop a 1.5C aligned transition plan until now. Currently our energy demand is met using 65% renewable biomass fuel sources. We have completed a climate risk analysis and are in the process of developing Science Based targets that will inform our development of a transition plan aligned with a 1.5C world.

C3.2

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

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 4.5	Business division		GPI uses WRI Aqueduct Water Risk Atlas 3.0 for modeling water availability scenarios for all our operating sites. The model evaluates potential water risk in 2030 and 2040 under different climate and development scenarios – optimistic, business as usual (BAU), and pessimistic. We evaluated future water risk using the water stress indicator, and current water risk using baseline water stress and baseline water depletion indicators. Parameters: WRI uses the general circulation models from the CMIP Phase 5 project and socioeconomic variables based on the SSP database from the International Institute for Applied Systems Analysis. SSPs consider population, GDP, and urbanization. The models also consider changing climate phenomena, economic development, and policy. Assumptions: The optimistic scenario uses SSP2 and RCP4.5 to model future water stress. RCP4.5 assumes emissions will stabilize at ~650 ppm CO2 and temperatures will rise to 1.1–2.6°C by 2100. SS2 assumes higher GDP growth, lower population growth, and a higher rate of urbanization than the SS3 scenario.

			Analytical Choices: The RCP4.5/SS2 scenario is applied at the company level and does not account for GPI's value chain. The time horizons covered include 2030 and 2040. This analysis identifies regions where water stress may impact current and/or future site operations and provides input for developing site specific water management strategies to protect future site operations. 2030 and 2040 analysis time periods are consistent with expected operating timelines for our facilities and long-term capital planning for future investments. Currently 20 sites (0.2% of GPI's water withdrawals) are in basins with modeled high or extremely high baseline water stress. Only 2 sites (0.02% of GPI's water withdrawals), are in basins with high or extremely high baseline water depletion. This aligns with expectations, as water stress examines the ratio of withdrawals to availability, while water depletion examines the ratio of consumption to availability. In the 2030 and 2040 BAU forward-looking scenarios, the number of sites in basins of high or extremely high water stress increases to 35 and 34 (representing 0.08% and 2.53% of GPI's water withdrawals), respectively. Scenario results are shared with leadership to inform water management strategies. Water stress is local. Models predicting stress does not mean there is actual risk for a facility. Currently there is no significant water risk to GPI operations.
Physical climate scenarios RCP 8.5	Business division		GPI uses WRI Aqueduct Water Risk Atlas 3.0 for modeling water availability scenarios for all our operating sites. The model evaluates potential water risk in 2030 and 2040 under different climate and development scenarios – optimistic, business as usual (BAU), and pessimistic. We evaluated future water risk using the water stress indicator, and current water risk using baseline water stress and baseline water depletion indicators. Parameters: WRI uses the general circulation models from the CMIP Phase 5 project and socioeconomic variables based on the SSP database from the International Institute for Applied Systems Analysis. SSPs consider population, GDP, and urbanization. The models also consider changing climate phenomena, economic development, and policy. Assumptions: The BAU scenario uses SSP2 and RCP8.5 to model future water risk. RCP8.5 assumes

			emissions will reach ~1370 ppm by 2100 and global mean temperatures will increase 2.6–4.8°C relative to 1986–2005. SS2 assumes higher GDP growth, lower population growth, and a higher rate of urbanization than SS3. Analytical Choices: The RCP8.5/SS2 scenario is applied at the company level and does not account for GPI's value chain. The time horizons covered are 2030 and 2040. This analysis identifies regions where water stress may impact current and/or future site operations and provides input for developing site specific water management strategies to protect future site operations. 2030 and 2040 analysis time periods are consistent with expected operating timelines for our facilities and long-term capital planning for future investments. Currently 20 sites (0.2% of GPI's water withdrawals) are in basins with modeled high or extremely high baseline water stress. Only 2 sites (0.02% of GPI's water withdrawals), are in basins with high or extremely high baseline water depletion. This aligns with expectations, as water stress examines the ratio of withdrawals to availability, while water depletion examines the ratio of consumption to availability. In the 2030 and 2040 BAU forward-looking scenarios, the number of sites in basins of high or extremely high water stress increases to 35 and 34 (representing 0.08% and 2.53% of GPI's water withdrawals), respectively. Scenario results are shared with leadership to inform water management strategies. Water stress is local. Models predicting stress does not mean there is actual risk for a facility. Currently there is no significant water risk to GPI operations.
Physical climate scenarios RCP 8.5	Business division		GPI uses WRI Aqueduct Water Risk Atlas 3.0 for modeling water availability scenarios for all our operating sites. The model evaluates potential water risk in 2030 and 2040 under different climate and development scenarios – optimistic, business as usual (BAU), and pessimistic. We evaluated future water risk using the water stress indicator, and current water risk using baseline water stress and baseline water depletion indicators. Parameters: WRI uses the general circulation models from the CMIP Phase 5 project and socioeconomic variables based on the SSP database from the International Institute for Applied

			Systems Analysis. SSPs consider population, GDP, and urbanization. The models also consider changing climate phenomena, economic development, and policy. Assumptions: The pessimistic scenario uses SSP3 and RCP8.5 to model future water risk. RCP8.5 assumes emissions will reach ~1370 ppm by 2100 and global mean temperatures will increase 2.6–4.8°C relative to 1986–2005. SS3 assumes lower GDP growth, higher population growth, and a lower rate of urbanization than SS2. Analytical Choices: The RCP8.5/SS3 scenario is applied at the company level and doesn't account for GPI's value chain. Time horizons covered are 2030 and 2040. This analysis identifies regions where water stress may impact current and/or future site operations and provides input for developing site specific water management strategies to protect future site operations. 2030 and 2040 analysis time periods are consistent with expected operating timelines for our facilities and long-term capital planning for future investments. Currently 20 sites (0.2% of GPI's water withdrawals) are in basins with modeled high or extremely high baseline water stress. Only 2 sites (0.02% of GPI's water withdrawals), are in basins with high or extremely high baseline water depletion. This aligns with expectations, as water stress examines the ratio of withdrawals to availability, while water depletion examines the ratio of consumption to availability. In the 2030 and 2040 BAU forward-looking scenarios, the number of sites in basins of high or extremely high water stress increases to 35 and 34 (representing 0.08% and 2.53% of GPI's water withdrawals), respectively. Scenario results are shared with leadership to inform water management strategies. Water stress is local. Models predicting stress does not mean there is actual risk for a facility. Currently there is no significant water risk to GPI operations.

C3.2b

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

Row 1

Focal questions

Key focal questions that provide direction to Graphic Packaging's climate-related scenario analysis include:
- Are our mills (our most water-intensive facilities) in areas of water stress today? Will they be located in areas of water stress in the future, and what is the associated time horizon?
- How will increasing water stress impact our operations in mills that are located in areas of high or very high water stress?
- What actions can we take to mitigate or respond to increasing water stress in areas where we have mill operations?
- What is the timeline associated with the actions we should take to mitigate or respond to increasing water stress in areas where we have mill operations?
- What are the most material potential risks that increasing water stress poses to our mill operations, and how can we respond?
- How does water stress impact future investments in new facilities?

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

Results from scenario analyses such as WRI's Water Risk Atlas tool are shared with mills operations leadership. The results include which facilities are located in areas of high or very high baseline water stress and depletion, and which facilities may be located in areas of high or very high water stress in 2030 and/or 2040. These results enable mills operations leadership to evaluate potential impacts of increasing water stress, such as reduced output or increased costs. Results of the scenario analysis also enable mills leadership to evaluate water stewardship strategies, engagement plans with local water stakeholders and water management needs, and associated timeframes. Finally, the results of this analysis can be used as an input when Graphic Packaging screens locations for new facility investments, to ensure adequate water supply will be available during the operating life of the facility.

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	Graphic Packaging has determined that our products and services have been impacted based on our evaluation of climate-related risks and opportunities. Graphic Packaging manufactures and sells paperboard packaging. This packaging is made from renewable tree-fiber materials, and virtually all can be recycled. Approximately 65% of energy used to make the paperboard packaging is renewable energy generated using biomass. When comparing the environmental profile of paperboard packaging with other packaging formats like plastic, glass, and metal, paperboard packaging can present a lower GHG emissions footprint as measured by ISO Life Cycle assessment methodologies. We integrate sustainability thinking throughout our product innovation process using a Design for the Environment (DfE) approach. With DfE, we consider how to reduce or remove environmental impacts from the beginning to the end of a product's life. In our Vision 2025, we have targeted $400 - $700 million in revenue generated from the sale of new innovative packaging. These sales will be predominately from innovative packaging solutions that provide a sustainability benefit to the marketplace. As an example, in 2021 we saw significant success with our hybrid tray solution, PaperSeal®. Designed for food applications where plastic cannot easily be eliminated due to the need for a hermetic seal or oxygen barrier to extend shelf-life, PaperSeal reduces plastic by up to 90 percent versus traditional trays. In addition, the paperboard portion of the tray can be easily separated from the liner for easy recycling by the consumer.
Supply chain and/or value chain	Yes	Graphic Packaging has determined that our supply chain has been impacted for some suppliers, facilities, or product lines based on our evaluation of climate-related risks and opportunities. For example, we understand that there are limitations on the availability of, and increases in, the costs of raw materials, including secondary fiber, petroleum-based materials, energy, wood, transportation, and other necessary goods and services which could impact the reliability of our supply chain. Because negotiated sales contracts and the market largely determine the pricing for its products, the Company is at times limited in its ability to raise prices and pass through any inflationary or other cost increases that the Company may incur to its customers. Therefore, we have established processes that enable us to work closely with our suppliers to ensure that we're being proactive in identifying any risks that could impact our supply chain and mitigate risks where possible. Wood fiber is a critical raw material to the company's process. Graphic Packaging's long-range planning process, which typically looks 3-5 years into the future, assesses forest-related risks and opportunities by evaluating macro influences on its

		woodbasket. These influences can be shifts in market demand from local, national and international demand patterns based on climate change or other reactions related to climate change by working with an external party to model scenarios. For example, to accomplish the UK's carbon reduction goals, many utilities have transitioned from electricity generated by coal to energy generated by biomass sources. Certain UK utilities source wood from the United States which also impacts the overall supply of this raw material. We have communicated to the EU and UK governments that subsidy of biomass energy supply is having a detrimental impact on business and could result in higher costs for UK and EU customers for paperboard products. The company runs woodbasket assessments to predict the impact of the government subsidies from the UK and EU. Based on these assessments the company alters its wood basket purchasing strategy.
Investment in R&D	Yes	Graphic Packaging has determined that investment in R&D has been impacted based on our evaluation of climate-related risks and opportunities. We understand that there are reputational risks based on consumer preferences for packaging made from renewable materials. There has been increasing evidence of this shift through public statements made by buyers of packaging, including food, beverage, and foodservice companies. Therefore, Graphic Packaging continues to engage in research and development activities that seek to identify technologies that would allow for alternative packaging for liquid and food products to replace plastic. Additionally, we seek to invest resources for the research and development of any efficient technologies that could be utilized in our manufacturing processes to be more efficient. In our Vision 2025, we have targeted $400 - $700 million over the period of 2020 – 2025 in net new product sales for our innovation efforts. Graphic Packaging continues to invest in R&D as reflected in our financial reports showing an increased investment year on year. In 2021 we mechanically completed the installation of a new world-class Coated Recycled Board (CRB) machine in our Kalamazoo, MI site that will result in cost and quality advantages for years to come. The $600 million investment will have a positive environmental impact by reducing annual global greenhouse gas emissions, as well as water usage and purchased energy. The Company expects the investment will enable it to eliminate higher cost production at other facilities and will deliver an incremental $130 million in annualized EBITDA over an anticipated three-year period following the commercialization in 2022. As demonstrated in this response, the Company has a strong innovation pipeline with new technologies that are designed to benefit the environment and positioned to meet market expectations.

Operations	Yes	As a company, we're always striving to improve our resource efficiency at each facility. Each year we identified improvement opportunities and incorporated them, where appropriate, in either our annual budgeting process or multi-year capital plan. We understand that improvements in our processes will lead to a reduction in both energy consumption and GHG emissions. This helps protect our company against risks such as rising energy prices and carbon taxes, and also positions us to realize business opportunities with customers focused on reducing their supply chain carbon footprint. In 2021 we mechanically completed the installation of a new world-class Coated Recycled Board (CRB) machine in our Kalamazoo, MI site that will result in cost and quality advantages for years to come. The $600 million investment will have a positive environmental impact by reducing annual global greenhouse gas emissions, as well as water usage and purchased energy. The Company expects the investment will enable it to eliminate higher cost production at other facilities and will deliver an incremental $130 million in annualized EBITDA over an anticipated three-year period following the commercialization in 2022. The company is also investing in upgrading several coating machines to higher efficiency curtain coater machines. As demonstrated in this response, the Company has a strong innovation pipeline with new technologies that are designed to benefit the environment and positioned to meet market expectations.

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	Graphic Packaging has evaluated how revenues are impacted by climate-related risks and opportunities in relation to our organization's business, strategy, and financial planning. For example, our Company's research and development team works directly with its sales, marketing, and consumer insights personnel to understand long-term consumer and retailer trends and create relevant new packaging. These innovative solutions provide customers with differentiated packaging to meet customer needs. The Company's development efforts include, but are not limited to: extending the shelf life of customers' products; reducing production and waste costs; enhancing the heat-managing characteristics of food packaging; improving the sturdiness and compression strength of packaging to meet store display needs; and refining

		packaging appearance through new printing techniques and materials. Circular economy business models and packaging waste reduction represents one of the strongest trends in the packaging industry and the Company focuses on developing more sustainable manufacturing processes and products. In our 2025 Vision we have targeted revenue growth through new product innovations of $400 - $700 million during the period 2020 – 2025. Case Study: Situation: Customers are looking to lessen the environmental impact of their packaging following the reduce, reuse, recycle approach as they evolve their packaging design and materials selection. Graphic Packaging is well positioned, as a wood fiber-based packaging company, to be a solution provider to respond to these growing external pressures. Task: Graphic Packaging is committed to sustainable innovation and has allocated investments both in terms of research and development as well as capital allocation to ensure that we have the appropriate resources to develop packaging solutions that will improve the environmental metrics of our customers' products. We keep abreast of consumer expectations to ensure that we're meeting preferences as they continue to shift towards more sustainable packaging. Action: We have established 8 R&D innovation centers in the US and the EU and have expanded our packaging innovation "toolset" as part of our recent acquisition of AR Packaging in November 2021. Over the past 2-3 years, our SVP, Global Innovation and New Business Development has restructured our R&D and marketing teams to improve market sensing capabilities as well as foster collaboration, ideation, and leveraging solutions from one global region to another. We have invested in innovation, research and development, and digital capabilities to allow us to capture sustainability supported organic growth. Throughout 2021 we have continued to develop products which look to have a positive environmental impact. We are focusing on providing fiber-based solutions to the problems surrounding single-use plastics. Example products we have commercialized include: KeelClip™, Cap-It™, and EnviroClip™ beverage packaging solutions, PaperSeal™ and ProducePack™ food packaging solutions, the Ecotainer™ and OptiCycle™ foodservice solutions, and the ZFlute™ and IntegraFlute™ strength packaging solutions. Result: These products are a representative sample of the many sustainable packaging solutions our innovation teams are developing that are expected to deliver $400 - $700 million in revenue growth over 2020 – 2025. Graphic Packaging has realized $275 million in net new product sales during 2020-2021 attributed to customer conversion to our new, innovative packaging designs.

		As demonstrated in this response, the Company has a strong innovation pipeline with new technologies that are designed to benefit the Environment and positioned to meet market expectations.

C4. Targets and performance

C4.1

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

Absolute target

Intensity target

C4.1a

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

Target reference number

Abs 1

Year target was set

2017

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2016

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

1,257,469

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

793,037

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

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

2,050,507

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

100

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

100

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

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

100

Target year

2025

Targeted reduction from base year (%)

10

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

1,845,456.3

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

1,607,767

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

735,864

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

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

2,343,631

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

-142.9519626122

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

Graphic Packaging reported this target to CDP in 2018 and is reporting progress against the same target in 2021. The 2021 acquisition of AR Packaging and Americraft has been included for part of the reporting year but a full rebaseline has not been completed. This has created a rise in Graphic Packaging's scope 1 + 2 emissions, contributing to negative progress against the company's emission reduction target. Graphic Packaging intends to finalize the integration of these acquisitions by the end of FY2022, including an update to the baseline according to the GHG Protocols.

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

To achieve this target, Graphic Packaging is investing in energy efficiency and renewable energy projects. This year, we continued development of our new Coated Recycled Board (CRB) machine in our Kalamazoo, MI site, which will reduce global greenhouse gas emissions and energy use.

List the emissions reduction initiatives which contributed most to achieving this 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

2017

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Intensity metric

Metric tons CO2e per unit revenue

Base year

2016

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

0.000292564

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

0.000184509

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

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

0.000477073

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

100

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

100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

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

100

Target year

2025

Targeted reduction from base year (%)

15

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

0.0004055121

% change anticipated in absolute Scope 1+2 emissions

-10

% change anticipated in absolute Scope 3 emissions

0

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

0.000224674

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

0.000102832

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

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

0.000327506

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

209.0064483493

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

Please explain target coverage and identify any exclusions

The 2021 acquisition of AR Packaging and Americraft has been included for part of the reporting year but a full rebaseline has not been completed. This has created a rise in Graphic Packaging's scope 1 + 2 emissions, while revenue has also increased. This is creating a decrease against the company's emission reduction target from the 2016 baseline. Graphic Packaging intends to finalize the integration of these acquisitions by the end of FY2022, including an update to the baseline according to the GHG Protocols.

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

List the emissions reduction initiatives which contributed most to achieving this target

To achieve this target, Graphic Packaging is investing in energy efficiency and renewable energy projects. This year, we continued development of our new Coated Recycled Board (CRB) machine in our Kalamazoo, MI site, which will reduce global greenhouse gas emissions and energy use.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2017

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Energy consumption or efficiency

million Btu

Target denominator (intensity targets only)

Other, please specify

per $1000 sales

Base year

2016

Figure or percentage in base year

6.565789212

Target year

2025

Figure or percentage in target year

5.58092083

Figure or percentage in reporting year

6.507784019

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

5.8896390685

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

Graphic Packaging is targeting a reduction in company-wide non-renewable energy use intensity by 15% (MMBTU/ $1,000 sales) in 2025 compared to 2016. Graphic Packaging's intensity has reduced by 1% compared to the base year.

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

To achieve this target, Graphic Packaging is investing in energy efficiency. This year, we continued development of our new Coated Recycled Board (CRB) machine in our Kalamazoo, MI site, which will reduce global greenhouse gas emissions and energy use.

List the actions which contributed most to achieving this target

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	4	0
To be implemented*	0	0
Implementation commenced*	4	80,886
Implemented*	2	945
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

Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

717

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

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

823,388

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

3,000,000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Different new equipment investments in 2021 (printers, heater, ventilation, gluer, stamping, UV lamps, air compressor, etc. depending on the site)

Initiative category & Initiative type

Transportation

Company fleet vehicle replacement

Estimated annual CO2e savings (metric tonnes CO2e)

227

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

Scope 1

Voluntary/Mandatory

Voluntary

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

243,550

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

0

Payback period

<1 year

Estimated lifetime of the initiative

11-15 years

Comment

Investment in new truck fleet and driver trainings and monitoring to save fuel led to an improvement of the mileage per gallon by >15% in Bardon distribution activity. These fleet innovations around emissions, safety and fuel efficiency have helped us to reach FORS (Fleet Operators Recognition Scheme) Gold Standard and successfully gain acceptance into the UK government DVSA (Driver and Vehicle Standards Agency) Earned Recognition Scheme which puts us amongst the top 80 operators (top 1%) in the UK. Trucks are leased for 3 years allowing us to upgrade the fleet continuously without CAPEX.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Compliance with regulatory requirements / standards: Graphic Packaging is in a heavily regulated industry and thus a portion of capital investments are directed to meet regulatory compliance. We continually assess capital investments for opportunities to achieve higher reductions in greenhouse gas emissions.
Financial optimization calculations	Financial optimization calculations: As a public company, Graphic Packaging applies financial rigor to capital investments to understand the return on investment. These calculations include factors such as emission reduction savings, productivity implications, and overall strategic impacts.

Internal finance mechanisms	Internal finance mechanisms: In addition to return on investment calculations, potential savings and revenue opportunities are assessed as part of our overall financial analysis.
Partnering with governments on technology development	Partnering with governments on technology development: Graphic Packaging has partnered with the Department of Energy through the Better Plants program to develop projects.
Other	Graphic Packaging employs Lean Six Sigma as part of our continuous improvement process which includes defined environmental impacts.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Climate Bonds Taxonomy

Type of product(s) or service(s)

Pulp and paper

Other, please specify

Packaging products

Description of product(s) or service(s)

Graphic Packaging manufactures and sells paperboard packaging. This packaging is made from renewable materials and tree- fiber materials, and virtually all can be recycled. Approximately 65% of the energy used to make the paperboard packaging is renewable energy generated using biomass. When comparing the environmental profile of paperboard packaging with other packaging formats like plastic, glass, and metal, paperboard packaging can present a lower GHG emissions footprint as measured by ISO Life Cycle assessment methodologies. Graphic Packaging partners with a third party to better understand the emissions reductions resulting from its products through life-cycle analyses. For example, an update to our LCA for various multipack beverage packaging designs was conducted in fall of 2020.

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

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

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

Explain your calculation of avoided emissions, including any assumptions

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

22

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

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

Row 1

Has there been a structural change?

Yes, an acquisition

Name of organization(s) acquired, divested from, or merged with

AR Packaging; Americraft

Details of structural change(s), including completion dates

Graphic Packaging has acquired two new divisions, AR Packaging and Americraft, as of CY2021. AR Packaging was completed in November 2021 and Americraft was completed in July 2021.

C5.1b

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

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	Graphic Packaging has shifted its control approach from financial control to operational control as of the CY2021 cycle of data reporting. This resulted in immaterial changes to sites included in Graphic Packaging's boundary, but was determined more appropriate to Graphic Packaging's business.

C5.1c

(C5.1c) Have your organization’s base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because we do not have the data yet and plan to recalculate next year	As the acquisitions were completed during 2021, Graphic Packaging is in the process of gathering historical data. We have reported site data as of the acquired month in 2021 and are currently working to gather all historical data for the newly acquired locations.

C5.2

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

Scope 1

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

1,257,469

Comment

Scope 2 (location-based)

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

789,906

Comment

Scope 2 (market-based)

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

793,037

Comment

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Graphic Packaging is in the process of refining its measurement methodology, investigating science-based targets, evaluating Scope 3 emissions and setting a baseline for future goals. Graphic Packaging will establish a Scope 3 baseline as part of this process when it establishes a target.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019
IEA CO2 Emissions from Fuel Combustion
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance
US EPA Mandatory Greenhouse Gas Reporting Rule
US EPA Emissions & Generation Resource Integrated Database (eGRID)

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)

1,607,767

Comment

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 are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based

645,888

Scope 2, market-based (if applicable)

735,864

Comment

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?

Yes

C6.4a

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

Source

Natural Gas and Electric Power

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

Graphic Packaging is excluding its former facility in Norwalk from this disclosure because it was only recently acquired as of July 2021, then closed mid-2022. The Norwalk site represented an immaterial percentage of Graphic Packaging's footprint and as a result, Graphic Packaging has not evaluated associated emissions.

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

0

Explain how you estimated the percentage of emissions this excluded source represents

The Norwalk site is estimated by averaging the scope 1 and 2 emissions calculated at the other similar Americraft sites. This represented 0.04% of total scope 1 + 2 emissions reported.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,157,893

Emissions calculation methodology

Spend-based method

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

0

Please explain

The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according to purchase type (i.e. standard goods and services). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

448,716

Emissions calculation methodology

Spend-based method

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

0

Please explain

The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according to purchase type (capital goods). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

488,621

Emissions calculation methodology

Site-specific method

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

0

Please explain

The estimated transmission and distribution loss emissions were calculated by taking the product of the final market-based electric power emissions for the Graphic Packaging portfolio and the U.S. EPA State Electricity Profile loss factors and World Bank T&D loss factors. The well-to-tank emissions were calculated by taking the volume of fuels and electric power for Graphic Packaging's portfolio and the DEFRA 2021 WTT factors.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

313,713

Emissions calculation methodology

Spend-based method

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

0

Please explain

The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according to third party transportation (air, water, rail, road freight) and distribution (warehousing and upstream). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

589,452

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

The estimated emissions were calculated using the U.S. EPA Emission Factor Hub and U.K. Department of Food & Environmental Affairs (DEFRA) emission factors. Metric tons of waste data was collected from Graphic Packaging's facilities. Based on waste type (e.g. landfilled, recycled, incinerated, etc.) and region (USA vs Europe), Graphic Packaging applied emission factors specific to the waste category to calculate the respective emissions.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,456

Emissions calculation methodology

Hybrid method

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

14

Please explain

The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool and supplier calculated emissions. Financial expenditure data was collected and allocated according to travel activity (auto rentals, taxi, hotel stays, air travel). Graphic Packaging's travel partner also provided calculated kg CO2e emitted for select commercial airline, jet, rental car, and hotel travel. The spend from these was excluded from the Quantis inputs. Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions. These were then combined with the supplier figures for the final emissions total.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

30,339

Emissions calculation methodology

Distance-based method

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

0

Please explain

The estimated emissions were calculated using the employee headcount, remote work statuses, time-off policy, and est. working hours (48 hrs/week) information provided by Graphic Packaging. Graphic Packaging's partner, EcoAct, calculated mileage assumptions based on National Household Travel Survey (NHTS) and the European Commission on Transport Statistics for the World model. For the US model, the modes of

transport are taken from the NHTS database and mapped to the EPA's emissions factor hub. For the World model, mode-specific emissions factors are obtained from DEFRA.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

145,115

Emissions calculation methodology

Average product method

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

0

Please explain

The estimated emissions were calculated using the respective material mass of converted products was collected and allocated according to product material grouping (i.e. paper, metals, plastics, organics, and mixed). Based on this allocation, Graphic Packaging calculated the emissions intensity of products by taking the scope 1 and 2 mtCO2e / total tons of US board = converting EF (mtCO2e/US ton board). This emission factor was then applied to the total weight (US tons) of sold boards in the US to calculate the respective emissions.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

31,568

Emissions calculation methodology

Asset-specific method

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

0

Please explain

The estimated emissions were calculated based on the use of electricity from packaging machines during their operating lifetimes. Graphic Packaging assumed an operating life of 24hr/day, 5 day/week, 52 wk/year, for 10 years. Based on this assumption, Graphic Packaging calculated the kWh assumed to operate machines in the US during 2021. This kWh estimate was then multiplied by the US EPA eGRID

average emission factor to calculate the respective emissions.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,025,569

Emissions calculation methodology

Spend-based method

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

0

Please explain

The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. The respective material mass of sold products was collected and allocated according to product material grouping (i.e. paper, metals, plastics, organics, and mixed). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based

on Graphic Packaging's review of operations.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Graphic Packaging does not operate any franchises and as such this Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

6,764

Emissions calculation methodology

Average product method

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

0

Please explain

The estimated emissions were calculated based on the revenues from sold cartons with Graphic Packaging's joint venture partner. This was accomplished by collecting the respective material mass of converted products and allocating according to product material grouping (i.e. paper, metals, plastics, organics, and mixed). Based on this allocation, Graphic Packaging calculated the emissions intensity of products by taking the

scope 1 and 2 mtCO2e / total tons of US board = converting EF (mtCO2e/US ton board). This emission factor was then applied to the total weight (US tons) of boards sold by Graphic Packaging's JV partner to calculate the respective emissions.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

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 biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)

5,753,287

Methodology

Default emissions factors

Please explain

Biogenic carbon dioxide emissions were calculated for bark, black liquor, and railroad cross ties using the US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013 emission factor set based on the energy generated from the combustion of these sources. Biogenic carbon dioxide emissions were calculated for sludge using a custom factor calculated by assuming 12.4% carbon content per wet ton of sludge using a Graphic Packaging custom HHV.

CO2 emissions from biofuel combustion (other)

Emissions (metric tons CO2)

0

Methodology

Other, please specify

Not relevant

Please explain

Graphic Packaging does not generate emissions from biofuel combustion other than from processing and manufacturing machinery, which is already disclosed.

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

Greenhouse gas emissions from timber are calculated as part of our Scope 3: Purchased Goods and Services emissions.

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)

178,170

Change from last reporting year

This is our first year of measurement

Please explain

Greenhouse gas emissions from timber are calculated as part of our Scope 3: Purchased Goods and Services emissions. Graphic Packaging uses the Quantis tool and spend-based data for our purchased virgin board to quantify emissions from timber.

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

0.000327506

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

2,343,631

Metric denominator

unit total revenue

Metric denominator: Unit total

7,156,000,000

Scope 2 figure used

Market-based

% change from previous year

2.56

Direction of change

Decreased

Reason for change

Intensity of emissions per unit of revenue have decreased by 2.56%. This is in part driven by emissions reduction projects, including investments in new, more efficient equipment (printers, heater, ventilation, UV lamps, air compressor, etc.) and upgrading truck fleets to more energy-efficient models. However, GPI's total Scope 1 and Scope 2 emissions have increased year over year by approximately 6% in part due

to our inclusion of acquired site data in 2021 (but not in prior years), improved data collection processes, our boundary shift to 'operational control' and change in revenues which have increased at a rate of 8% therefore reducing the intensity of emissions per unit of revenue by 2.56%. We anticipate updating our baseline and prior year emissions per GHG protocols in future, as we continue to improve GPI's data collection processes and continue collecting information from our newly acquired facilities.

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	1,469,357	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	111,847	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	24,670	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	2,390	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)
United States of America	1,525,689

Other, please specify Rest of World	82,078

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Mills Division	1,519,709
Converting and Machinery	88,058

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

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

Yes

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

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

Activity

Processing/Manufacturing

Emissions (metric tons CO2e)

1,519,709

Methodology

Default emissions factor

Please explain

Over half of Graphic Packaging's Scope 1 emissions result from activities from mill operations, which are the core of our processing and manufacturing activities. To calculate the respective emissions, the energy activity is multiplied by standard (default) emission factors.

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)
United States of America	605,257	686,863
Other, please specify Rest of World	40,631	49,001

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)

Mills Division	347,078	434,960
Converting and Machinery	298,810	300,904

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	934	Decreased	0.04	The decrease in emissions from 2020 to 2021 due a change in renewable energy consumption was 934 MT CO2e. The total scope 1 and 2 emissions in 2020 were 2,204,781, therefore the emissions value is calculated as: 934/2,204,781 = 0.04%
Other emissions reduction activities	945	Decreased	0.04	The decrease in emissions from 2020 to 2021 due to Graphic Packaging's emission reduction projects (detailed in C4.3b) was 945 MT CO2e. The total scope 1 and 2 emissions in 2020 were 2,204,781, therefore the emissions value is calculated as: 945/2,204,781 = 0.04%
Divestment				

Acquisitions				
Mergers				
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

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?

Market-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

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	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	Yes
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)	HHV (higher heating value)	17,957,679	159,011,431	176,969,110
Consumption of purchased or acquired electricity		5,304	2,143,248	2,148,551
Consumption of purchased or acquired heat		0	2,727	2,727
Consumption of purchased or acquired cooling		0	115	115

Consumption of self-generated non-fuel renewable energy		1,352,195		1,352,195
Total energy consumption		19,315,177	161,157,520	180,472,698

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	No
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

17,957,679

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

17,957,679

Comment

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

27,882

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

27,882

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

7,625,196

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

7,625,196

Comment

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

Heating value

HHV

Total fuel MWh consumed by the organization

151,358,353

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

151,358,353

Comment

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

176,969,110

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

176,969,110

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	1,906,631	1,906,631	1,352,195	1,352,195
Heat	0	0	0	0

Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Supplier confirms that only renewable energy is used in generation, but did not specify the specific energy mix.

Country/area of low-carbon energy consumption

Austria

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

1,891

Country/area of origin (generation) of the low-carbon energy or energy attribute

Austria

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2,021

Comment

Graphic Packaging's location received 100% of its power from renewable energy in 2021. Only renewable energy is used in generation, but the specific energy mix is not specified.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

Sweden

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2,226

Country/area of origin (generation) of the low-carbon energy or energy attribute

Sweden

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2,021

Comment

Graphic Packaging's locations received 50% of its power from renewable energy in 2021. Hydropower is used in generation, but the capacity is not specified.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Low-carbon energy mix, please specify

Hydropower and wind

Country/area of low-carbon energy consumption

Sweden

Tracking instrument used

GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

484

Country/area of origin (generation) of the low-carbon energy or energy attribute

Sweden

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2,021

Comment

Graphic Packaging's location received 100% of its power from renewable energy in 2021. This is supported with a Guarantee of Origin certificate, confirming energy is received from a mix of hydro and wind during 2021.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Supplier confirms that only renewable energy is used in generation (in alignment with the Renewable Standard and certified by the Carbon Trust), but did not specify the specific energy mix.

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

704

Country/area of origin (generation) of the low-carbon energy or energy attribute

United Kingdom of Great Britain and Northern Ireland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2,021

Comment

Graphic Packaging's location received 100% of its power from renewable energy in 2021. Only renewable energy is used in generation, but the specific energy mix is not specified. This is in alignment with the Renewable Standard and certified by the Carbon Trust.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

United States of America

Consumption of electricity (MWh)

4,178,665

Consumption of heat, steam, and cooling (MWh)

0

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

4,178,665

Country/area

Other, please specify

Rest of World

Consumption of electricity (MWh)

396,190

Consumption of heat, steam, and cooling (MWh)

822

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

397,012

C9. Additional metrics

C9.1

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

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

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Limited assurance

Attach the statement

CY20 GPI Assurance Statement.pdf

Page/ section reference

1-2

Relevant standard

ISO14064-3

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

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Limited assurance

Attach the statement

CY20 GPI Assurance Statement.pdf

Page/ section reference

1-2

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Limited assurance

Attach the statement

CY20 GPI Assurance Statement.pdf

Page/ section reference

1-2

Relevant standard

ISO14064-3

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
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Limited assurance

Attach the statement

CY20 GPI Assurance Statement.pdf

Page/section reference

1-2

Relevant standard

ISO14064-3

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?

No, we do not verify any other climate-related information reported in our CDP disclosure

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)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Québec CaT - ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Québec CaT - ETS

% of Scope 1 emissions covered by the ETS

4.1

% of Scope 2 emissions covered by the ETS

0.01

Period start date

January 1, 2021

Period end date

December 31, 2021

Allowances allocated

31,715

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

65,517

Verified Scope 2 emissions in metric tons CO2e

59

Details of ownership

Facilities we own and operate

Comment

Allocated allowances are estimated based on awarded allowances (23,786) in January 2021 that represent ~75% of projected 2021 allowances. Final total awarded allowances will be assigned in September 2022 following submission of the final 2021 emissions report.

C11.1d

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

Our process for complying with the Québec ETS is as follows: We monitor energy use and measure emitted greenhouse gases to determine the number of allowances needed to offset Graphic Packaging emissions. In the case that actual emissions exceed awarded allowances, then Graphic Packaging would need to either use banked allowances or purchase additional allowances. To avoid the need to purchase allowances above the cap, we work to implement energy efficiency measures at the Québec mill. For example, the mill recently implemented minor changes to speed up the paper machine (and dryer pressure) and to improve mill runnability. As a result, we have maintained energy use and GHG emissions below the Quebec ETS limit and have not had to purchase any allowances.

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, but we anticipate doing so in the next two years

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers/clients

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

1

% total procurement spend (direct and indirect)

25

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

Rationale for the coverage of your engagement

We engage with certain suppliers including our wood and resin suppliers representing <1% of the North America supplier population. Our rationale is that these represent critical raw materials purchased and our engagement of these suppliers will have the greatest impact on our procurement sustainability. We also engage a few technology-specific innovators. Programs include upgrading performance of materials and reducing the amount of material required for producing our products. Engagements in innovation include designing coatings and tapes that are made from renewable materials and recyclable materials. We are addressing End-of-Life challenges that petroleum-based resins present. Coatings innovation work focuses on replacing LDPE on Foodservice packaging. The coatings will help meet recycling needs and thus help improve the recovery of foodservice packaging, reducing the amount that would otherwise be sent to landfill for disposal. Innovation efforts to replace resin-based tapes will allow 100% recovery of the package as the tape will be fiber based and can be processed in a recycled paperboard mill.

Impact of engagement, including measures of success

The impact of the engagement will help allow Graphic Packaging to provide sustainable, recyclable packaging solutions that are primarily made from renewable materials and are recyclable and / or compostable. Graphic Packaging measures the success of our engagement with our suppliers through our ability to develop and commercialize new products with improved recyclability attributes that are enabled by new materials or supplier enabled new designs. Success is measured against our Vision 2025 goals. As part of our 2025 Vision, Graphic Packaging has committed to reducing

the use of low-density polyethylene (LDPE) by 40% and to delivering targeted revenue of $400 - $700 million from new product innovation efforts over the period of 2020 – 2025. Graphic Packaging’s threshold for success is based on how it is tracking towards and if it ultimately achieves these goals. As an example of a positive outcome, Graphic Packaging has realized $275 million in net new product sales during 2020-2021 attributed to customer conversion to our new, innovative packaging designs. Impact of climate-related supplier engagement strategy: By providing more sustainable food service packaging options that are more easily recycled than current offerings, Graphic Packaging can position itself as a leader in its sector, particularly in quick service restaurant markets where we are seeing increased demand for sustainable packaging solutions.

Comment

A significant challenge with products like Paper Cups & Food Service Packaging is the resin material that is added to the package for barrier protection. Traditional solutions include petroleum-based resins that may contaminate the paper recycling stream. These solutions generally are not compostable. Graphic Packaging has developed advanced biobased resins that provide barriers and generally are recyclable and / or compostable.

C12.1b

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

Type of engagement & Details of engagement

Education/information sharing

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

% of customers by number

50

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

Please explain the rationale for selecting this group of customers and scope of engagement

Innovative partnerships and projects with customers are a key tenant of Graphic Packaging's Vision 2025 business strategy. We target engaging customers in the consumer-packaged goods market, focusing on the beverage, food, and household products segments where there is a desire to find recyclable packaging solutions and/or to eliminate tertiary packaging to reduce material use. We have access to and target for engagement customers whose operations are high-speed and high-volume manufacturing processes, which gives us the largest opportunity to deliver impact.

Graphic Packaging offers a portfolio of fiber-based beverage multipack solutions, including our newest innovations KeelClip™, Cap-It™, GripClip™, and EnviroClip™. In addition, our established solutions such as our Marksman™ carton wraps, ship flat for efficient distribution efficiency and do not require glue due to their unique locking system design. Our strength packaging solutions, such as ZFlute™ and IntegraFlute™, maintain packaging performance through the supply chain while reducing overall material usage, including eliminating tertiary

packaging materials.
The PaperSeal™ and ProducePack™ food packaging solutions offer paperboard solutions to reduce total fossil-based material use in food packaging by as much as 90% while protecting food from damage and preserving freshness. The scope of our engagement involves providing customers with product literature, customized product education, innovation sessions with customers to explore packaging options, package footprint and circularity analyses, and trialing packaging solutions to enable successful packaging conversion. At this time we are only able to track engagements with our NA customers. Our teams are engaging with all our global customers where there is a need to find climate friendly, recyclable packaging solutions and/or to eliminate tertiary packaging to reduce material use.

Impact of engagement, including measures of success

GPI's strategy is to grow together with both existing and new global customers by offering sustainable, recyclable, high-performance fiber-based packaging solutions. Our growth relies on skilled, talented people ideating new, innovative, and industry leading packaging solutions that meet customer and consumer needs.

This customer engagement is important because it 1) supports our strategy to grow by innovating new, sustainable, high-performing, recyclable packaging solutions, and 2) responds to our customer needs as many of our customers have set sustainability targets related to reducing packaging waste by either increasing the recyclability of their product packaging by replacing fossil-based packaging with paper-based solutions or by reducing the total amount of packaging they use by eliminating tertiary packaging. Both cases help our customers to reduce their value chain greenhouse gas emissions. GPI's customer engagement is driving innovation and emissions reduction in the consumer-packaged goods sector. Ultimately, success is measured through sales of our new product offerings. We measure success through our Vision 2025 ESG goal to deliver $400-$700 million in net new product revenue by 2025. GPI's threshold for success is if it is tracking towards and ultimately achieves these goals. As an example of a positive outcome, GPI has realized $275 million in net new product sales during 2020-2021 attributed to customer conversion to our new, innovative packaging designs.

We measure the number of actions completed: in 2021, a total of 82 sustainability related innovation sessions and trainings were implemented for GPI's customers globally with the aim to encourage customers to make more sustainable packaging choices. While we did supplement in person sessions with virtual design and training opportunities in 2021, impacts of Covid-19 continued to limit customer engagements. We expect the number of customer innovation sessions to grow as the impacts of Covid lessen and as we launch new innovative packaging solutions, including new multipacks for food and beverage categories, new applications for PaperSeal® and our wider food tray range, and produce category introductions including our ProducePack™ Punnet, and Boardio™, which is the newly added product for replacement of plastic tubs and cannisters for food, beverage and healthcare applications.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

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

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

Yes

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

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

Management practice reference number

MP1

Management practice

Knowledge sharing

Description of management practice

Graphic Packaging engages with landowners, loggers, and land managers on an annual basis at training events hosted by Graphic Packaging at the West Monroe and Macon mills. These training events are facilitated by professors and wood procurement managers, who instruct continuing professional educational classes on sustainable forestry management practices. In 2021 we facilitated in-person training sessions in Macon, GA and Farmerville, LA and also sponsored logger training through the SFI State Implementation Committees. Additionally, Graphic Packaging engages regional members of forestry certification bodies. Graphic Packaging has chosen knowledge sharing as the management

practice as it directly empowers our suppliers to make informed and educated decisions with the resources shared by our industry. We expect the sharing of knowledge to create more sustainable wood baskets that increase the resiliency of our supply chain.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Suppliers are encouraged to implement these new practices through personal instruction at Graphic Packaging-hosted informational training sessions at our West Monroe and Macon mills.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Increase carbon sink (mitigation)

Comment

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

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

No

C12.3

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

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers
Yes, we engage indirectly through trade associations

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

No, and we do not plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

Graphic Packaging's VP of Government Affairs provides strategic direction and ensures that the direct and indirect activities regarding climate change policies are consistent with the strategy. The strategy is reviewed formally each year and on an ad hoc basis. Graphic Packaging's President and CEO and other members of the Executive Team participate in policy discussions at Federal and State levels. Environmental and climate change risks and opportunities, along with macroeconomic trends, are incorporated in our long-range plan, as appropriate. The long-range plan is presented to the Board of Directors for its consideration and approval.

C12.3a

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

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

Extended Producer Responsibility (EPR)

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

EPR is a policy / regulatory framework that assigns end of life responsibility to manufacturers or producers for packaging and products that are placed in the market.

Policy, law, or regulation geographic coverage

National

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

Other, please specify

Graphic Packaging is engaged on EPR in North America, Europe and ANZ. The focus of the engagement is the US.

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

Oppose

Description of engagement with policy makers

Graphic Packaging opposes EPR for paper and paperboard packaging that does not factor in the recovery rates of the materials. The recovery rates are approaching 70% and demonstrate that the forest products industry is addressing end of life of their materials by purchasing recycled paper as a raw material used in the making of recycled paper products and packaging. The high recovery rates demonstrate that there is a well-functioning market that is encouraging investment for capacity increases.

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

No exceptions

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

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

Trade association

Other, please specify

American Forest and Paper Association

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

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We have already influenced them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

AF&PA members have long been stewards of our planet's resources. The industry produces recyclable products made from renewable resources, trees, and believes that
sustainable practices today will yield positive results for a better tomorrow. Better Practices, Better Planet 2020 - the AF&PA's sustainability initiative – is a proactive
commitment to the long-term success of our industry, our communities, our environment and the nearly 900,000 men and women who make the paper and wood products
vital to the lives of people around the world. This initiative aligns the objectives of one of the United Nations Sustainable Development Goals (UNSDGs). The six goals
targeted within Better Practices Better Planet focus on increasing paper recovery for recycling, improving energy efficiency, reducing greenhouse gas emissions, promoting sustainable forestry practices, improving workplace safety, and reducing water use. These goals were updated in 2021.

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

Describe the aim of your organization's funding

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

Yes, we have evaluated, and it is aligned

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 mainstream reports

Status

Complete

Attach the document

Graphic Packaging_2021AR.pdf

Page/Section reference

9, 23-24

Content elements

Strategy
Risks & opportunities
Other metrics

Comment

Graphic Packaging's Annual Report on Form 10-K includes disclosures related to climate strategy, climate risks & opportunities, and metrics related to sales from products that can be recycled.

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

2020-gpi-esg-report.pdf

Page/Section reference

95-111 provide the summary of Graphic Packaging's disclosure through SASB, GRI, TCFD as well as the UN SDGs. Additional context is provided throughout the report.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Graphic Packaging's Annual Sustainability Report was written and organized to better reflect the scope of our disclosures and our commitment to a broad set of environmental, social, and governance initiatives. This report has been prepared in accordance with the GRI Standards: Core option, aligns with the Sustainability Accounting Standards Board (SASB) standards, and is informed by the Task Force on Climate-related Financial Disclosures (TCFD). For convenience we have provided alignment to the TCFD framework. Additionally, we have utilized the United Nations Sustainable Development Goals (SDGs) as a guiding framework in the development of our ESG initiatives and mapped disclosures in this report to the SDGs.

C13. Other land management impacts

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

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

Yes

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

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

Management practice reference number

MP1

Overall effect

Positive

Which of the following has been impacted?

Biodiversity

Soil

Water

Description of impacts

We provide continuing education to landowners, loggers, and land managers at our West Monroe, LA and Macon, GA sites. These training events are facilitated by forestry and wildlife professionals, wood procurement managers, and specialized instructors who provide continuing educational classes on sustainable forestry management practices. These trainings support state and local requirements for loggers to maintain

their professional logger status. Graphic Packaging only contracts with loggers that have active professional logger status or that are in active training to obtain their status.

Our training includes education on biodiversity and guidance on protecting soil and water ecosystems including best practices to:
• Use stream side management zones as a buffer to protect water quality and provide a wildlife corridor. The width of these zones and the permitted operations on them are defined by sustainable forest management practices.
• Construct bridges to cross streams or waterways as needed to prevent stream disturbance.
• Leave wildlife corridors in place during final harvest at tracts of a certain size.
• Distribute unusable tree debris as a soil cover to protect against soil erosion, protect water quality, and provide habitat for small ground mammals and birds.

Each state has unique guidance that outlines the state's requirements for best forest management practices. These practices include requirements for reforestation following timber harvest. Training offered by Graphic Packaging provides information on where suppliers can access state best management practices.

Have any response to these impacts been implemented?

Yes

Description of the response(s)

Graphic Packaging will continue to provide continuing education and knowledge to landowners, loggers, and land managers as it directly empowers our suppliers to make informed and educated decisions with the resources shared by our industry. We expect the sharing of knowledge to create more sustainable wood baskets that increase the resiliency of our supply chain.

Graphic Packaging conducts tract inspections on at least 50% of our wood suppliers each year. In 2021 we completed inspections with 131% of targeted suppliers for our Macon mill, and with 100% of targeted suppliers for our West Monroe mill. The inspections address the presence of sensitive ecosystems, labor practices, and use of forest best management practices. Any findings during the inspection are shared with the supplier and the issue must be remediated by the supplier.

C15. Biodiversity

C15.1

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	Our Board of Directors, which includes our President and CEO, guides our purpose, values, and sustainability strategy, including biodiversity matters. In recognition of the importance of sustainability matters to the Company, we believe that a two-tiered level of oversight provides the best structure to integrate consideration of ESG and climate risks/opportunities into our overall business strategy and help us meet the changing demands of all our stakeholders. As set forth in our Corporate Governance Guidelines, our Board is responsible for reviewing, approving, and monitoring business strategies and financial performance and ensuring appropriate oversight is in place. The Board fulfills these responsibilities through a number of practices, including: approval of the annual operating and strategic long-range plans, review of results against such plans and review and approval of significant corporate actions. In addition, the Board is responsible for the oversight of our sustainability and biodiversity strategy, governance standards, goals and performance and has assigned principal oversight of our sustainability policy and practices to the Nominating and Corporate Governance Committee (NCGC). The NCGC of the Board considers current and emerging social and environmental trends, as well as major legislative and regulatory developments and other public policy issues that may impact our business operations or stakeholders. The Committee also reviews the Company's policy and practices for consistency with its ESG and biodiversity commitments, including goals, performance metrics, mitigation plans, and public reporting and makes recommendations to the Board and management. In particular, our approach to managing biodiversity issues is addressed through our sustainable sourcing for wood fiber raw materials and

		wood fiber chain of custody certification. Oversight of governance matters such as enterprise risk management, including biodiversity risk, are assigned to the Audit Committee. In 2021, the NCGC reviewed our approach for managing biodiversity impacts in our wood basket through their review of our 2020 ESG report.

C15.2

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

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Commitment to no conversion of High Conservation Value areas Commitment to secure Free, Prior and Informed Consent (FPIC) of Indigenous Peoples Commitment to no trade of CITES listed species	Other, please specify We are certified to the Sustainable Forestry Initiative, Forest Stewardship Council, and Programme for the Endorsement of Forest Certification

C15.3

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

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	Yes, we assess impacts on biodiversity in our upstream value chain only

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Other, please specify Our wood procurement team sources our wood fiber raw materials following the Sustainable Forestry Initiative's certified sourcing standard and we certify our North America operations to this standard.

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Other, please specify Third-party GIS tools screen for sensitive species, deforestation, illegal harvesting, and reforestation within our woodbasket. We support conservation by partnering with American Forest Foundation and receive reports on biodiversity performance.

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Details on biodiversity indicators Biodiversity strategy	https://www.graphicpkg.com/documents/2021/12/forest-fiber-certification-policy.pdf/, pg. 1 https://cdn.metrio.net/clients/gpi/global-assets/reports/2020-gpi-esg-report.pdf, pg. 52-56

C16. Signoff

C-FI

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

C16.1

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

	Job title	Corresponding job category
Row 1	President and CEO	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms