



Klöckner Pentaplast

TCFD Report 2025

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This report covers our disclosures following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

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Introduction

We provide disclosures for financial and regulatory stakeholders relating to climate risk and opportunity in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Readers can also access our Carbon Disclosure Project (CDP) submissions online¹.

We recognise that climate change presents both physical and transition risks to our business as well as meaningful commercial opportunities.

Physical risks include the potential for operational disruption arising from increasing frequency and severity of extreme weather events. Transition risks include, among others, increased regulatory requirements, carbon-related cost exposure, and shifts in customer and end-market preferences towards lower-carbon and more recyclable products. Understanding, assessing and managing these climate-related risks is an integral component of maintaining operational continuity and supporting long-term value creation.

Climate-related opportunities arise from actions taken to mitigate and adapt to the risks described above, and from broader initiatives we have taken to improve efficiency, strengthening supply chain resilience, and embedding circularity in our products. Through these activities, we continue to create value and reduce exposure, while contributing to a more circular and lower-carbon economy.

This disclosure is structured around the four pillars of the TCFD – Governance, Strategy, Risk Management, and Metrics & Targets. These pillars provide a comprehensive and consistent framework for evaluating and reporting on climate-related risks and opportunities. By aligning with TCFD recommendations, we enable our stakeholders to understand how climate considerations influence our decision-making, long-term planning, and operational resilience.

The TCFD framework reinforces the connection between climate risks, financial performance and strategic resilience. It enables investors, customers, and regulators to understand the robustness of our approach, under a range of climate scenarios. This report outlines: how climate-related risks and opportunities are identified, assessed and prioritised; how they are embedded into our key strategic and operational processes; and how progress is monitored using clearly defined metrics. This provides a consistent and forward-looking view of our preparedness for both the transition to a low-carbon economy and the impacts of a changing physical climate.

1. https://www.kpfilms.com/en/sustainability/reports-and-disclosure/CDP_Corporate_Questionnaire_2025.pdf

Governance

Responsibility for climate-related risks and opportunities

Our Board of Directors (the Board) provides overall oversight of climate-related risks and opportunities as part of our broader risk management framework, and is responsible for ensuring that climate considerations are integrated into our strategic direction and long-term objectives.

Executive management is accountable for the day-to-day identification, assessment and management of climate-related risks and opportunities. This includes monitoring regulatory, operational and market developments, evaluating potential impacts on our business, and implementing appropriate mitigation measures. Executive management provides regular updates to the Board on strategic, operational and emerging climate-related risks, together with the measures being taken to address them. Climate-related risks and opportunities are identified through trend analysis, external stakeholder engagement and monitoring emerging regulatory and market developments. These updates support the Board in fulfilling its oversight role and ensuring that climate-related issues are appropriately considered in governance and strategic processes, and incorporated into our risk framework to ensure they are managed by the appropriate business functions.

Our Board and executive management recognise the material impacts, risks and opportunities associated with climate change, including physical risks, regulatory changes and market-driven transitions. These impacts, risks and opportunities are integrated into our business strategy and investment models. For example, we continue to implement mitigating actions to reduce our operational GHG emissions, diversify our product portfolio, strengthen business continuity plans, conduct Life Cycle Assessments, and encourage partners in our value chain to adopt similar practices.

See page 50 of our 2025 Sustainability Report for more information on our governance structure.

Strategy

Climate-related factors – both physical and transition – present material risks and emerging opportunities for businesses across all sectors. Extreme weather events, regulatory shifts, technological innovation, and changing stakeholder expectations can disrupt operations, supply chains, and long-term value creation, while also creating pathways for resilience, efficiency, and growth. Our Board and executive management build both into our corporate strategy, which is fully integrated with *Investing in Better* (2026–2030).

Following the 2023 climate risk assessment, we undertook an updated assessment in 2025 to ensure our analysis reflects the latest changes and market dynamics, and to improve our understanding of the potential financial impacts. We held a workshop in April 2025 with senior internal stakeholders in attendance. Among others, the aim of the workshop was to identify a longlist of potential climate risks and opportunities for us to present to stakeholders in the survey. These were assessed against short-term (5 years), medium-term (10 years) and long-term (30 years) timeframes. This was achieved by the following steps:

- Reviewing the risks identified in the 2023 climate risk assessment and updating it based on research on the latest regulatory and market trends.
- Using our core sustainability team's knowledge to identify which risks and opportunities have shifted since the last climate risk assessment.

The longlist of potentially material climate-related risks and opportunities was mapped against the TCFD categories and subsequently shared with the workshop attendees for review and validation.

The tables below present the updated climate risk and opportunity longlists identified in the internal workshop. These incorporate insights from the 2023 climate risk assessment and have been revised to reflect recent developments, emerging trends, and evolving business priorities. This year's TCFD disclosure reflects progress since the 2023 assessment, including updated risk and opportunity identification, expanded scenario analysis, and improved integration of climate considerations into strategic planning.

Transition risks and opportunities

Climate transition risks for the plastics industry include stricter regulations on plastic use, technological shifts toward alternatives, market changes driven by circular economy models, and reputational pressures from evolving consumer preferences. These transition risks could influence our strategic decisions on decarbonisation pathways, investment in low-carbon technologies, and alignment with evolving stakeholder expectations.

Strategy continued

2023 Climate Risk & Description	2025 Climate Risk & Description	Time Horizon	Primary Financial Impact (2025)
Alternative materials: a market shift to alternative materials could affect kp's sales and reputation.	Change in customer sentiment for alternative materials. This might cause customers to move away from purchasing kp's products which utilise petroleum-based raw materials in their manufacture. (Market risk)	Medium (~10 years)	Decrease in revenue from petroleum-based products where alternatives comply with regulations.
Legal requirements for recyclability and circularity: fast-evolving legislative requirements pose a risk to kp's licence to operate.	New legislation for kp and its customers concerning requirements on plastic recyclability, circularity and lightweighting. This might cause customers to purchase fewer kp products. This is particularly for those which have low recycled content or are non-recyclable. (Reputation risk)	Short to Medium (~5–10 years)	Decrease in revenue from low-recycled content/ non-recyclable products.
Sustainability commitments: kp may not be able to deliver on its sustainability commitments or address all material sustainability/ climate-related risks, which may result in reputational damage or fines.	Shifted to new categorisation, such as legal requirements for recyclability and circularity.	–	–
Increased costs: Anticipated regulations in Europe and associated technological solutions will likely result in increased supply prices for manufacturers.	Anticipated regulation involving carbon pricing mechanisms (own operations). A carbon price/tax on kp's own operations might increase kp's operational costs (e.g. EU Emissions Trading System). kp's operations currently have a Scope 1 & 2 footprint of approximately 150,000 tCO ₂ e. (Policy risk)	Medium to Long (~10–30 years)	Increase in operational costs from exposure to carbon pricing.
	Anticipated regulation involving carbon pricing mechanisms (upstream suppliers). A carbon price/tax on kp's suppliers might be passed onto kp, impacting kp's operational costs. (Policy risk)	Medium (~10 years)	Increase in supplier costs from exposure to carbon pricing.

Climate transition opportunities arise from innovation, circularity, and low-carbon solutions. These support customer needs and regulatory compliance while unlocking new markets. These opportunities include advancing sustainable packaging solutions, investing in recycling technologies, and leveraging innovation to meet growing demand for low-carbon products and circular economy models.

2023 Climate Opportunity & Description	2025 Climate Opportunity & Description	Time Horizon	Primary Financial Impact (2025)
Governance: improved governance and accountability of climate-related risks and opportunities. Building on existing risk management assessments and strategies adopted by kp and extending them to include climate risks and opportunities.	Shifted to new categorisation, such as legal requirements for recyclability and circularity.	–	–
Life Cycle Assessments (LCAs): Performing LCAs on material products that can be communicated to customers and consumers to sell the climate-related value of kp's products.	Perception of kp's existing products. Products with low-carbon attributes proven by LCAs or product carbon footprints (PCFs) might improve kp's reputation as a low-carbon products manufacturer. (Reputation opportunity)	Short to Medium (~5–10 years)	Increased market share or profitability due to claims of reduced emissions.
Collaboration and partnerships: Opportunities to leverage kp's influence to create task forces with key customers, suppliers, local communities and other stakeholders, exploring climate change mitigation and adaptation strategies that would benefit all the players within a localised system.	Shifted to new categorisation, such as legal requirements for recyclability and circularity.	–	–

Strategy continued

2023 Climate Opportunity & Description	2025 Climate Opportunity & Description	Time Horizon	Primary Financial Impact (2025)
Renewable energy: Investing in and transitioning to renewable energy, reducing the dependency on grid energy and mitigating risks associated with volatility in grid energy prices.	Continued investment in renewable energy. This can reduce dependency on the power grid (e.g. on-site solar photovoltaic (PV)), mitigate price volatility (e.g. power purchase agreements) and avoid anticipated carbon pricing mechanisms. (Policy opportunity)	Short (~5 years)	Return on investment in renewable energy technology.
Technology: Investment in technologies such as ‘super clean technology’, new equipment/retrofitting equipment and designing for chemical recycling to future-proof the business.	Continued investment in innovative energy-efficient technologies in the manufacturing process. This might reduce dependency on fossil fuels and avoid anticipated carbon pricing mechanisms. (Technology opportunity)	Medium (~10 years)	ROI on energy-efficiency and low-carbon technology.
	Development and expansion into new low-carbon products and services. This might open kp up to new market opportunities previously unavailable. (Market opportunity)	Long (~30 years)	Increase in revenue from new low-carbon products and services.
	Development and expansion into recyclable and circular products and services. This might open kp up to new market opportunities previously unavailable. (Market opportunity)	Medium to Long (~10–30 years)	Increase in revenue from new recyclable/circular products and services.

Based on the longlist of risks and opportunities, an internal workshop was held using DNV’s knowledge of the TCFD framework, our own documentation and enterprise risk management thresholds, and feedback from our team. The workshop was used to prioritise the potentially material climate risks and opportunities from the longlist of topics. These materiality scorings were aligned with our enterprise risk management thresholds and incorporated subject matter expert feedback. Subsequent selection of two risks and one opportunity were based on the materiality scores, breadth of risks and opportunities considered, and TCFD alignment. The risks and opportunities were used to conduct scenario analysis in line with the TCFD recommendations to assess the resilience of our strategy under different climate scenarios.

The three scenarios have allowed us to develop further understanding of how climate-related physical and transition risks and opportunities may impact our operations, strategies, and financial performance over three time horizons. This approach supports our long-term planning, enhances risk management, and furthers our position as a leader in the transition to a low-carbon economy. We selected the two most extreme physical risk scenarios because they best illustrate the maximum range of potential climate risks and variability in outcomes over the short to medium term, helping to prioritise where site-level assessment should be undertaken based on financial impacts and high physical risk.

Given the high reliance on necessary assumptions with significant uncertainty, we have not disclosed detailed quantitative outputs. Examples of driving assumptions include carbon pricing, technology adoption, and policy timing, which are well-recognised to carry significant uncertainty over different time horizons and scenarios.

As per TCFD recommendations, the risks and opportunities were evaluated based on the following climate-related scenarios.

Strategy continued

Climate scenarios for scenario analysis

	Deregulation	Current Policies	Delayed Transition	Net Zero
Description	Continued high greenhouse gas emissions with no significant changes to the plastics sector, leading to approximately 4°C warming.	Continued high greenhouse gas emissions leading to approximately 3°C warming by 2100, leading to gradual transformation of the plastics sector.	Aggressive but delayed global actions to limit warming to under 2°C, leading to a slower transformation of the plastics sector, when compared to Net Zero 2050.	Aggressive and immediate global actions to limit warming to under 1.5°C, leading to significant transformation of the plastics sector.
Transition risk scenario analysis	N/A	REMIND-MAGPIE 3.3–4.8: Current Policies	REMIND-MAGPIE 3.3–4.8: Delayed Transition	REMIND-MAGPIE 3.3–4.8: Net Zero 2050
Physical risk scenario analysis	SSP5–8.5	N/A	N/A	SSP1–2.6

As mentioned above, the three most material climate risks and opportunities were selected for scenario analysis presented in the table below.

Risks

Description	Context
Anticipated regulation involving carbon pricing mechanisms (upstream suppliers). A carbon price/tax on our suppliers might be passed onto us, impacting our operational costs.	Exposure is concentrated in high-volume raw materials (PVC, PET, PETG, RPET), with Europe and the Americas most vulnerable due to higher projected carbon prices and regulatory stringency. Across scenarios, cost pressure is limited under Current Policies, increases under Delayed Transition, and is highest under Net Zero, reflecting stronger and earlier carbon pricing and policy tightening. Mitigation capacity is stronger where low-carbon and circular raw material alternatives are available.
Change in customer sentiment for alternative materials. This might cause customers to move away from purchasing our products which utilise petroleum-based raw materials in their manufacture.	This risk is driven by rising carbon prices and perceived associated regulatory expansion. The risk is amplified in regions that adopt carbon pricing early – particularly in Europe – and in high-margin product categories. While most transition risk for petroleum will materialise downstream, we face exposure if sentiment shifts prematurely, before viable alternatives are fully scaled. Across scenarios, sentiment-driven demand risk is weakest under Current Policies, becomes more pronounced under Delayed Transition, and is strongest under Net Zero, where policy momentum and stakeholder expectations accelerate substitution pressures.

Opportunities

Description	Context
Products with low-carbon attributes proven by LCA or PCF might improve our reputation as a low-carbon products manufacturer.	kp can capture growing preference for low carbon, recyclable packaging if positioned strongly against peers on life cycle carbon intensity and recyclability, with upside concentrated in higher-margin product segments. Across scenarios, the opportunity is modest under Current Policies, grows under Delayed Transition, and is greatest under Net Zero as customer requirements, regulatory signals, and willingness to pay a premium for demonstrably lower-carbon solutions is strengthened.

Heatmap

	Year	Current Policies (€)	Delayed Transition (€)	Net Zero (€)
Anticipated regulation involving carbon pricing mechanisms (upstream suppliers). A carbon price/tax on kp's suppliers might be passed onto kp, impacting kp's operational costs.	2035	-X	-X	-X
	2050	-X	-X	-X
Change in customer sentiment for alternative materials. This might cause customers to move away from purchasing kp's products which utilise petroleum-based raw materials in their manufacture.	2035	-X	-X	-X
	2050	-X	-X	-X
Products with low-carbon attributes proven by LCA or PCF might improve kp's reputation as a low-carbon products manufacturer.	2035	X	X	X
	2050	X	X	X

Physical risks

Acute and chronic physical risks have the potential to disrupt manufacturing facilities and infrastructure, compromise access to water and raw materials, and weaken supply chain resilience. Direct financial consequences may include rising insurance premiums and higher capital expenditure for climate adaptation. Our insurance policies generally offer cover for physical loss or damage to property when caused by an extreme weather event.

Strategy continued

Many of our assets exist within regions that experience the impact of natural weather variability. As part of the climate risk and opportunity assessment, using scenario analysis we assessed the physical climate change exposure across five key sites.

Sites were selected based on financial materiality, first assessed using an independent consultant's proprietary software to identify acute and chronic hazards, then reviewed against our existing mitigation actions to determine residual risk. Physical risks were evaluated differently from transition risks because they are highly location-specific and operational in nature, requiring site-level analysis of vulnerability and local conditions.

Across the five sites, there was no climate hazard that was deemed as having a high mitigated risk. However, across the sites, several medium-level risks were identified. We will continue to closely engage with the sites to implement resilience measures to mitigate the risks that these hazards pose.

We also reviewed the previous physical climate risk assessments from the 2023 assessment for any changes or increases, across 11 sites. This was found to be broadly consistent when adaptation strategies were taken into consideration, and therefore no additional changes to climate risk strategy are required.

Film Manufacturing Site	Risks Posed After Mitigation
Montabaur, Germany	• No hazard poses a medium or high mitigated risk level.
Rural Retreat, USA	• Wildfires pose a medium mitigated risk level.
Gordonsville, USA	• Wildfires and storms pose a medium mitigated risk level.
Pravia, Spain	• Wildfires and storms pose a medium mitigated risk level.
Pontivy, France	• Storms pose a medium mitigated risk level.

Risk management

Our approach endeavours to anticipate threats to delivering our key activities. We are committed to maturing our capacity and capability, to manage risk and uncertainty to ensure long-term financial resilience.

Our risk management process is based on international best practice. Our robust Enterprise Risk Process includes a yearly assessment, resulting in appropriate mitigation actions in line with risk tolerances. Each site systematically manages its environmental management, energy management and quality processes to ensure compliance with regulations and our policies.

Material climate impacts are discussed within the sustainability team, with key risks and opportunities being promptly communicated to key decision-makers and executive management, thus providing an overview of our principal climate-related risks and including details of new and emerging climate-related risks.

Centralised and integrated policies, procedures and guidance ensure effective risk management and mitigation across our two divisions and at each of our sites, and are under continuous review and updates. With independent experts, we conducted an extensive climate risk assessment, building on and including the climate scenario analysis on physical risks to our operating sites, and with the use of stakeholder surveys and interviews. Following this, a workshop was held with internal stakeholders, including members of executive management and the core sustainability team, to validate the findings. This work informed a roadmap to address our short-, medium- and long-term climate-related risks and opportunities. We have identified a series of actions that arose as a result of our assessments:

Risk / Opportunity	Next Steps
Carbon Pricing (Risk)	• Consider purchasing increased volumes of recycled materials such as recycled PET (rPET) which have lower production emissions. • Work with suppliers with renewable energy strategies and low-carbon manufacturing processes to reduce exposure to upstream emissions. • Track Scope 3 emissions and monitor developments of carbon pricing mechanisms in relevant geographies, including carbon-border adjustment mechanisms.
Market Sentiment (Risk)	• Prioritise low-carbon alternatives for high-risk products, especially pharmaceuticals, to reduce exposure to sentiment-driven loss. • Broaden material offerings across product lines to reduce reliance on petroleum-based inputs and improve resilience to sentiment shifts. • Strengthen customer engagement through transparency and certification to retain demand during periods of reputational pressure.
Reputation (Opportunity)	• Assess the potential to increase recycled content as a buffer against virgin material price volatility and supply chain disruptions. • Continue to assess how recyclability and compliance-ready design could unlock access to new markets and meet evolving customer expectations.

Metrics and targets

We are committed to product innovations and reductions of operational (Scope 1 and 2) and supply chain (Scope 3) GHG emissions.

We are constantly adapting our portfolio to offer more fully recyclable products and to use as much recycled content as possible. Our overall recyclability is increasing; we now have recyclable alternatives for much of our overall product portfolio. See page 20 of our 2025 Sustainability Report for more information.

We are also on a mission to recover used packaging and turn it back into more of the same. Our Tray2Tray® programme is leading the way to create plastic trays that can come back time and again as safe, protective, fully recyclable food packaging trays, in a fully closed loop. An increasing amount of our recycled material inputs was generated from this circular system. See page 23 of our 2025 Sustainability Report for performance data charts.

We have science-based targets for all emission scopes (approved by the SBTi in 2021). These targets were aligned with the well-below 2°C trajectory. However, the SBTi has since strengthened its criteria to require near-term targets consistent with a 1.5°C pathway and net-zero commitments by 2050. To maintain credibility and alignment with evolving best practice, kp must update its targets this year to reflect these changes. This includes revising Scope 1 and 2 targets to meet the latest near-term ambition thresholds and ensuring Scope 3 targets cover the required percentage of emissions. Updating the target will reinforce kp's leadership position, support compliance with ESG-linked financing expectations, and demonstrate resilience under tightening regulatory and market conditions.

Scope	Category	2022 tCO ₂ e	2023 tCO ₂ e	2024 tCO ₂ e	2025 tCO ₂ e
1	Sub-total	20,475	17,571	15,339	18,655
2	Sub-total (market-based)	145,558	136,726	123,741	119,800
	Sub-total (location-based)	180,442	168,442	173,681	147,926
1 and 2	Total Scopes 1 and 2 (market-based)	166,034	154,297	139,081	138,455
	Total Scopes 1 and 2 (location-based)	200,917	186,013	189,020	166,582
3	Sub-total (market-based)	1,992,464	1,690,057	1,681,979	1,607,748
	Sub-total (location-based)	2,008,155	1,705,390	1,696,233	1,592,516
1, 2 and 3	Total (market-based)	2,158,498	1,844,354	1,821,060	1,774,329
	Total (location-based)	2,209,073	1,891,403	1,885,253	1,730,971

We monitor and report Scope 1, 2 and 3 GHG emissions in line with the Greenhouse Gas Protocol and ISO 14064. See page 34 of our 2025 Sustainability Report and below for the breakdown of our emissions. Our supplier engagement programme reduces Scope 3 emissions. Our procurement team engages with strategic suppliers (based on their Scope 3 contribution) to collect primary data. This engagement includes support and training materials.

We have submitted revised GHG emissions reduction targets to the SBTi for validation and are currently awaiting formal approval. See page 35 of our 2025 Sustainability Report for more information on the proposed targets which reflect updated emissions data, methodological refinements, and our evolving decarbonisation pathway. These targets reflect and reinforce our strategy to drive innovation in sustainable packaging, improve energy efficiency, and collaborate with suppliers and customers to lower emissions throughout the value chain. Pending SBTi validation, we are continuing to implement measures towards achieving these revised targets.



Read more about Investing in Better at
www.kpfilms.com/sustainability