

Supplementary information





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ABOUT THIS REPORT

The information in this report covers the international activities of the Smurfit Kappa Group for the calendar year 2021 and also includes some information for early 2022, where mentioned specifically. In this report, we cover the business, environmental and social activities at our own operations, as well as our approach to sourcing and how we support our customers' sustainability targets.

Acquisitions, Divestitures and Closures 2021

During 2021, Smurfit Kappa acquired a paper mill in Italy (Verzuolo), a folding carton operation in Mexico (Cartonbox), and a corrugated plant in Peru (Cartones del Pacifico). We opened a recovered paper depot in Serbia and closed a sack operation in Colombia (Cali Sack) as well as a converting plant in Italy (Emmecco). Two speciality sites were sold in El Salvador (Celpack) and in Ireland (Newspress).

Data on the acquired, opened, sold and closed sites is not included for the 2021 data presented in this report. Our reporting policy states that the acquired and opened sites start to report on their first full year in the Group. The sold and closed sites report until the last reporting period in the Group which for all environmental data is quarterly for paper and board mills and annually for all other operations. The health and safety data for all operations is reported quarterly and the social data annually.

Smurfit Kappa applies a two-year integration policy to the acquired operations. The new operations have to obtain certified management systems required by the Group within this period. The operations start to report about the management systems immediately after obtaining the certificate, issued by a third-party. This has the greatest effect on the certified Chain of Custody related reporting.

Topics, Issues and Targets

Smurfit Kappa fully recognises that sustainable development embraces social and business issues as well as environmental ones. These issues have been selected on the basis of input from various stakeholder groups. Smurfit Kappa collected and controlled data from all its manufacturing operations that were operational at the end of 2021.

No significant changes in the scope, boundary and measurement methods were applied to the report compared with previous years.

Our targets are primarily based on specific emissions, measured against produced tonnes of paper rather than absolute values as the Group is in dynamic growth mode and also subject to opening and closing facilities. Other information is reported in absolute figures, unless otherwise stated.

Reporting Guidelines, Data Collection

Among the various references used for the development and identification of baseline data included in this report, in our reporting the leading standard is the GRI Standards (comprehensive option) issued by the Global Reporting Initiative (GRI).

GRI is an international independent organisation that helps businesses, governments and other organisations understand and communicate the impact of business on critical sustainability issues such as climate change, human rights, corruption and many others.

In May 2020, Smurfit Kappa announced its support for the recommendations by the Task Force on Climate-related Financial Disclosures (TCFD). Following on from that, this is the Group's second year to report in line with those recommendations and we expect this to develop and evolve over time (see page 115). The TCFD was established by the Financial Stability Board to develop recommendations in relation to climate-related disclosures that would inform investment and other financial decisions. The recommendations set out an important framework for understanding and analysing climate-related risks.

The Sustainability Accounting Standards Board (SASB) is an independent non-profit organisation that sets standards to guide the disclosure of financially material sustainability information by companies to their investors. The Group's response to the relevant SASB criteria can be found in this report (see page 116).

Every effort has been made to provide data that is as accurate as possible. Data relating to environmental factors is gathered through a Group-wide IT-based reporting system implemented in all Smurfit Kappa operations.

This tool is integrated into the Group's intranet, enabling sites to report their environmental data online according to GRI guidelines into a central database. We make continuous efforts to increase our data quality. This includes improving the user-friendliness of our data collection and developing mill individual reporting protocols. Our protocols and guidelines exceed the scope of the GRI guidelines and are part of the external assurance scope. For the most part, data is based on measured or metered quantities, or on best estimates based on industry knowledge and established calculation factors.

Our Greenhouse Gas emission reporting is based on CO₂ emissions which is the only material GHG emission for Smurfit Kappa. CO₂ emission calculations have been based on established fuel consumption and specific CO₂ emission factors. Definitions and calculations for the performance indicators can be found in the glossary on pages 120-124.

Ongoing initiatives continue to further standardise the data gathering system to improve data quality and consistency in the use of Group definitions and scope requirements of our key indicators.

We appointed an external assurance provider, KPMG, to provide limited assurance on the data and the text of the report. KPMG's assurance report can be found on page 125.

GRI INDEX

GRI Standard Number	Disclosure Number	Disclosure Title and Description	Source/Comment	Page(s)
Category: General Disclosures				
GRI 102: General Standard Disclosures				
Organisational Profile				
GRI 102	GRI 102:1	Name of the organisation	SDR	Cover
GRI 102	GRI 102:2	Activities, brands, products, and services	SDR	4-5
GRI 102	GRI 102:3	Location of headquarters	SDR	back cover
GRI 102	GRI 102:4	Location of operations	SDR/AR	5 / 4-5
GRI 102	GRI 102:5	Ownership and legal form	AR	78-117
GRI 102	GRI 102:6	Markets served	SDR/Website	5
GRI 102	GRI 102:7	Scale of the organisation	SDR/AR	5 / 1, 4-5
GRI 102	GRI 102:8	Information on employees and other workers	SDR/AR	56-77, 102, 108/ 64-75
GRI 102	GRI 102:9	Supply chain	SDR	20-21, 80, 87-89, 103
GRI 102	GRI 102:10	Significant changes to the organisation and its supply chain	SDR	108
GRI 102	GRI 102:11	Precautionary Principle or approach	SDR	36
GRI 102	GRI 102:12	External initiatives	SDR	1, 79-87
GRI 102	GRI 102:13	Membership of associations	SDR	1, 86-87
Strategy				
GRI 102	GRI 102:14	Statement from senior decision-maker	SDR	12-16
GRI 102	GRI 102:15	Key impacts, risks, and opportunities	SDR	1, 12-15, 19, 26-27, 30-89
Ethics and Integrity				
GRI 102	GRI 102:16	Values, principles, standards, and norms of behaviour	SDR/AR	86-87 / 82-87
GRI 102	GRI 102:17	Mechanisms for advice and concerns about ethics	SDR/Website: Whistleblower policy/ AR	62, 86-87/ 75
Governance				
GRI 102	GRI 102:18	Governance structure	AR	78-117
GRI 102	GRI 102:19	Delegating authority	SDR	86-87
GRI 102	GRI 102:20	Executive-level responsibility for economic, environmental, and social topics	SDR	86-87
GRI 102	GRI 102:21	Consulting stakeholders on economic, environmental, and social topics	SDR/AR	24-25 / 44-47
GRI 102	GRI 102:22	Composition of the highest governance body and its committees	AR	78-117
GRI 102	GRI 102:23	Chair of the highest governance body	AR	78-81
GRI 102	GRI 102:24	Nominating and selecting the highest governance body	AR	78-117
GRI 102	GRI 102:25	Conflicts of interest	AR	82-83
GRI 102	GRI 102:26	Role of highest governance body in setting purpose, values, and strategy	AR	78-117
GRI 102	GRI 102:27	Collective knowledge of highest governance body	AR	54, 56-57, 82-83, 113-114
GRI 102	GRI 102:28	Evaluating the highest governance body's performance	AR	83-86
GRI 102	GRI 102:29	Identifying and managing economic, environmental, and social impacts	SDR	26-27, 86-87
GRI 102	GRI 102:30	Effectiveness of risk management processes	AR	34-38
GRI 102	GRI 102:31	Review of economic, environmental, and social topics	SDR	86-87 – The Sustainability Committee of the Board met six times in 2021
GRI 102	GRI 102:32	Highest governance body's role in sustainability reporting	SDR/AR/Website	86-87/ 82-83, 113-114
GRI 102	GRI 102:33	Communicating critical concerns	SDR/AR	86/82-87
GRI 102	GRI 102:34	Nature and total number of critical concerns	SDR	15, 62, 86
GRI 102	GRI 102:35	Remuneration policies	AR	92-95
GRI 102	GRI 102:36	Process for determining remuneration	AR	92-95
GRI 102	GRI 102:37	Stakeholders' involvement in remuneration	AR	92

GRI INDEX CONTINUED

GRI Standard Number	Disclosure Number	Disclosure Title and Description	Source/Comment	Page(s)
GRI 102	GRI 102:38	Annual total compensation ratio	AR	Limited due to confidentiality Executive Directors' remuneration report in AR 94-109
GRI 102	GRI 102:39	Percentage increase in annual total compensation ratio	AR	104-106
Stakeholder Engagement				
GRI 102	GRI 102:40	List of stakeholder groups	SDR/AR	24-25/ 44-45
GRI 102	GRI 102:41	Collective bargaining agreements	SDR	62
GRI 102	GRI 102:42	Identifying and selecting stakeholders	SDR/AR	24-25 / 44-45
GRI 102	GRI 102:43	Approach to stakeholder engagement	SDR/AR	24-25 / 44-45
GRI 102	GRI 102:44	Key topics and concerns raised	SDR	27, 31-35, 57-61, 79-83
Reporting Practices				
GRI 102	GRI 102:45	Entities included in the consolidated financial statements	AR	188-189
GRI 102	GRI 102:46	Defining report content and topic boundaries	SDR	27, 31-35, 57-61, 79-83, 108
GRI 102	GRI 102:47	List of material topics	SDR	26-27
GRI 102	GRI 102:48	Restatements of information	SDR	108
GRI 102	GRI 102:49	Changes in reporting	SDR	108
GRI 102	GRI 102:50	Reporting period	SDR	The report covers the period 2021
GRI 102	GRI 102:51	Date of most recent report	SDR	Published 30 April 2021
GRI 102	GRI 102:52	Reporting cycle	SDR	Annual, 108
GRI 102	GRI 102:53	Contact point for questions regarding the report	SDR	Back cover
GRI 102	GRI 102:54	Claims of reporting in accordance with the GRI Standards	SDR	86, 108
GRI 102	GRI 102:55	GRI content index	SDR	109-114
GRI 102	GRI 102:56	External assurance	SDR	125-126
GRI 103: Management Approach				
Reporting Practices				
GRI 103	GRI 103:1	Explanation of the material topic and its boundary	SDR	26-27, 31-35, 57-61, 79-83
GRI 103	GRI 103:2	The management approach and its components	SDR/AR	86 / 113
GRI 103	GRI 103:3	Evaluation of the management approach	SDR/AR	86 / 113
Category: Economic				
GRI 201: Economic Performance				
GRI 201	GRI 201:1	Direct economic value generated and distributed	AR	1, 4-5
GRI 201	GRI 201:2	Financial implications and other risks and opportunities due to climate change	SDR/AR	31-35 / 34-38, 54-61
GRI 201	GRI 201:3	Defined benefit plan obligations and other retirement plans	SDR/AR	70, 86-87 / 164-168
GRI 201	GRI 201:4	Financial assistance received from government	SDR	87
GRI 202: Market Presence				
GRI 202	GRI 202:1	Ratios of standard entry-level wage by gender compared with local minimum wage	SDR	70
GRI 202	GRI 202:2	Proportion of senior management hired from the local community	SDR	62, 124
GRI 203: Indirect Economics Impacts				
GRI 203	GRI 203:1	Infrastructure investments and services supported	SDR	74-77
GRI 203	GRI 203:2	Significant indirect economic impacts	AR	34-38
GRI 204: Procurement Practice				
GRI 204	GRI 204:1	Proportion of spending on local suppliers	SDR	88-89, 123

GRI Standard Number	Disclosure Number	Disclosure Title and Description	Source/Comment	Page(s)
GRI 205: Anti-corruption				
GRI 205	GRI 205:1	Operations assessed for risks related to corruption	SDR/AR	62, 86 / 38 – Our Code of Conduct covers anti-corruption
GRI 205	GRI 205:2	Communication and training about anti-corruption policies and procedures	SDR/AR	62, 86 / 53 – Our Code of Conduct covers the items of this criteria
GRI 205	GRI 205:3	Confirmed incidents of corruption and actions taken	SDR	86 – Our Code of Conduct covers the items of this criteria
GRI 206: Anti-competitive Behaviour				
GRI 206	GRI 206:1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	SDR/AR Reporting limited by our materiality assessment	62, 86 / 38 – Our Code of Conduct covers the items of this criteria
GRI 207: Tax				
GRI 207	GRI 207:1	Approach to tax	SDR	87
GRI 207	GRI 207:2	Tax governance, control, and risk management	SDR	87
GRI 207	GRI 207:3	Stakeholder engagement and management of concerns related to tax	Website: smurfitkappa.com/tax-strategy	
GRI 207	GRI 207:4	Country-by-country reporting		Omitted: work in progress
Category: Environmental				
GRI 301: Materials				
GRI 301	GRI 301:1	Materials used by weight or volume	SDR	92-93
GRI 301	GRI 301:2	Recycled input materials used	SDR	41, 43, 92-93
GRI 301	GRI 301:3	Reclaimed products and their packaging materials	SDR	N/A SK produces packaging materials for other industries
GRI 302: Energy				
GRI 302	GRI 302:1	Energy consumption within the organisation	SDR	35, 36-40, 100, 120-121
GRI 302	GRI 302:2	Energy consumption outside of the organisation	SDR	Omitted: n/a
GRI 302	GRI 302:3	Energy intensity	SDR	38, 94-100
GRI 302	GRI 302:4	Reduction of energy consumption	SDR	36-39, 94-100
GRI 302	GRI 302:5	Reductions in energy requirements of products and services	SDR	38-40, 84
GRI 303: Water				
GRI 303	GRI 303:1	Interactions with water as a shared resource	SDR	48-51
GRI 303	GRI 303:2	Management of water discharge-related impacts	SDR	31-35, 48-51
GRI 303	GRI 303:3	Water withdrawal	SDR 303:3 b and c omitted: no sufficient data	48, 92-100, 123
GRI 303	GRI 303:4	Water discharge	SDR 303:3 b and c omitted: no sufficient data	50-51, 92-100, 123
GRI 303	GRI 303:5	Water consumption	SDR	48-51, 92-100
GRI 304: Biodiversity				
GRI 304	GRI 304:1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	SDR/Website	46-47, 104-105
GRI 304	GRI 304:2	Significant impacts of activities, products, and services on biodiversity	SDR	46-47
GRI 304	GRI 304:3	Habitats protected or restored	SDR/Website	46-47, 104-105
GRI 304	GRI 304:4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	SDR/Website	46-47, 104-105

GRI INDEX CONTINUED

GRI Standard Number	Disclosure Number	Disclosure Title and Description	Source/Comment	Page(s)
GRI 305: Emissions				
GRI 305	GRI 305:1	Direct (Scope 1) GHG emissions	SDR Smurfit Kappa reports based on CO ₂ emissions only. Other CO ₂ equivalent emissions are not considered material	38-39, 92-97, 108, 120-121
GRI 305	GRI 305:2	Energy indirect (Scope 2) GHG emissions	SDR Smurfit Kappa reports based on CO ₂ emissions only. Other CO ₂ equivalent emissions are not considered material	94-100, 108, 120-121
GRI 305	GRI 305:3	Other indirect (Scope 3) GHG emissions	SDR	40-42
GRI 305	GRI 305:4	GHG emissions intensity	SDR Smurfit Kappa reports based on CO ₂ emissions only. Other CO ₂ equivalent emissions are not considered material	2, 6-7, 19, 25, 31, 35, 39
GRI 305	GRI 305:5	Reduction of GHG emissions	SDR Smurfit Kappa reports based on CO ₂ emissions only. Other CO ₂ equivalent emissions are not considered material	2, 6-7, 19, 25, 31, 35-40, 120-121
GRI 305	GRI 305:6	Emissions of ozone-depleting substances (ODS)	SDR Due to their specific relevance for our industry, we report SO _x and NO _x as individual emissions	SO _x , NO _x , 94-97
GRI 305	GRI 305:7	Nitrogen oxides (NO _x), sulphur oxides (SO _x), and other significant air emissions	SDR	94-97, 121
GRI 306: Waste				
GRI 306	GRI 306:1	Waste generation and significant waste-related impacts	SDR	52, 54-55, 92-100
GRI 306	GRI 306:2	Management of significant waste-related impacts	SDR	6-7, 20-23, 31-35, 52-55, 108.
GRI 306	GRI 306:3	Waste generated	SDR	52, 54, 92-100
GRI 306	GRI 306:4	Waste diverted from disposal	SDR	52, 92-100
GRI 306	GRI 306:5	Waste directed to disposal	SDR	52, 92-100
GRI 307: Environmental Compliance				
GRI 307	GRI 307:1	Non-compliance with environmental laws and regulations	SDR	86
GRI 308: Supplier Environmental Assessment				
GRI 308	GRI 308:1	New suppliers that were screened using environmental criteria	SDR	88-89, 103
GRI 308	GRI 308:2	Negative environmental impacts in the supply chain and actions taken	SDR	88-89, 103
Category: Social				
GRI 401: Employment				
GRI 401	GRI 401:1	New employee hires and employee turnover	SDR	102
GRI 401	GRI 401:2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	SDR	70
GRI 401	GRI 401:3	Parental leave	SDR	102

GRI Standard Number	Disclosure Number	Disclosure Title and Description	Source/Comment	Page(s)
GRI 402: Labour/Management Relations				
GRI 402	GRI 402:1	Minimum notice periods regarding operational changes	SDR	62
GRI 403: Occupational Health and Safety				
GRI 403	GRI 403:1	Occupational Health and Safety Management System	SDR	71-73
GRI 403	GRI 403:2	Hazard identification, risk assessment, and incident investigation	SDR	71-73, 102
GRI 403	GRI 403:3	Occupational health services	SDR	71-73
GRI 403	GRI 403:4	Worker participation, consultation, and communication on occupational Health and Safety	SDR	62, 71-73
GRI 403	GRI 403:5	Worker training on occupational Health and Safety	SDR	71-73
GRI 403	GRI 403:6	Promotion of worker health	SDR	70-73
GRI 403	GRI 403:7	Prevention and mitigation of occupational Health and Safety impacts directly linked by business relationships	SDR	71-73
GRI 403	GRI 403:8	Workers covered by an occupational Health and Safety management system	SDR	71-73, 101-102
GRI 403	GRI 403:9	Work-related injuries	SDR	71-73, 102
GRI 403	GRI 403:10	Work-related ill health	SDR	71-73, 102
GRI 404: Training and Education				
GRI 404	GRI 404:1	Average hours of training per year per employee	SDR	102
GRI 404	GRI 404:2	Programmes for upgrading employee skills and transition assistance programmes	SDR	58, 64-65, 68-69
GRI 404	GRI 404:3	Percentage of employees receiving regular performance and career development reviews	Omitted: insufficient data	
GRI 405: Diversity and Equal Opportunity				
GRI 405	GRI 405:1	Diversity of governance bodies and employees	SDR/ AR	62, 65 / 112
GRI 405	GRI 405:2	Ratio of basic salary and remuneration of women to men	Omitted: insufficient data. SK rewards are based on merit.	
GRI 406: Non-discrimination				
GRI 406	GRI 406:1	Incidents of discrimination and corrective actions taken	SDR	62, 67-68, 86
GRI 407: Freedom of Association and Collective Bargaining				
GRI 407	GRI 407:1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	SDR	62, 86-89
GRI 408: Child Labour				
GRI 408	GRI 408:1	Operations and suppliers at significant risk for incidents of child labour	SDR	62, 86, 88-89
GRI 409: Forced or Compulsory Labour				
GRI 409	GRI 409:1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	SDR	62, 88-89
GRI 410: Security Practices				
GRI 410	GRI 410:1	Security personnel trained in human rights policies or procedures	N/A	
GRI 411: Rights of Indigenous Peoples				
GRI 411	GRI 411:1	Incidents of violations involving rights of indigenous peoples	SDR	No incidents were recorded in 2021
GRI 412: Human Rights Assessment				
GRI 412	GRI 412:1	Operations that have been subject to human rights reviews or impact assessments	SDR	62
GRI 412	GRI 412:2	Employee training on human rights policies or procedures		Omitted: previous training in 2014
GRI 412	GRI 412:3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	SDR	62

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GRI Standard Number	Disclosure Number	Disclosure Title and Description	Source/Comment	Page(s)
GRI 413: Local Communities				
GRI 413	GRI 413:1	Operations with local community engagement, impact assessments, and development programmes	SDR	24-25, 56-61, 74-77
GRI 413	GRI 413:2	Operations with significant actual and potential negative impacts on local communities	SDR	24-25, 56-61, 74-77
GRI 414: Supplier Social Assessment				
GRI 414	GRI 414:1	New suppliers that were screened using social criteria	SDR	88-89
GRI 414	GRI 414:2	Negative social impacts in the supply chain and actions taken	SDR	80, 88-89, 103
GRI 415: Public Policy				
GRI 415	GRI 415:1	Political contributions	SDR	86-87
GRI 416: Customer Health and Safety				
GRI 416	GRI 416:1	Assessment of the Health and Safety impacts of product and service categories	SDR	87
GRI 416	GRI 416:2	Incidents of non-compliance concerning the Health and Safety impacts of products and services	SDR	87
GRI 417: Marketing and Labelling				
GRI 417	GRI 417:1	Requirements for product and service information and labelling	SDR	N/A*
GRI 417	GRI 417:2	Incidents of non-compliance concerning product and service information and labelling	SDR	N/A*
GRI 417	GRI 417:3	Incidents of non-compliance concerning marketing communications	SDR	87-89
GRI 418: Customer Privacy				
GRI 418	GRI 418:1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		No substantiated complaints identified
GRI 419: Socioeconomic Compliance				
GRI 419	GRI 419:1	Non-compliance with laws and regulations in the social and economic area	SDR	87-88

Notes

* Our products are business to business and in general no such information is required.

TASK FORCE ON CLIMATE RELATED FINANCIAL DISCLOSURES ('TCFD') INDEX

Area	Recommended Disclosures	Source	Page(s)
Governance			
Disclose the organisation's governance around climate-related risks and opportunities.	a) Describe the Board's oversight of climate-related risks and opportunities.	AR 2021 SDR 2021 CDP Climate Change response 2021	AR: 34-35, 54, 56 SDR 2021: 86-87 CDP: Section C.1 Governance
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	AR 2021 SDR 2021 CDP Climate Change response 2021	AR: 34-35, 56-57 SDR 2021: 86-87 CDP: Section C.1 Governance
Strategy			
Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material.	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	AR 2021 CDP Climate Change response 2021	AR: 57-58, 60-61 CDP: Section C.2 Risk and Opportunities
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	AR 2021 SDR 2021 CDP Climate Change response 2021	AR: 57-58, 60-61 SDR 2021: 32-42 CDP: Section C.2 Risk and Opportunities and C.3 Business Strategy
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	AR 2021 CDP Climate Change response 2021	AR: 58-59 CDP: Section C.3 Business Strategy
Risk Management			
Disclose how the organisation identifies, assesses, and manages climate-related risks.	a) Describe the organisation's processes for identifying and assessing climate-related risks.	AR 2021 CDP Climate Change response 2021	AR: 34-35, 59 CDP: Section C.2 Risk and Opportunities
	b) Describe the organisation's processes for managing climate-related risks.	AR 2021 SDR 2021 CDP Climate Change response 2021	AR: 34-35, 59 SDR 2021: 32-42 CDP: Section C.2 Risk and Opportunities
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	AR 2021	AR: 59
Metrics and Targets			
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	AR 2021 SDR 2021 CDP Climate Change response 2021	AR: 33, 58-59, 62-63 SDR 2021: 34-42, 92-100 CDP: Section C.4 Targets and Performance and Section C.6 Emissions Data
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	AR 2021 SDR 2021 CDP Climate Change response 2021	AR: 33, 58-59, 62-63 SDR 2021: 36-42, 92-100 CDP: Section C.4 Targets and Performance and Section C.6 Emissions Data
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	AR 2021 SDR 2021 CDP Climate Change response 2021	AR: 33, 58-59, 62-63 SDR 2021: 34-42 CDP: Section C.4 Targets and Performance

AR – Annual Report

SDR – Sustainable Development Report

CDP – Carbon Disclosure Project

SASB INDEX

Code	Accounting Metric	Source	Page(s)
Topic: Greenhouse Gas Emissions			
RR-PP-110a.1	Gross global Scope 1 emissions	SDR	39, 92-100
RR-PP-110a.	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	SDR	36-42
Topic: Air Quality			
RR-PP-120a.1	Air emissions of the following pollutants: 1 (NO _x (excluding N ₂ O); 2 SO _x ; 3 Volatile organic compounds (VOCs); and 4 Particulate matter (PM), and (5) hazardous air 1. pollutants (HAPs)	SDR NO _x , SO _x , and PM (dust) are part of the HAPs. Other relevant HAPs and relevant VOCs are being reported to the local authorities depending on the local requirements stipulated in the permits	92-100
Topic: Energy Management			
RR-PP-130a.1	1 Total energy consumed; 2 Percentage grid electricity; 3 Percentage from biomass; and 4 Percentage from other renewable energy	SDR	92-100
Topic: Water Management			
RR-PP-140a.1	1 Total water withdrawn; and 2 Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	SDR	48-51
RR-PP-140a.2	Description of water management risks and discussion of strategies and practices to mitigate those risks	SDR	48, 50
Topic: Supply Chain Management			
RR-PP-430a.1	Percentage of wood fibre sourced from: 1 Third-party certified forestlands and percentage to each standard; and 2 Meeting other fibre sourcing standards and percentage to each standards	SDR	43, 45, 103
RR-PP-430a.2	Amount of recycled and recovered fibre procured	SDR	43, 45, 103

BUSINESS IN THE COMMUNITY, IRELAND

Continued Delivery for a Better Tomorrow

Smurfit Kappa Group has always employed an 'end-to-end' approach to sustainability and it is clear from their 2021 Report, that managing the business through the COVID-19 pandemic has reinforced the value of this approach.

In the words of Group CEO Tony Smurfit, Smurfit Kappa has not only deepened their "understanding of every social, environmental and economic aspect of our business but also the interdependencies between them."

It is this kind of clarity that sets Smurfit Kappa apart from other companies, and not only within the packaging sector.

Their 'end-to-end' approach means that Smurfit Kappa is involved in all stages of its supply chain – from the collection and purchasing of wastepaper to the growing and purchasing of wood (to supply the raw material needed by their paper mills to produce the full range of packaging paper required for their customer-tailored, innovative designs).

Smurfit Kappa paper is then converted into corrugated containers that they deliver to customers using a combination of rail, water and road-based transportation.

Environmental Progress & Innovation

Smurfit Kappa's environmental priorities are Climate Change, Forest, Water and Waste.

We were delighted to see that in 2021, the company's CO₂ reduction target was validated by the SBTi.

Smurfit Kappa's sustainability targets are ambitious. Aiming to reach *at least* net zero emissions by 2050, they have set a target of a 55% reduction in fossil emission intensity by 2030. They are already making strides as by 2021, they achieved a 41.3% reduction.

Other notable successes in 2021 include a 20% improvement in the energy efficiency of Smurfit Kappa paper mills (since 2005); a 29.2% reduction in waste sent to landfill and a 6.2% reduction in water consumption. The company is aiming for a 60% reduction in Chemical Oxygen Demand intensity by 2030, having achieved a 38.5% reduction by 2021.

The company has also committed to 95% of packaging solutions being sold as Chain of Custody Certified by 2025, having achieved 93.45% in 2021.

We are interested in the continued focus on material efficiency. Paper clippings from operations are returned to paper mills as recovered fibre; organic by-products (e.g., wood bark, dust and black liquor (biogas from biological water treatment) are used as biofuel; some water treatment sludges become soil improvers in road construction; water ash is used in the cement industry.

One of the many USPs of Smurfit Kappa is their capability to reduce the carbon footprint of customers (and their customers), while also helping the value chain to avoid waste packaging.

In their 2021 Report, examples include Smurfit Kappa:

- Designing a 100% renewable, recyclable, biodegradable corrugated fruit box for Roberto's Mangos to replace their plastic crate packaging, simplifying logistics and reducing costs.
- Designing a 100% renewable, recyclable, biodegradable tamper-proof Click-to-Lock Box, to provide a sustainable alternative to the traditional plastic box used for laundry pods, significantly reducing CO₂ emissions during production.
- Having the first packaging solution to receive a Vegan Trademark globally demonstrating that their product is animal cruelty-free.

Another indication of Smurfit Kappa's long experience of integrating sustainability to the core of the business is that the inaugural green bond launched by Smurfit Kappa in September 2021 was "over-subscribed multiple times and secured the company the lowest-ever coupon for a corporate at our credit rating with a strong participation from dark green investors".

This is a significant endorsement of the company's approach to producing circular products, utilising certified sustainable raw materials and implementing circular production processes that are continuously improving (via the setting of targets to do exactly this, as evidenced by their publicly available sustainability reports going back as far as 2007).

Smurfit Kappa's investment in efficient energy generation, efficient energy use and moving to neutral biofuels and other renewable solutions is needed. Steady progress is being made such as the use of 51.8% biofuels in paper mills in 2021, compared with 37.4% in 2005.

We noted Smurfit Kappa's assessment of all CO₂ emission sources to give necessary insight on their Scope 3 emissions. Targets are in the process of being set (with data already being collected and reported for Transport emissions for all European operations).

The commitment of Smurfit Kappa to Biodiversity and Ecosystem Conservation and Sustainable Forest Management is described well on pages 46-47 as a further means to mitigate climate change.

Corporate Governance

Corporate Governance is an area where Smurfit Kappa notably places a significant amount of emphasis.

The Board Sustainability Committee provides the overall guidance for the Group Sustainability Strategy (focusing on People, Planet and an Impactful Business). The Sustainability Strategy is managed by the Group Executive Committee, led by the Group CEO. An Executive Sustainability Committee ensures the Sustainability Strategy is driven throughout the business and reports to the Board Sustainability Committee and the Group Executive Committee. The Sustainability Working Group ensures targets set are met across all material areas and also promotes these targets with customers and suppliers.

Both the Executive Sustainability Committee and the Sustainability Working Group are led by the Group Chief Sustainability Officer, who reports to the CFO.

We noted that during 2021, the Smurfit Kappa Board of Directors invested additional time to develop a greater understanding of the climate risks and opportunities that are presenting. This activity stemmed from an objective "to enhance TCFD disclosure and uphold the highest standards of corporate governance and ethical business conduct."

At Board level, female representation in 2021 is at 33.3%, up from 23% in 2017. Female representation at the Group Executive Committee is at 30.8%, up from 0% in 2017. Female representation in management positions is at 22%.

Stakeholder Engagement & Human Rights

We appreciate the detail provided on the topic of stakeholder engagement (pages 25, 34 & 35) as it forms a key tenet of the success of Smurfit Kappa. Multi-level engagement with customers, investors, employees and communities enables Smurfit Kappa to keep their fingers on the pulse of key issues. Leadership in this area is also demonstrated by the involvement via board positions on bodies such as the Confederation of European Paper Industries (CEPI), the European Corrugated Packaging Association (FEFCO) and the International Corrugated Case Association (ICCA).

BUSINESS IN THE COMMUNITY, IRELAND CONTINUED

What is particularly interesting in the 2021 Report is the inclusion of the section on how Smurfit Kappa went about re-examining the Purpose of the company to determine how it is lived meaningfully, every day, by employees at all levels across all areas of the business.

The Purpose discovery process uncovered many stories of 'purpose in action.' By allocating time to share and discuss what was essential to different people, the collective motivation that gives various day jobs meaning was identified and will continue to act as a driver to sustain the work, culture and behaviour of the company. The Smurfit Kappa Purpose (*We Create, Protect & Care*) also informs strategic business decisions and actions.

Supplier engagement by Smurfit Kappa is also becoming increasingly robust in that suppliers are now required to submit a declaration form for compliance with the Sustainable & Responsible Sourcing Policy, the Supplier Code of Conduct, the Smurfit Kappa Modern Slavery Statement and the Statement of the Controversial Sources of Raw Materials, Goods and Services. Suppliers that have signed this declaration to date represent 63% of the relevant sourcing spend. Suppliers are also audited on human rights, labour practices and environmental impact.

Summary

In this Report, Smurfit Kappa Group demonstrates their leadership in sustainability in a range of ways, not least by further increasing their ambitions and targets in the areas of carbon reduction, employee engagement, gender balance, diversity and inclusion and community impact.

Case studies are used well throughout and in many instances highlight the significant ability of the company to work in partnership and collaborate with other companies and organisations, a skill likely to be drawn on extensively in the years ahead to address the growing need for carbon emissions in the value chain to be reduced further.

The report identifies inequality as a major societal challenge. There is a strong commitment to local communities, further evidenced by the €4.9 million ring-fenced for social investments in 2021. It is important Smurfit Kappa continues to build and adapt its vision when it comes to tackling inequality, further assessing how operations have the potential for negative as well as positive impact on people and communities.

In particular, we encourage Smurfit Kappa to bring together its environmental and social agendas closer together using a Just Transition lens, and incorporating a reflection on how a company of this size and scope can deliver a Just Society.

We were impressed by how Smurfit Kappa's paper mill in Nettingsdorf Austria supported the setting-up of a district heating system in Ansfelden (again by using a partnership approach), heating up to 10,000 households and reducing 20,000 tonnes of CO₂ emissions annually. From a community engagement perspective – with Smurfit Kappa's experience in partnering with energy companies on similar systems around the world, combined with the significant rise in energy costs and the urgent need for renewable energy solutions – projects like these could be prioritised.

Consistent since 2009, the Smurfit Kappa Group Sustainable Development Report has been assured by an independent third-party assurance provider. The 'Comprehensive' option of the GRI Standards has also been applied.

We appreciated the focus on visual presentation throughout this Report. It is possible to read key information at a glance, and how it links to both the business strategy and the UN SDGs.

Tomás Sercovich
CEO

UN GLOBAL COMPACT

Smurfit Kappa became a supporter of the United Nations Global Compact (UNGC), a worldwide corporate citizenship initiative, in 2010.

As a network of more than 12,000 corporate participants and other stakeholders in some 170 countries, it is the largest voluntary corporate responsibility initiative in the world. Supporters of the UNGC promote 10 core principles in the areas of human rights, labour, environment and anti-corruption. These principles are listed in the table below.

As a part of this commitment, Smurfit Kappa will report on the Company's corporate responsibility activities and performance in an annual Communication On Progress (COP), using the annual Sustainable Development Report as the platform for this communication.

The Sustainable Development Report provides a number of examples of ongoing activities, as well as relevant key performance indicators, which illustrate Smurfit Kappa's support for the 10 Global Compact principles in its everyday business. Measurements of performance related to the Global Compact principles are given using indicators provided by the Global Reporting Initiative (GRI), wherever feasible. In particular, GRI performance indicators relating to human rights, labour and anti-corruption principles are presented in the Social Development section, while environmental performance indicators reported in the Environment section. A complete GRI index can be found on pages 109-114 of the Report.

The following table shows how our performance in relation to each UN Global Compact principle can be reported using a number of GRI performance indicators. This is based on guidance documents published by the UN Global Compact.

UNGC Principles	GRI Indicators
Human Rights	
1 Businesses should support and respect the protection of internationally proclaimed human rights; and	403:1,4; 405:1-2; 406:1; 407:1; 408:1; 409:1; 410:1; 411:1; 412:1-3; 414: 1-2; 418:1
2 Businesses should make sure that they are not complicit in human rights abuses.	406:1; 407:1; 408:1; 409:1; 410:1; 411:1; 412:1
Labour	
3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	402:1; 403:1,4
4 Businesses should uphold the elimination of all forms of forced and compulsory labour;	410:1
5 Businesses should uphold the effective abolition of child labour; and	409:1
6 Businesses should uphold the elimination of discrimination in respect of employment and occupation.	203:1; 401:2; 405:2; 407:1; 414:1-2
Environment	
7 Businesses are asked to support a precautionary approach to environmental challenges;	201:2; 305:4-5; 306:5
8 Businesses should undertake initiatives to promote greater environmental responsibility; and	301:1-2; 302:1-5; 303:1-5; 304:1-4; 305:1-7; 306:1-5; 307:1; 308:1-2; 417:1-2
9 Businesses should encourage the development and diffusion of environmentally friendly technologies.	301:2; 302:3-5; 303: 3-5; 305:4-5; 306:5
Anti-corruption	
10 Businesses should work against corruption in all its forms, including extortion and bribery.	205:1-2; 413:2



GLOSSARY

Climate Change, Energy and Air Emissions

Bioeconomy	Smurfit Kappa uses the European Commission definition for bioeconomy as production of renewable biological resources and the conversion of these resources and waste streams into value-added products, such as food, feed, bio-based products and bioenergy.
Bioenergy	Bioenergy is one of the many diverse resources available to help meet our demand for energy. It is classified as a form of renewable energy derived from biomass – organic material – that can be used to produce heat, electricity, transportation fuels and products.
Biofuels	Fuels coming from biomass: wood rejects, bark, black liquor, pitch oil, certain parts of mixed wastes and biogas produced during the anaerobic treatment of water.
Biomass	Biomass is an energy resource derived from plant- and algae-based material that includes crop wastes, forest residues, purpose-grown grasses, woody energy crops, algae, industrial wastes, sorted municipal solid waste, urban wood waste and food waste. Biomass is the only renewable energy source that can offer a viable supplement to petroleum-based liquid transportation fuels – such as gasoline, jet and diesel fuel – in the near to mid term. It can also be used to produce valuable chemicals for manufacturing, as well as power to supply the grid.
Black liquor	Residue from pulping containing organic compounds (such as lignin). This residue is burnt to produce energy and to recover the chemicals.
By-product	Secondary or incidental products deriving from manufacturing process and are not the primary product. A by-product can be marketable.
Carbon dioxide equivalent CO₂-eq	A measure used to compare the emissions from various greenhouse gases based upon their climate change potential (CCP). The CO ₂ -eq carbon dioxide equivalent for other emissions is derived by multiplying the amount of the emission by the associated CCP factor.
Carbon footprint	Carbon released to the atmosphere during the life cycle of a product from cradle to grave.
CDP	CDP (formerly the 'Carbon Disclosure Project') is an organisation based in the United Kingdom which encourages large corporations from the world's major economies to disclose their greenhouse gas emissions and climate change strategies.
CHP	Combined Heat and Power: a combination of a boiler and a gas and/or steam turbine that simultaneously produces electricity and thermal energy (steam) by burning fuels. This system is considered to be the most efficient technology in industries using both steam and electricity. When mills sell part of their produced steam to an external party or have net electricity export (selling more to an external party than purchasing), the consumption of fuel and emissions reported for these mills is adjusted to report only that part used to produce paper. This adjustment is based on a reference heat boiler with an efficiency of 90%, which is also used by CEPI and the European Commission for EU ETS benchmark calculations. Electricity from a CHP is called co-generated electricity while all other internal generation is expressed as self-generated.
CHP (outsourced)	A CHP installation, belonging to an external party, located at or near a Smurfit Kappa site for delivering electricity and steam to the Smurfit Kappa production facility. All fuel and electricity used for the production of paper as well as emissions related to that are included in the figures for the Smurfit Kappa production facility.
Climate change	The United Nations Framework Convention on Climate Change (UNFCCC) defines it as a change of climate that is attributed directly or indirectly to human activity, altering the composition of the global atmosphere.
Co-generated electricity	Electricity generated by a CHP system belonging to Smurfit Kappa or from an outsourced CHP system.
CO₂ biogenic	Carbon dioxide emitted when burning biofuels. This CO ₂ is considered to be carbon neutral as it is removed from the atmosphere and stored in biomass within a short period of time.
CO₂ fossil	Carbon dioxide emitted when burning fossil fuels for the production of paper. The calculation is based on international guidelines from the carbon content of each fuel (WRI/WBCSD GHG protocol).
CO₂ indirect	Fossil carbon dioxide generated externally in the production of electricity purchased from the grid. Source: IEA CO ₂ Emissions from Fuel Combustion, OECD/IEA, Paris, 2016.
Energy efficiency	Energy efficiency is the goal to reduce the amount of energy required to provide products and services.
Energy Union	The Energy Union strategy is focused on boosting energy security, creating a fully integrated internal energy market, improving energy efficiency, decarbonising the economy (not least by using more renewable energy) and supporting research, innovation and competitiveness.
European Union Emissions Trading System – EU ETS	EU ETS, also known as the European Union Emissions Trading Schemes, is the most extensive greenhouse gas emissions trading scheme in the world. It was launched in 2005 to combat global warming and is a major pillar of EU climate policy.
Dust	Particles coming from the combustion of fuels. Dust emissions are measured mainly by the mills. Where dust is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1. Ecoinvent is a life cycle inventory database for energy systems, materials, transports and chemicals.
Fossil fuels	Fuels originating from non-renewable resources (gas, oil, coal, peat and lignite).
GHG emissions	A greenhouse gas (GHG) is any gaseous compound in the atmosphere that is capable of absorbing infrared radiation, that is trapping and holding heat in the atmosphere. By increasing the heat in the atmosphere, greenhouse gases are responsible for the greenhouse effect, which leads to global warming.
GJ	Gigajoule, a unit of energy that generally applies to fuel. 1 gigajoule (GJ) = 1 billion joules = 10 ⁹ joules.

Climate Change, Energy and Air Emissions *continued*

Green electricity certificate	A tradable commodity for electricity units generated using renewable energy sources. Definition of renewable energy source is a variable depending on certificate trading scheme, typically solar, hydro, wind, geothermal or biomass. A certificate of origin covers other energy sources than certificate of renewable origin.
Grid supply	Electricity purchased from a national distribution network.
GWh	Unit of energy, generally applies to electricity. 1 GWh (GigaWatt hour) = 1 million kWh (kiloWatt hour).
Net zero	To achieve net zero emissions, we work towards achieving a state in which the activities at our paper and board mills in our gate-to-gate value chain result in no net impact on the climate from greenhouse gas emissions. The key effort for Smurfit Kappa is to move from fossil-based fuels to carbon neutral fuels and improve its energy efficiency.
NO_x	Mix of nitrogen oxides (NO and NO ₂) calculated as NO ₂ (nitrogen dioxide) coming from combustion of fuels. They can contribute to the acidification of soil and water. NO _x emissions are measured mainly by the mills. Where NO _x is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
Paris Agreement	Agreement within the framework of the United Nations Framework Convention on Climate Change dealing with greenhouse gases, emissions mitigation, adaptation and finance. An agreement on the language of the treaty was negotiated by representatives of 195 countries during COP21 in December 2015.
Self-generated electricity	Electricity generated by an electricity generator without recovery of steam.
Sequestration	Carbon sequestration describes the long-term storage of carbon dioxide or other forms of carbon to either mitigate or defer global warming and avoid dangerous climate change.
SO_x	Mix of sulphur oxides calculated as SO ₂ coming from combustion of fuels. Sulphur dioxide contributes to the acidification of soil and water. SO _x emissions are measured mainly by the mills. Where SO _x is not measured (converting plants), emissions are calculated from fuel consumption using the emission factors listed in the Ecoinvent database version 2.1.
PJ	Petajoule, a unit of energy. 1 petajoule = 1000 terajoules = 10 ¹⁵ joules.
TJ	Terajoule, a unit of energy that generally applies to fuel. 1 terajoule = 1000 gigajoules = 10 ¹² joules.
21st Conference of the Parties – COP 21	The 2015 United Nations Climate Change Conference was held in Paris, France, from 30 November to 12 December 2015. It was the 21st yearly session of the Conference of the Parties to the 1992 United Nations Framework Convention on Climate Change and the 11th session of the Meeting of the Parties to the 1997 Kyoto Protocol.

Organisations

Asociación de Corrugadores del Caribe Centro y Sur América (ACCCSA)	Organisation of corrugated cardboard manufacturers in the Latin American region, whose objective is to exchange experiences, ideas and technological knowledge that will benefit and consolidate the entire Latin American corrugator sector.
CEPI	CEPI, the Confederation of European Paper Industries. It is a non-profit organisation representing the European pulp and paper industry.
EcoVadis	EcoVadis brings Buyers and Suppliers together to efficiently drive CSR and sustainability performance across 150 sectors and 120 countries to reduce risk and drive innovation in their supply chains.
ELCD	European Reference Life Cycle Database. The ELCD has been developed within the 'European Platform on Life Cycle Assessment' by the Joint Research Centre, Institute for Environment and Sustainability (JRC-IES).
ERT	The European Round Table of Industrialists (ERT) is a forum bringing together around 50 Chief Executives and Chairpersons of major multinational companies of European parentage covering a wide range of industrial and technological sectors, working to strengthen competitiveness in Europe. The group works at both national and European levels.
ESG	Environmental, social and corporate governance (ESG) criteria refer to three main factors investors consider with regards to a firm's ethical impact and sustainable practices.
Ethibel	The Ethibel Sustainability Index Excellence Europe lists 200 European companies that display the best performance in terms of corporate social responsibility.
Euronext Vigeo	The Euronext Vigeo indices comprise the highest-ranking listed companies as evaluated in terms of their performance in corporate social responsibility.
FAO	The Food and Agriculture Organisation (FAO) is specialised agency of the United Nations that leads international efforts to defeat hunger. The goal is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives. With over 194 member states, FAO works in over 130 countries worldwide.
FEFCO. The European Federation of Corrugated Board Manufacturers	FEFCO is a non-profit organisation representing the interests of the industry across Europe and addressing a wide range of issues, from technical topics to economical questions. The role of the Federation is to investigate economic, financial, technical and marketing issues of interest to the corrugated packaging industry, to analyse all factors that may influence the industry and to promote and develop its image.
FTSE4Good	The FTSE4Good Index series is designed to measure the performance of companies demonstrating strong environmental, social and governance practices.

GLOSSARY CONTINUED

Organisations continued

Global Reporting Initiative (GRI)	GRI is an independent international organisation for sustainability reporting, since 1997. GRI helps businesses and governments worldwide understand and communicate their impact on critical sustainability issues such as climate change, human rights, governance and social well-being. This enables real action to create social, environmental and economic benefits for everyone. The GRI Sustainability Reporting Standards are developed with true multi-stakeholder contributions and rooted in the public interest.
ICCA	The International Corrugated Case Association (ICCA), formed in 1961, contributes to the well-being of the corrugated packaging industry worldwide by supporting and enhancing the work of association members.
ILO	International Labour Organisation (ILO) is the only tripartite United Nations agency. Since 1919, the ILO brings together governments, employers and workers of 187 member states, to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
Irish Business and Employers Confederation (IBEC)	IBEC is Ireland's largest lobby group representing Irish business both domestically and internationally. Its membership is home-grown, multinational, big and small, spanning every sector of the economy.
OECD	Organisation for Economic Co-operation and Development (OECD), provides a forum in which governments can work together to share experiences and find solutions to common problems, work with governments to understand what drives economic, social and environmental changes, measure productivity and global flows of trade and investment, analyse and compares data to predict future trends, establishes international standards in a wide range of aspects, from agriculture and taxes to the safety of chemical products.
SDGs	The Sustainable Development Goals (SDGs) define global sustainable development priorities and aspirations for 2030 and seek to mobilise global efforts around a common set of goals and targets. The SDGs call for worldwide actions among governments, business and civil society to end poverty and create a life of dignity and opportunity for all, within the boundaries of the planet.
SEDEX	As the largest collaborative platform for sharing ethical supply chain data, SEDEX is an innovative and effective supply chain management solution, helping companies to reduce risk, protect company reputation and improve supply chain practices.
STOXX Global ESG Leaders	The STOXX Global ESG Leaders index offers a representation of the leading global companies in terms of environmental, social and governance criteria, based on ESG indicators provided by Sustainalytics. The index is made of the following three ESG sub-indices: the STOXX Global ESG Environmental Leaders, the STOXX Global ESG Social Leaders and the STOXX Global ESG Governance Leaders indices.
TCFD. Task Force on Climate-Related Financial Disclosures:	The Task Force on Climate-related Financial Disclosures is an industry-led effort, chaired by Michael Bloomberg, with 32 global expert members from the private sector. The Task Force's remit was to develop voluntary climate-related disclosures that could "promote more informed investment, credit, and insurance underwriting decisions." The TCFD recommendations describe information that companies should disclose to help investors, lenders, and insurance underwriters better understand how companies' oversee and manage climate-related risks and opportunities as well as the material risks and opportunities to which companies are exposed.
UN 2030 Agenda	The 2030 Agenda for Sustainable Development was launched by a UN Summit in New York on 25-27 September 2015 and is aimed at ending poverty in all its forms. The UN 2030 Agenda envisages 'a world of universal respect for human rights and human dignity, the rule of law, justice, equality and non-discrimination'. It is grounded in the Universal Declaration on Human Rights and international human rights treaties and emphasises the responsibilities of all states to respect, protect and promote human rights. There is a strong emphasis on the empowerment of women and of vulnerable groups such as children, young people, persons with disabilities, older persons, refugees, internally displaced persons and migrants. The Agenda's 17 Sustainable Development Goals (SDG), and their 169 targets, aim at eradicating poverty in all forms and 'seek to realise the human rights of all and achieve gender equality'.
UN Global Compact's CEO Water Mandate	The CEO Water Mandate is a UN Global Compact initiative that mobilises business leaders on water, sanitation and the Sustainable Development Goals. Endorsers of the CEO Water Mandate commit to continuous progress against six core elements of water stewardship and in so doing understand and manage their own water risks.
WBCSD	The World Business Council for Sustainable Development is a CEO-led organisation of forward-thinking companies that galvanises the global business community to create a sustainable future for business, society and the environment.

Certifications: Forest and Other

Deforestation	Deforestation, clearance or clearing is the removal of a forest or stand of trees where the land is thereafter converted to a non-forest use.
FSC	The Forestry Stewardship Council (FSC) is an independent, non-governmental organisation established to promote the responsible management of the world's forests through independent third-party certification.
FSSC 22000	These standards specify requirements for a food safety management system where an organisation in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption.
ISO 9001	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of quality management.
ISO 14001	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of environmental management.

Certifications: Forest and Other *continued*

ISO 50001 Energy Management Systems	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of energy usage: improvement of efficiency, reduction of consumption and energy security.
Non-controversial origin	Virgin wood or wood fibre which has been verified as having a low probability of including wood from any of the following categories, in line with FSC and PEFC schemes: a) Illegally harvested wood. b) Wood harvested in violation of traditional and civil rights. c) Wood harvested in forests in which high conservation values are threatened by management activities. d) Wood harvested in forests being converted from natural and semi-natural forests to plantations or non-forest use. e) Wood from forests in which genetically modified trees are planted.
OHSAS 18001/ ISO 45001	Scheme certified by independent third party that ensures that the operation certified applies internationally recognised standards and procedures of occupational health and safety management.
PEFC	Programme for the Endorsement of Forest Certification. PEFC is an independent, non-governmental organisation that promotes sustainably managed forests through independent third-party certification.
Reforestation	Reforestation is the natural or intentional restocking of existing forests and woodlands (forestation) that have been depleted.
SFI	SFI Inc. (Sustainable Forest Initiative) is an independent, non-profit organisation dedicated to promoting sustainable forest management. Companies are certified Chain of Custody according to the SFI standard through independent third-party certification.
EU Timber Regulation	The EU Timber Regulation is a regulation aims to reduce illegal logging by ensuring that no illegal timber or timber products can be sold in the EU, applies to wood and wood products being placed for the first time on the EU market.

Water

BOD	Biochemical Oxygen Demand (unit: mg O ₂ /litre) refers to the level of oxygen uptake by microorganisms in a sample of water measured over a period of five days.
COD	Chemical Oxygen Demand (COD) is the most commonly used test to measure the amount of organic compounds in water (unit: mg O ₂ /litre). The result indicates the level of all organic compounds that can be oxidised by a strong oxidising agent.
Process water	Quantity of water containing organic compounds released into the environment (river, sea) after internal water treatment or released to an external treatment plant (municipal water treatment). In all cases, levels of pollutants released are reported as outputs of the Company even in the case of operations that send process water to external treatment.
Total N (nitrogen)	Sum of organic nitrogen, ammonia (NH ₃) and ammonium (NH ₄ ⁺) discharged with the process water.
Total P (phosphorous)	Sum of phosphorous compounds discharged with the process water.
Total suspended solids (TSS)	Refers to the level of small solid particles discharged with the process water. Total suspended solids are those solids retained on a glass fibre filter dried to a constant weight at 103-105°C.
Water impact assessment	Assessing potential risk from water availability and quantity, covering multiple aspects specific to each geographical locations.

Products and Raw Materials

Containerboard	Papers and boards mainly used in the manufacture of corrugated board. They are made from virgin or recycled fibres. Included are kraftliner, testliner, semi-chemical fluting and recycled fluting.
Corrugated board	Structured board made by a corrugator usually formed by gluing one wave-formed liner (called fluting) in the middle of two flat-facing sheets of containerboard (kraftliner or testliner).
EPS	Expanded and Extruded Polystyrene is a rigid, closed cell, thermoplastic foam material, produced from solid beads of polystyrene. Used for thermo insulation purposes.
Fluting	The wave-formed middle layer in corrugated board.
Kraftliner	Paper manufactured mainly from virgin wood fibres.
Testliner	Paper manufactured from recycled fibres.
Inorganic raw materials	Raw material used for manufacturing our products that are not organic, such as fillers, sodium hydroxide, sodium sulphate and calcium oxide.
Other organic raw materials	Raw materials used for manufacturing our products that are organic excluding fibres, starch or plastic raw materials which are reported individually. This category includes oil, lubricant and organic additives, such as colourant or dyes.
Location information	Local: The country where we operate. In sourcing local refers to Smurfit Kappa country of operations. Significant locations of operation: Smurfit Kappa has high volume production – can be a country or region within a country. In sourcing, suppliers' location, we buy material from.
Raggers	In the beginning of the repulping process in which recovered paper is returned into pulp, non-fibrous materials are being removed from the recovered paper. Plastics, strapping and other floating materials are collected from the mass with a rope called a 'ragger'.
Recovered paper	Recovered paper refers to used paper and board separately collected and classified for the purpose of recycling, which is then used as raw material in the manufacture of new paper and paperboard.

GLOSSARY CONTINUED

Products and Raw Materials continued

Recovery	Recovery refers to extracting selected materials for a specific use. In the paper industry this means recovery of fibres in recycled paper or the recovery of energy value in the final stage of the material life cycle.
Recycling	Converting material into new materials and products. In the paper industry this refers to converting recycled fibres back to paper and finding new uses for other raw materials produced alongside recovered paper instead of sending them to landfill.
Reduction	This can either mean finding the most materially efficient ways to use raw materials or replacing a more harmful raw material with a less harmful one and thus reducing its harmful impact.
Renewing	Using renewable raw materials in a sustainable manner and maintaining the natural ability of the material to be renewed.
Reuse	Reuse is the action or practice of using something again, whether for its original purpose (conventional reuse) or to fulfil a different function (creative reuse or repurposing) without changing its form in between.
Virgin fibre	Pulp obtained through a chemical process used to remove lignin from wood. As a result, the fibre can be used to produce paper. The lignin residue and other organic compounds are subsequently collected and used in the formation of black liquor.

Social Citizenship and Health and Safety

Accident	An undesirable or unfortunate happening that occurs unintentionally and usually results in harm, injury, damage or loss.
Contractor	This refers to all contract staff agency workers provided by a third party staff agency, where the invoice is accounted in the P&L as part of 'wages and salaries'.
Lost time accident (LTA)	Refers to a work-related injury incident sustained by a Smurfit Kappa employee while performing their work duties that results in their absence from their scheduled work after the day of the incident.
Lost time accident frequency rate	Refers to the number of lost time accidents per 100,000 hours worked. $LTA \text{ frequency rate} = \frac{\text{number of LTA} \times 100,000}{\text{total number of hours worked}}$.
Lost time accident severity rate	Refers to the total number of days lost per 100,000 hours worked. $LTA \text{ severity rate} = \frac{\text{number of days lost} \times 100,000}{\text{total number of hours worked}}$.
Number of days lost	Refers to the number of days lost arising from any lost time accident. When counting the number of days lost due to an accident, the day of the accident is not counted as a lost day.
Senior Management	Executive Teams or similar positions.
Subcontractor	This refers to workers who provide services to Smurfit Kappa but work for third party organisations (e.g. Cleaners, Security, Catering) – where Smurfit Kappa is not directly responsible for paying their 'wages and salaries'.
Total recordable incident rate	Refers to the total number of recordable injury cases per 100,000 hours worked by Smurfit Kappa employees. $\text{Number of recordable injuries (lost time accident + restricted workday case + medical treatment case)} \times 100,000 / \text{total hours worked by all Smurfit Kappa employees during the period covered}$.
Universal Declaration of Human Rights	The Universal Declaration of Human Rights (UDHR) is a milestone document in the history of human rights. Drafted by representatives with different legal and cultural backgrounds from all regions of the world, the Declaration was proclaimed by the United Nations General Assembly in Paris on 10 December 1948 (General Assembly resolution 217 A) as a common standard of achievements for all peoples and all nations. It sets out, for the first time, fundamental human rights to be universally protected and it has been translated into over 500 languages.
Workforce	The workforce, or labour force, is the labour pool in employment; it is generally used to describe those working for a company or industry.

Wastes

Wastes	Wastes are classified as non-hazardous wastes or hazardous wastes, and are reported separately. Wood wastes and corrugated board shavings are excluded. All amounts of wastes are reported in mass as disposed.
Total non-hazardous wastes	Sum of all non-hazardous waste whatever its destination. Each category of non-hazardous wastes is defined and reported.
Non-hazardous wastes landfill	Part of the non-hazardous wastes that are disposed of in either internal or external landfill in accordance with national legislation.
Non-hazardous wastes recovery	Part of non-hazardous wastes that are reused or recycled or composted or used in agriculture or incinerated with energy recovery. The incineration facility is classified as a recovery operation if the efficiency of the plant complies with the definition laid down in Annex II of the Directive 2008/98/EC on waste.
Non-hazardous wastes other	Part of non-hazardous wastes that do not belong to the two previous categories. This includes wastes incinerated without energy recovery or wastes for which the final disposal is uncertain.
Hazardous waste	A hazardous waste is a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Residues of oils and other hazardous wastes (building wastes containing asbestos, ink residues, etc.).

ASSURANCE REPORT OF THE INDEPENDENT AUDITOR

To: the members of Smurfit Kappa Group plc

Our conclusion

We have reviewed the Sustainable Development Report 2021 (hereafter 'the Report') of Smurfit Kappa Group plc (hereafter 'Smurfit Kappa') based in Dublin, Ireland, for the year ended 31 December 2021. A review is aimed at obtaining a limited level of assurance.

Based on our review nothing has come to our attention that causes us to believe that the Report is not prepared, in all material respects, in accordance with the reporting criteria as described in the 'Reporting criteria' section of our report.

The Report comprises a representation of the policy of Smurfit Kappa with regard to sustainability and the thereto related business operations, events and achievements during the year. Smurfit Kappa is the parent company of a group of entities. The Report incorporates the consolidated information of this group of entities to the extent as specified in 'About this Report' in the Report.

Basis for our conclusion

We have conducted our review in accordance with Dutch law, including Dutch Standard 3810N 'Assurance-opdrachten inzake maatschappelijke verslagen' (Assurance engagements relating to sustainability reports), which is a specified Dutch Standard that is based on the International Standard on Assurance Engagements (ISAE) 3000 'Assurance engagements other than audits or reviews of historical financial information'. This engagement is aimed to obtain limited assurance. Our responsibilities in this regard are further described in the 'Auditor's responsibilities' section of our report.

We are independent of Smurfit Kappa in accordance with the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence). Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics). We believe the assurance we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Reporting Criteria

The Report needs to be read and understood together with the reporting criteria. Smurfit Kappa is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting.

The reporting criteria used for the preparation of the Report are based on the Sustainability Reporting Standards of the Global Reporting Initiative (GRI) and the applied supplemental reporting criteria as disclosed on pages 107-114 of the Report.

Materiality

Based on our professional judgement we determined materiality levels for each relevant part of the Report and for the sustainability information as a whole. When evaluating our materiality levels, we have taken into account quantitative and qualitative considerations as well as the relevance of information for both stakeholders and the company.

Limitations to the scope of our review

The Report includes prospective information such as ambitions, strategy, plans, expectations and estimates. Inherently the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the Report.

References to external sources or websites in the Report are not part of the sustainability information as reviewed by us. Therefore, we do not provide assurance on this information.

Our conclusion is not modified in respect to these matters.

Directors' Responsibilities

Directors of Smurfit Kappa are responsible for the preparation of the Report in accordance with the applicable criteria as described in the 'Reporting criteria' section of our report, including the identification of stakeholders and the definition of material matters. The choices made by the Directors regarding the scope of the Report and the reporting policy are summarized on page 108 of the Sustainable Development Report 2021.

Furthermore, the Directors are responsible for such internal control as it determines is necessary to enable the preparation of the Report is free from material misstatement, whether due to fraud or error.

Auditor's responsibilities

Our responsibility is to plan and perform our review in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusion.

Procedures performed to obtain a limited level of assurance are aimed to determine the plausibility of information and vary in nature and timing, and are less in extent, compared to a reasonable assurance engagement. The level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

We apply the 'Nadere Voorschriften Kwaliteitssystemen' (NVKS, Regulations for Quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have exercised professional judgement and have maintained professional skepticism throughout the review, in accordance with the Dutch Standard 3810N, ethical requirements and independence requirements.

Our review included among others:

- Performing an analysis of the external environment and obtaining an understanding of relevant societal themes and issues, and the characteristics of the company;
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the Report. This includes the evaluation of the results of stakeholder dialogue and the reasonableness of estimates made by the Management Board;
- Obtaining an understanding of the reporting processes for the Report, including obtaining a general understanding of internal control relevant to our review;
- Identifying areas of the Report where a material misstatement, whether due to fraud or error, are most likely to occur, designing and performing assurance procedures responsive to these areas, and obtaining assurance information that is sufficient and appropriate to provide a basis for our conclusion. These procedures included, amongst others:
 - Interviewing management and relevant staff at corporate level responsible for the strategy, policy and results;
 - Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures over, and consolidating the data in the Report;
 - Determining the nature and extent of review procedures for the group components and locations. For this, the nature, extent and risk profile of these components are decisive. Based thereon we selected the components and locations to visit. The visits to Forney, San Antonio, Fort Worth, Mengibar, Saillat, St Leon Rot and Rheinwelle in the United States, Spain, France and Germany are aimed at, on a local level, validating source level data and evaluating the design and implementation of internal controls and validation procedures;
 - Obtaining assurance information that the Report reconciles with underlying records of Smurfit Kappa;
 - Reviewing, on a limited test basis, relevant internal and external documentation; and
 - Performing an analytical review of the data and trends.

ASSURANCE REPORT OF THE INDEPENDENT AUDITOR CONTINUED

- Evaluating the consistency of the sustainability information with the information in the annual report which is not included in the scope of our review;
- Evaluating the presentation, structure and content of the Report; and
- Considering whether the Report as a whole, including the disclosures, reflects the purpose of the reporting criteria used.

Amstelveen, 14 April 2022

KPMG Accountants N.V.
Danielle Landesz Campen RA
Partner