Facts & figures

Within this chapter:

Report profile

Part of the non-financial report

For us, sustainable entrepreneurship and profitable growth go hand in hand. We can ensure our own future competitiveness only by creating value for society. Our ambition is to leverage science and technology so as to achieve progress for mankind. In this report, we present a comprehensive picture of our understanding of sustainable entrepreneurship.

We have a long-standing history of embracing corporate responsibility, which is also reflected in our reporting practices. We have been detailing our efforts to meet our obligations to society since 1993. This initially took the form of environmental reports, evolving in 2003 into the publication of a Corporate Responsibility Report every two years. Since 2016, we have been publishing a report annually. In 2020, we restructured our Sustainability organization, formulated new, strategic sustainability goals and, as a result, renamed our "Corporate Responsibility Report" to "Sustainability Report".

In this report, we describe the new strategic direction of our sustainable entrepreneurship and the focus areas in which we intend to achieve our sustainability goals.

With transparency as a key goal, we work to keep our stakeholders thoroughly informed about our activities and successes, along with the challenges we face.

With this Sustainability Report for 2020, we meet the legal requirements for a combined, separate non-financial report. The Index to the non-financial report provides an overview of the relevant content.

Moreover, the Sustainability Report also documents the progress we have made in implementing the guidelines of the United Nations Global Compact ("Communication on Progress").

Reporting framework

This report covers fiscal 2020 and pertains to our entire Group, including our 221 subsidiaries in 66 countries. Any deviations from this reporting framework are indicated on a case-by-case basis.

Acquisitions and divestments

In 2019, we acquired Versum Materials, Inc. and Intermolecular, Inc., achieving two milestones in the transformation of our Performance Materials business sector.

We are currently consolidating the methods, objectives, results, and measures relating to our non-financial topics identified as being material. We expect to fully complete this by the end of 2021. The sections of the non-financial report in which the mentioned acquisitions play a significant role reflect the current consolidation measures as of December 2020. We do not list completed integration measures in this report.

In 2020, we sold our allergy business Allergopharma to Dermapharm Holding SE. We completed the divestment on March 31, 2020, subject to the approval of the relevant regulatory authorities and other customary closing conditions. Allergopharma is a leading supplier in the field of allergen-specific immunotherapy of type 1 allergies. Allergopharma products are currently available in 18 markets worldwide. The transaction encompassed the Allergopharma business in Europe and Asia, with the broad portfolio of therapeutic and diagnostic products and the production site in Reinbek near Hamburg (Germany).

Data collection and consolidation systems

In general, the 2020 Sustainability Report provides non-financial indicators that represent the entire Group, including the recently acquired companies Intermolecular, Inc. and Versum Materials, Inc. The Allergopharma business is not included as it was divested in 2020. The majority of the figures we publish reflect the status as of December 31, 2020. If we deviate from these parameters in individual cases, we will indicate this accordingly.

Since 2005, we have been using a Group-wide electronic data collection system to collect environmental and occupational health and safety data, which are tracked locally at our individual sites and approved following review. To maximize the quality of this data, we support the sites in improving their collection processes and their corresponding quality assurance measures. Moreover, our Group Environment, Health, Safety, Security, Quality (EQ) function takes measures, such as internal EHS audits, to review both the processes and the data provided.

We collect environmental performance indicators across all our production sites. We also record these indicators for the warehouse, research and office locations that are relevant in terms of their environmental impact. This report's scope of consolidation therefore covers all Group sites that have relevant impacts on the environment.

All employee master data is continually updated in an SAP database. Some employee data is disclosed only for select sites or countries, which is accordingly indicated in the respective text passages.

We use community data management software to track data pertaining to our community outreach activities.

Determining report content

We align the content of our report with the internationally recognized guidelines of the Global Reporting Initiative (GRI) and the principles of completeness and materiality as well as input from our stakeholders. This report has been prepared in accordance with the GRI standards: Comprehensive option. Furthermore, we have taken into consideration the requirements of the capital market for assessing companies' sustainability performance.

We perform a materiality assessment annually to determine the sustainability topics of relevance to our Group. Experts from our business sectors and relevant Group functions review and validate the findings of this analysis. Moreover, as stipulated by section 289c (2) of the German Commercial Code (HGB), we also check the issues for "double materiality". We have derived the content of this CR report from the results of the materiality assessment, which can be found together with the materiality matrix under Materiality analysis.

Our Executive Board has reviewed and approved this report. The content of the non-financial report has also been reviewed by the Supervisory Board in accordance with section 111 (2) of the German Stock Corporation Act (AktG).

External audit

KPMG AG Wirtschaftsprüfungsgesellschaft has audited the annual financial statements and management report of our company for the fiscal year spanning January 1 to December 31, 2020 and has issued an unqualified opinion.

Furthermore, after undergoing a limited assurance audit, our company has received an independent audit certificate for the following chapters of this Sustainability Report as well as for the non-financial report.

The additional contents provided on both the company's websites as well as external web pages that are linked in this report are not part of the information assured by KPMG.

Contact:

We welcome your feedback and are happy to answer any questions.

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The previous Corporate Responsibility Report was published in April 2020. Our next Sustainability Report is scheduled for publication in April 2022.

Indicators

Economics

Net sales, operating result (EBIT) and research and development costs, by business sector[1]

€ million	Healthcare	Life Science	Performance Materials	Group
2019				
Net sales	6,714	6,864	2,574	**16,152**
Operating result (EBIT)	1,149	1,280	307	**2,120**
R&D costs[2]	1,666	276	267	**2,268**
2020				
Net sales	6,639	7,515	3,380	17,534
Operating result (EBIT)	1,804	1,599	240	2,985
R&D costs[2]	1,640	313	274	2,288

1 As a non-operating segment, Corporate and Other is not shown here as a separate item, but rather under Segment Reporting in our 2020 Annual Report.
2 Part of the non-financial report

Business ethics

Part of the non-financial report

Compliance training

	2017[1]	2018[1]	2019[2,3]	2020 Merck Group[4,5]	2020 thereof Merck KGaA[5]
Total number of persons trained on anti-corruption guidelines[6]	**17,044**	**11,404**	**36,109**	**28,827**	**3,880**
Total number of employees trained on anti-corruption guidelines	**13,345**	**11,155**	**35,673**	**28,805**	**3,877**
% of employees trained on anti-corruption	25	22	63	50	45
by employee category					
Number of Role 2+ employees trained on anti-corruption	7,080	9,257	26,890	27,123	3,848
% of Role 2+ employees trained on anti-corruption	27	36	96	90	93
% of employees below Role 2 trained on anti-corruption	23	7	30	6	1
by region (%)					
Europe	18	19	71	51	45
North America	46	36	59	45	not applicable
Asia-Pacific (APAC)	25	16	47	44	not applicable
Latin America	19	12	62	44	not applicable
Middle East and Africa (MEA)	29	18	80	66	not applicable

1 In 2017 and 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma. In the facts and figures, these employees are included under "employees below Role 2".

2 In 2019, the position assessment had not yet been carried out for employees of Versum Materials as well as of Allergopharma. In the figures, employees whose positions have not been assessed have been allocated to "employees below Role 2".

3 As of 2019, we changed our reporting method. Previously, our reports covered the active workforce who has been trained on a specific subject during a particular year. In 2019, we report on the active, trained workforce in the company, regardless of whether their training has already taken place prior to the reporting year. The possibility of trend forecasts for year-to-year comparisons is therefore limited.

4 In 2020, the position assessment had not yet been carried out for employees of Versum Materials. In the figures, employees whose positions have not been assessed have been allocated to "employees below Role 2".

5 In 2020, we began using our own global learning management tool and therefore now have a different reporting structure. As of 2020, we report on the active workforce that is part of the target group and has completed the training in the reporting year. The possibility of trend forecasts for year-to-year comparisons is therefore limited.

6 Includes contractors, external supervised workers (e.g. temps) and contract partners working on-site who were trained on anti-corruption guidelines (2020: 22).

The (employee) target audience for a specific training is related to the risk level associated with employee positions and Role levels. Target audiences therefore may not include all Group employees and also may vary from training to training.

In order to address the special responsibility held by management personnel, and staff with HR responsibility, trainings on anti-corruption guidelines for these employees are in focus. This applies to all employees rated Role 2+.

Our compliance and anti-corruption principles are communicated to all our business partners who undergo a Business Partner Risk Management (BPRM) process.

Internal audits on corruption and Human Rights Charter

	2017	2018	2019	2020 Merck Group	2020 thereof Merck KGaA[1]
Number of audits relating to corruption	50	54	50	52	26
% of audits relating to corruption	65	69	65	66	33
Number of audits relating to the workplace requirements of our Human Rights Charter	45	46	46	42	20

1 Includes global audits which are conducted at the headquarters in Darmstadt and/or the management of the audited function is reporting into KGaA.

In 2020, during 42 of our audits conducted in 14 countries, we reviewed workplace parameters as per our Human Rights Charter. No violations were identified.

Human rights violations[1]

	2017[2]	2018[2]	2019[2]	2020
Number of reported violations of Social and Labor Standards Policy	-	-	-	108
Number of confirmed Violations of Social and Labor Standards Policy	-	-	-	29
thereof number of incidents of discrimination	-	-	-	2

1 In 2020, we modified our reporting structure for human rights violations. Previously, we reported on such violations in the "Reported compliance violations" table. Since 2020, we report on violations of the Social and Labor Standards Policy, which was drafted and rolled out across the entire Group in 2019.

2 Due to our revised reporting practices, we have decided not to report the data from previous years.

Reported compliance violations

	2017	2018	2019	2020 Merck Group	2020 thereof Merck KGaA
Total number of reported compliance violations					
Number of reported compliance incidents	39	72	75	81	8
Number of confirmed cases	14	19	30	41	3
Confirmed cases by category[1]					
Bribery and corruption	3	3	9	6	0
Violation of cartel laws and fair competition rules	0	1	0	0	0
Fraudulent actions against Merck	1	5	8	11	0
Other violations of the Merck Compliance Principles for the relations with business partners	2	1	4	0	0
Other violations of Merck values, internal guidelines or legal requirements	8	9	9	24	3

1 In 2020, we revised our case categories. The figures from previous years have been retroactively adjusted. You can find detailed information on the revised categories in the comment below the table.

Revisions to the table have resulted in the following changes: The category "Violation of the Human Rights Charter" is now being disclosed in the new "Human rights violations" table. As of 2020, the category "Violation of Data Privacy" will be reported separately in the "Data privacy" table.

The category “Violation of the Merck Pharmaceutical Guidelines” was partially merged with “Bribery and corruption”. Going forward, the category “Other violations of values, internal guidelines or legal requirements” will include violations from “Manipulation of business documents” and “Infringements in the areas of finance, accounting and banking”, along with violations that used to be reported in part under “Violation of the Merck Pharmaceutical Guidelines” or “Violation of Confidentiality Guidelines”.

Data Privacy

	2017	2018	2019[1]	2020 Merck Group	2020 thereof Merck KGaA
Reported violations of Data Privacy Guidelines	–[2]	1	1	3	3
Customer Privacy[3]					
Total number of substantiated complaints received from outside parties	0	0	0	0	0
Total number of complaints from regulatory bodies	0	0	1	0	0
Total number of identified leaks, thefts, or losses of customer data	0	1	1	0	0

1 Since 2019, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.
2 No violations reported to the authorities as the reporting obligation was introduced only in 2018 as part of the EU General Data Protection Regulation.
3 These data only reflect incidents classified as significant.

As of 2020, this table presents the number of reported cases of data privacy violations. In the previous years, we reported data privacy violations in one line combined with violations of confidentiality guidelines in the table entitled “Reported Compliance Violations”. For more information, please see the table entitled Reported Compliance Violations.

Legal actions

	2017	2018[1]	2019	2020 Merck Group	2020 thereof Merck KGaA
Total number[2] of legal actions pending or completed (for anti-competitive behavior, violations of anti-trust or violations of monopoly legislation)	**3**	**3**	**3**	**4**	**2**
pending	3	3	3	4	2
completed	0	0	0	0	0

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.
2 As published in the annual reports, the herein listed total number of legal actions refers to the significant legal risks as per the company’s definition. The significance of legal risks is based on potential negative effects on projected financial objectives as well as on the probability of occurrence.

For further information please see our annual reports:

- Annual Report 2017, pages 148-150 and pages 252-253, No. 27
- Annual Report 2018, pages 146-148 and pages 247-251, No. 26
- Annual Report 2019, pages 115-117 and pages 231-233, No. 26
- Annual Report 2020, pages 125-127 and pages 252-256, No. 27

Employees

Part of the non-financial report

Total number of employees

As of Dec. 31	2017	2018	2019	2020 Merck Group	2020 thereof Merck KGaA
Total number of employees	**52,941**	**51,749**	**57,071**	**58,127**	**8,578**
Men	30,083	29,006	32,531	33,204	5,814
Women	22,858	22,743	24,540	24,923	2,764

Number of employees by hierarchical level

As of Dec. 31	2017[1]	2018[1]	2019[2]	2020 Merck Group	2020 thereof Merck KGaA
Total employees	**52,941**	**51,749**	**57,071**	**58,127**	**8,578**
Senior management (Role 6+)	197	193	190	193	68
Middle management (Role 4 & 5)	2,927	3,095	3,352	3,637	773
Low management (Role 3)	8,904	9,019	9,499	10,286	2,024
Other employees (below Role 3)	40,913	39,442	44,030	44,011	5,713
% of women (total)	**43**	**44**	**43**	**43**	**32**
thereof in senior management (Role 6+)	30	36	39	42	15
thereof in middle management (Role 4 & 5)	917	1,025	1,146	1,284	228
thereof in low management (Role 3)	3,714	3,795	4,029	4,352	703
thereof other employees (below Role 3)	18,197	17,888	19,326	19,245	1,818
% of men (total)	**57**	**56**	**57**	**57**	**68**
thereof in senior management (Role 6+)	167	157	151	151	53
thereof in middle management (Role 4 & 5)	2,010	2,070	2,206	2,353	545
thereof in low management (Role 3)	5,190	5,224	5,470	5,934	1,321
thereof other employees (below Role 3)	22,716	21,554	24,704	24,766	3,895
by age group **Up to 29 years old (%)**	**15**	**15**	**15**	**15**	**14**
thereof in senior management (Role 6+)	0	0	0	0	0
thereof in middle management (Role 4 & 5)	3	5	8	6	1
thereof in low management (Role 3)	194	211	190	199	64
thereof other employees (below Role 3)	7,479	7,279	8,362	8,365	1,096
30 to 49 years old (%)	**62**	**61**	**60**	**60**	**52**
thereof in senior management (Role 6+)	72	69	69	68	29
thereof in middle management (Role 4 & 5)	1,782	1,829	1,933	2,032	460
thereof in low management (Role 3)	6,308	6,206	6,516	6,926	1,280
thereof other employees (below Role 3)	24,733	23,536	25,859	25,948	2,689
50 years or older (%)	**23**	**24**	**25**	**25**	**34**
thereof in senior management (Role 6+)	125	124	121	125	39
thereof in middle management (Role 4 & 5)	1,142	1,261	1,411	1,599	312
thereof in low management (Role 3)	2,402	2,602	2,793	3,161	680
thereof other employees (below Role 3)	8,701	8,627	9,809	9,698	1,928

1 In 2017 and 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma. In the facts and figures, these employees are included under "other employees (below Role 3)".

2 In 2019, the position assessment had not yet been carried out for employees of Versum Materials as well as of Allergopharma. In the figures, employees whose positions have not been assessed have been allocated to "other employees (below Role 3)".

Average number of employees by functional area[1]

	2017	2018[2]	2019[3]	2020[4]
Group	**52,053**	**53,809**	**53,645**	**57,612**
thereof women	**22,353**	**23,388**	**23,503**	**24,746**
Production	15,571	16,240	16,455	17,624
thereof women	5,059	5,359	5,529	6,043
Logistics/Supply Chain	3,729	4,014	4,109	4,298
thereof women	1,442	1,569	1,626	1,734
Marketing and Sales/Commercials	15,115	15,479	13,970	14,127
thereof women	6,609	6,981	6,608	6,787
Administration	9,286	9,864	10,342	11,342
thereof women	4,798	5,067	5,194	5,499
Research and Development	6,789	7,245	7,561	7,504
thereof women	3,591	3,871	4,053	3,996
Infrastructure and Other	1,564	966	1,208	2,717
thereof women	854	541	493	687

1 The average employee headcount is calculated by adding up all employees at the end of each of the last 13 months, and dividing this total by 13.

2 The average employee headcount for fiscal 2018 incorporates the Consumer Health employees on a pro rata basis up until the end of November 2018 due to the divestment of the Consumer Health business as of December 1, 2018.

3 To calculate the average number of employees in fiscal 2019, the employee headcount of Versum Materials has been included on a pro rata basis as of October 2019 owing to the acquisition. They are allocated to the functional area “Infrastructure and Other”.

4 The average employee headcount for fiscal 2020 incorporates the Allergopharma employees on a pro rata basis up until the end of March 2020 due to the divestment of the Allergopharma business as of March 31, 2020.

Number of employees by region

As of Dec. 31	2017	2018	2019	2020 Merck Group	2020 thereof Merck KGaA
Total	**52,941**	**51,749**	**57,071**	**58,127**	**8,578**
Europe	**25,980**	**25,792**	**26,715**	**26,587**	**8,578**
Women	11,627	11,464	11,909	11,743	**2,764**
Women (%)	45	44	45	44	32
Number of employees with temporary contracts	1,279	1,209	1,137	1,105	285
% of employees with temporary contracts	5	5	4	4	3
North America	**10,520**	**10,978**	**12,829**	**13,312**	**0**
Women	4,518	4,742	5,285	5,527	not applicable
Women (%)	43	43	41	42	not applicable
Number of employees with temporary contracts	138	148	158[1]	139	not applicable
% of employees with temporary contracts	1	1	1[1]	1	not applicable
Asia-Pacific (APAC)	**11,294**	**10,486**	**12,728**	**13,518**	**0**
Women	4,298	4,348	5,049	5,425	not applicable
Women (%)	38	41	40	40	not applicable
Number of employees with temporary contracts	2,603	2,846	3,263[1]	3,362	not applicable
% of employees with temporary contracts	23	27	26[1]	25	not applicable
Latin America	**4,050**	**3,340**	**3,433**	**3,387**	**0**
Women	1,896	1,648	1,690	1,630	not applicable
Women (%)	47	49	49	48	not applicable
Number of employees with temporary contracts	40	62	55	67	not applicable
% of employees with temporary contracts	1	2	2	2	not applicable
Middle East and Africa (MEA)	**1,097**	**1,153**	**1,366**	**1,323**	**0**
Women	519	541	607	598	not applicable
Women (%)	47	47	44	45	not applicable
Number of employees with temporary contracts	172	189	182	420	not applicable
% of employees with temporary contracts	16	16	13	32	not applicable

1 Employees whose contract type had not yet been recorded in our database by December 31, 2019 were divided up proportionally between the categories "Employees with permanent contracts" and "Employees with temporary contracts".

Employees by business sector

As of Dec. 31	2017	2018	2019	2020
Healthcare employees	**19,795**	**17,456**	**18,136**	**17,463**
thereof women	9,656	8,884	9,232	8,788
thereof women (%)	49	51	51	50
Life Science employees	**19,607**	**20,667**	**21,934**	**23,196**
thereof women	8,276	8,837	9,487	10,175
thereof women (%)	42	43	43	44
Performance Materials employees	**5,529**	**5,278**	**7,329**	**7,228**
thereof women	1,455	1,411	1,712	1,666
thereof women (%)	26	27	23	23

Employees by contract type

As of Dec. 31	2017	2018	2019	2020
Total employees	**52,941**	**51,749**	**57,071**	**58,127**
Number of employees with permanent contracts	48,709	47,295	52,276[1]	53,034
% of employees with permanent contracts	92	91	92[1]	91
thereof women	20,741	20,545	22,237[1]	22,500
thereof women (%)	43	43	43[1]	42
Number of employees with temporary contracts	4,232	4,454	4,795[1]	5,093
% of employees with temporary contracts	8	9	8[1]	9
thereof women	2,117	2,198	2,303[1]	2,423
thereof women (%)	50	49	48[1]	48
full-time employees	50,498	49,273	54,265	**55,220**
% full-time	95	95	95	95
thereof women	20,677	20,577	22,208	22,572
thereof women (%)	41	42	41	41
part-time employees	2,443	2,476	2,806	**2,907**
% part-time	5	5	5	5
thereof women	2,181	2,166	2,332	2,351
thereof women (%)	89	87	83	81

1 Employees whose contract type had not yet been recorded in our database by December 31, 2019 were divided up proportionally between the categories "employees with permanent contracts" and "employees with temporary contracts".

New employees

As of Dec. 31	2017	2018	2019[1]	2020 Merck Group	2020 thereof Merck KGaA
Total number of new employee hires	**7,285**	**7,129**	**7,924**	**6,669**	**500**
by age group					
up to 29 years old	2,940	2,967	3,432	2,889	259
30 to 49 years old	3,848	3,728	4,055	3,347	223
50 or older	497	434	437	433	18
by gender					
Women	3,412	3,401	3,622	3,016	186
Men	3,873	3,728	4,302	3,653	314
by region					
Europe	3,058	2,560	2,529	2,160	500
North America	1,603	1,524	1,733	1,789	not applicable
Asia-Pacific (APAC)	1,955	2,222	2,729	2,206	not applicable
Latin America	497	583	578	396	not applicable
Middle East and Africa (MEA)	172	240	355	118	not applicable
Rate of new employee hires[2] (%)	**14**	**14**	**14**	**11**	**6**
by age group[3]					
up to 29 years old	40	42	43	43	52
30 to 49 years old	53	52	51	50	45
50 or older	7	6	6	7	3
by gender[3]					
Women	47	48	46	45	37
Men	53	52	54	55	63
by region[3]					
Europe	42	36	32	32	100
North America	22	21	22	27	not applicable
Asia-Pacific (APAC)	27	31	34	33	not applicable
Latin America	7	8	7	6	not applicable
Middle East and Africa (MEA)	2	3	5	2	not applicable

1 These figures exclude the approximately 2,400 Versum Materials and Intermolecular employees who are not classified as new hires because they joined Merck as part of the acquisitions.

2 Formula for calculating the rate of new employee hires: Total number of new employee hires divided by number of employees at the end of the fiscal year.

3 Formula for calculating the rate of new employee hires by age/gender/region: New employee hires of the focus group divided by the total number of new employee hires.

Staff turnover[1,2]

	2017	2018[3]	2019	2020 Merck Group[4]	2020 thereof Merck KGaA
Total turnover rate	**9.05**	**9.09**	**9.07**	**8.22**	**3.30**
Turnover rate by gender					
Men	8.75	9.03	8.69	8.22	3.30
Women	9.46	9.18	9.54	8.22	3.29
Turnover rate by age group					
Up to 29 years old	13.66	14.24	13.13	11.30	3.35
30 to 49 years old	8.38	8.53	8.90	7.74	2.50
50 or older	7.87	7.39	7.03	7.52	4.48
Turnover rate by region					
Europe	6.22	5.73	5.72	5.64	3.30
North America	11.02	9.90	11.02	9.79	not applicable
Asia-Pacific (APAC)	12.53	14.51	13.18	10.60	not applicable
Latin America	13.74	15.41	13.47	11.40	not applicable
Middle East and Africa (MEA)	11.22	9.77	12.14	11.80	not applicable
Total number of leavers	**4,710**	**4,613**	**4,863**	**4,721**	**281**
by gender					
Men	2,596	2,578	2,621	2,697	191
Women	2,114	2,035	2,242	2,024	90
by age group					
Up to 29 years old	1,058	1,061	1,042	974	40
30 to 49 years old	2,713	2,649	2,898	2,677	110
50 or older	939	903	923	1,070	131
by region					
Europe	1,488	1,457	1,500	1,490	281
North America	1,143	1,064	1,264	1,281	not applicable
Asia-Pacific (APAC)	1,387	1,468	1,484	1,394	not applicable
Latin America	570	522	459	398	not applicable
Middle East and Africa (MEA)	122	102	156	158	not applicable

1 The table contains unadjusted turnover rates. The rate excludes employees who depart due to parental leave or a long-term illness, as well as employees who are transitioning to the non-working phase of partial retirement.
2 Employee headcount is calculated as follows: Total number of leavers from the past 12 months divided by the average employee headcount multiplied by 100.
3 Since 2018, the figures exclude the Consumer Health business, which was divested on December 1, 2018.
4 The figures do not reflect the approximately 500 Allergopharma employees, who were not included in the employee turnover rate due to the divestment of the business.

In 2020, the average length of service for employees Group-wide was 9.6 years (2019: 9.5 years), with 16.2 years (2019: 16.3 years) for Merck KGaA employees.

Work-related accidents[1]

	2017	2018	2019	2020 Merck Group[2]	2020 thereof Merck KGaA
Lost Time Injury Rate (LTIR = workplace accidents resulting in missed days of work per one million man-hours)	**1.5**	**1.2**	**1.6[3]**	**1.3**	**2.9**
by region					
Europe	2.4	1.8	2.6[3]	2.4	2.9
North America	1.0	1.1	1.0[3]	0.7	not applicable
Asia-Pacific (APAC)	0.3	0.3	0.2	0.1	not applicable
Latin America	1.3	1.5	1.7	0.9	not applicable
Middle East and Africa (MEA)	0.0	0.7	0.0	0.4	not applicable
Number of deaths	**0**	**0**	**0**	**0**	**0**
by region					
Europe	0	0	0	0	0
North America	0	0	0	0	0
Asia-Pacific (APAC)	0	0	0	0	0
Latin America	0	0	0	0	0
Middle East and Africa (MEA)	0	0	0	0	0
by gender					
Women	0	0	0	0	0
Men	0	0	0	0	0

1 Including supervised workers
2 The data include the divested Allergopharma business up to March 31, 2020. See the Report profile for further information.
3 Figure retroactively adjusted

Both Merck employees as well as supervised workers have been included in the calculation of these indicators.

Through the LTIR, we record work-related accidents that involve at least one day of missed work. A work-related accident is an injury that results from the type of work, in the course of doing said work, and that has no internal cause. Work-related accidents are considered relevant if they occur on the premises, on business trips, during goods transport, as a result of external influences (e.g. natural disasters), or due to criminal acts involving personal injury. Commuting accidents and accidents during company sporting activities are not included. First-aid incidents are generally not included in the LTIR since these usually do not result in more than one day of missed work.

We aimed to sustainably lower our LTIR to 1.5 by 2020. In the reporting year, we succeeded in outperforming this ambitious figure, which we achieved for the first time in 2015.

The LTIR is the key occupational safety indicator for the Merck Group as a whole. Therefore, we do not publish any other indicators such as workplace accidents, lost days or days of absence. The LTIR is not broken down by gender as this differentiation is not relevant to our strategic planning.

For Merck KGaA (about 15% of the employees of the Merck Group), we only report work-related illnesses if these have been certified as an occupational illness by the employers' liability insurance association. In 2020, no cases of work-induced illness were verified.

Employees who regularly receive a performance and development evaluation

	2017[1]	2018[1,2]	2019	2020 Merck Group	2020 thereof Merck KGaA
% of employees who receive a performance and development evaluation	**97**	**98**	**98**	**98**	**100**
by gender					
Women	97	99	98	98	100
Men	97	98	98	98	100
by employee category					
Senior management (Role 6+)	100	100	100	100	100
Middle management (Role 4 & 5)	100	100	100	100	100
Low management (Role 3)	100	100	100	100	100
Other employees (below Role 3)	96	98	98	98	100

1 In 2017 and 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma. In the facts and figures, these employees are included under "other employees (below Role 3)".

2 Since 2018, the figures exclude the Consumer Health business, which was divested on December 1, 2018.

Regular feedback and employee performance evaluations are essential to fairly ranking individual performance and to helping all employees follow their own career path at Merck. Our globally uniform Performance and Talent Management Process requires annual feedback meetings and performance assessments. Apart from evaluating employee performance, this helps us to identify individual development opportunities.

In Germany, all permanent employees have been participating in the Performance and Talent Management Process since 2013. In 2020, a total of 56,922 employees worldwide were involved in the process. The Performance and Talent Management Process is coordinated via our online platform HR4You.

Internationality of employees

As of Dec. 31	2017[1]	2018[1]	2019[2]	2020 Merck Group	2020 thereof Merck KGaA
Number of nationalities	131	136	139	141	87
Number of nationalities in management positions (Role 4 or above)	65	70	73	75	35
% of non-Germans in management positions (Role 4 or above)	64	64	64	66	11

1 In 2017 and 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma.

2 In 2019, the position assessment had not yet been carried out for employees of Versum Materials as well as of Allergopharma.

Employee age by region

As of Dec. 31

Number of employees	Worldwide	North America	Europe (including Germany)	Merck KGaA	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
2019							
Up to 29 years old	8,560	1,829	3,282	1,208	2,713	498	238
thereof women	3,983	773	1,595	440	1,225	289	101
30 to 49 years old	34,377	6,441	15,540	4,355	9,067	2,373	956
thereof women	15,076	2,733	7,191	1,465	3,531	1,200	421
50 or older	14,134	4,559	7,893	2,911	948	562	172
thereof women	5,481	1,779	3,123	814	293	201	85
Average age	**41.7**	**44.4**	**43.0**	**43.4**	**36.8**	**40.3**	**38.6**
Total employees	**57,071**	**12,829**	**26,715**	**8,474**	**12,728**	**3,433**	**1,366**
2020							
Up to 29 years old	8,570	1,906	3,193	1,161	2,800	472	199
thereof women	4,018	825	1,525	420	1,307	260	101
30 to 49 years old	34,974	6,615	15,416	4,458	9,669	2,323	951
thereof women	15,268	2,841	7,076	1,505	3,776	1,161	414
50 or older	14,583	4,791	7,978	2,959	1,049	592	173
thereof women	5,637	1,861	3,142	839	342	209	83
Average age	**41.7**	**44.4**	**43.1**	**43.4**	**37.0**	**40.7**	**39.1**
Total employees	**58,127**	**13,312**	**26,587**	**8,578**	**13,518**	**3,387**	**1,323**

Age of youngest employee

As of Dec. 31	2017	2018	2019	2020
Age of youngest employee, excluding apprentices	18	17	18	18

Voluntary insurance benefits (voluntarily introduced and (co-) financed)

As of Dec. 31	2017	2018	2019[1]	2020 Merck Group[1]	2020 thereof Merck KGaA
% of employees with healthcare benefits[2]	68	67	68	63	0
% of employees with Group accident insurance[3]	42	39	36	41	4
% of employees with life insurance[4]	58	58	58	56	0
% of employees with disability insurance (short-term and long-term)[5]	35	37	39	39	0

1 The figures exclude Versum Materials and Intermolecular since the integration process is still underway. For more information, see report profile.

2 Any spend on voluntarily introduced and (co-) financed healthcare benefits for employees and possibly their dependents. Not taking into consideration any mandatory social security cover (mostly covered by an insurance policy).

3 Any spend on voluntarily introduced and (co-) financed accident insurance that pays a defined amount in case of death or disability caused by a work-related accident (not taking into consideration any mandatory social security cover, e.g. workman's compensation).

4 Any spend on voluntarily introduced and (co-) financed life insurance cover that pays a defined amount of money in case of natural death (not accidental).

5 Any spend on voluntarily introduced and (co-) financed insurance cover that disability pays for salary continuation in case of inability to work caused by an insured incident.

All our employees are covered by either statutory or voluntary accident and health insurance. Employees of Merck KGaA are covered by statutory insurance as stipulated by the regulations in force in Germany.

We offer a company pension in numerous countries along with various programs for supplemental company pensions and survivor's benefits.

The global benefits listed in the table above are designed to provide additional security to our workforce and their families and to improve their quality of life. Benefits represent voluntarily employer-initiated as well as employer-financed assistance to our workforce in addition to the regular compensation package.

Our benefits offer meaningful choices, where possible, to support a diverse workforce and are sensitive to the needs and customs of the employees who use them, regardless of country, age, family status, interests, or values.

Long-term pension obligations and post-employment benefits

€ million	2017	2018	2019	2020
Present value of all defined benefit obligations as of Dec. 31	4,707	4,719	5,644	6,352
Pension expenses	304	319	357	408

Depending on the legal, economic and fiscal circumstances prevailing in each country, different retirement benefit systems are provided for the employees of the Merck Group. Generally, these systems are based on the years of service and salaries of the employees. Pension obligations of the Merck Group include both defined benefit and defined contribution plans and comprise both obligations from current pensions and accrued benefits for pensions payable in the future. In the Merck Group, defined benefit plans are funded and unfunded (see our Annual Report 2020, Note on Provisions for pensions and other post-employment benefits).

Flexible working hours in Germany

As of Dec. 31	2017	2018	2019	2020
% of employees utilizing the "mywork@Merck" working model	40	42	43	48

In coordination with their teams and supervisors, employees taking advantage of "mywork@merck" can choose when and where they work.

For more information on flexible working models during Covid-19, see Work-life balance chapter.

Parental leave[1]

As of Dec. 31	2017	2018	2019	2020
Number of employees with a right to parental leave	353	308	375	351
thereof women (recorded via maternity leave in the respective year)	151	188	239	225
thereof men (recorded via special paternity leave in the respective year)	202	120	136	126
Number of employees who took parental leave[2]	352	500	542	538
thereof women	150	240	248	265
thereof men	202	260	294	273
Number of employees on parental leave who worked part time during their leave	49	128	164	104
thereof women	47	109	140	73
thereof men	2	19	24	31
Number of employees who returned from parental leave[2]	312	312	536	529
thereof women	143	65	243	252
thereof men	169	247	293	277
Return to work rate (%)	88.6	62.4	98.9	98.3
thereof women	95.3	27.1	98.0	95.1
thereof men	83.7	95.0	99.7	101.5
Number of employees still working for Merck one year after their return from parental leave	238	268	496	-[3]
thereof women	89	26	218	-[3]
thereof men	149	242	278	-[3]
Retention rate (%)	89.8	93.1	92,5	-[3]
thereof women	85.6	63.4	89,7	-[3]
thereof men	92.5	97.9	94,9	-[3]

1 Figures pertain only to Merck KGaA (which accounted for around 15% in 2020). Figures are calculated on the basis of the data from one entire year, which also includes those employees who took parental leave during the calendar year but who had not yet returned by Dec. 31.

2 Since parental leave can be taken for a period ranging from one month to three years, it is possible for employees to be recorded across a period of up to four calendar years. This explains why the number of employees on parental leave exceeds the number of employees who have a right to it. It also explains why the "Number of employees who returned from parental leave" might exceed the "Number of employees who took parental leave".

3 Figure will be available on December 31, 2021.

Employees with disabilities[1] (%)

As of Dec. 31	2017	2018	2019	2020
Employees with disabilities	4.3	4.3	4.4	4.7

1 Only pertains to Merck KGaA (which accounted for around 15% of Merck Group employees in 2020, calculations based on the German Social Code IX - SGB IX).

Apprentices in Germany

As of Dec. 31	2017	2018	2019	2020
Number of apprentices	588	604	589	607
% of apprentices	4.4	4.5	4.3	4.6

Environment

Individual tables are part of the non-financial report

Total greenhouse gas emissions (Scope 1 and 2 of the GHG Protocol)[1]

metric kilotons	2006[2]	2017	2018[3]	2019	2020 Merck Group[4]	2020 Merck KGaA
Total CO_2eq[5] emissions	**754**	**653**	**636**	**630**	**2,010**	**132**
Thereof						
direct CO_2eq emissions (Scope 1)	352	341	332	341	1,706	108
indirect CO_2eq emissions[6] (Scope 2)	402	312	304	289	304	24
Biogenic CO_2 emissions	**0**	**13**	**13**	**13**	**13**	**0**

1 In line with the Greenhouse Gas Protocol, for all previous years (up to the 2006 baseline) greenhouse gas emissions were calculated based on the current corporate structure as of Dec. 31 of the reporting year and retroactively adjusted for acquisitions or divestments of (parts of) companies, or for changes in emission factors (portfolio-adjusted). Exceptions to this are company units that were added as a result of the acquisition of Versum Materials. Figures dating back to the 2006 baseline are not available for these units.

2 Baseline for our emission targets is 2006.

3 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

4 Includes Versum Materials as of 2020. Excluding Versum Materials, our greenhouse gas emissions totaled 563 kilo tons in 2020.

5 eq = equivalent

6 The figures presented here have been calculated in accordance with the market-based method.

Our response to the Carbon Disclosure Project contains a detailed description of our calculation methods.

We have included the following gases in our calculation of direct and indirect CO2eq emissions:

- Direct CO_2 emissions: CO_2, HFCs, PFCs, CH_4, N_2O, NF_3, SF_6.
- Indirect CO_2 emissions: CO_2.

In 2020, we emitted 0.11 kg of CO_2eq per euro of net sales.

Other relevant indirect greenhouse gas emissions (Scope 3 of the GHG Protocol)[1]

	2017	2018	2019	2020
Total gross other indirect emissions (metric kilotons CO_2eq[2])	**328[3]**	**348[3]**	**339[3]**	**308**
Fuel- and energy-related emissions, not included in Scope 1 or 2 (category 3)	118	131	127	119
Waste generated in operations (category 5)[4]	43[3]	47[3,5]	50[3]	85
Business travel - air travel (category 6)	98	103	86	14
Business travel - rail travel (category 6)[6]	0.02	0.02	0.02	0.01
Business travel - rental car travel (category 6)	0.6	1.4	1.3	0.2
Employee commuting (category 7)	68	66	75	90[4]
Upstream leased assets (category 8)[7]	0.0	0.0	0.0	0.0
Processing of sold products (category 10)[8]	0.0	0.0	0.0	0.0
Downstream leased assets (category 13)	0	0	0	0
Franchises (category 14)	0	0	0	0

1 At present, we only record Scope 3 emissions globally, and not at site or legal entity level. For many categories, local allocations present a significant challenge. Currently the focus is on creating greater transparency with respect to our Scope 3 emissions at Group level. To this end, we are now analyzing emissions for the Scope 3 categories 1, 4 and 10 in particular.

2 eq = equivalent

3 Figure retroactively adjusted.

4 Since 2020, we apply a new calculation approach.

5 Since 2018, this figure has excluded the Consumer Health business, which was divested on December 1, 2018.

6 German Railway

7 Already covered under Scope 1 and 2 emissions

8 Merck produces a huge variety of intermediate products for various purposes. Due to their many applications and our customer structure, the associated greenhouse gas emissions cannot be tracked in a reasonable fashion.

No data are available for Scope 3 categories not listed above. Their relevance to Merck is assessed in the Scope 3 document.

Biogenic emissions (Scope 3), if present, are not being recorded.

Emissions of ozone-depleting substances

metric tons	2017	2018[1]	2019	2020
Total emissions of ozone-depleting substances	1.9	1.5	1.0	2.2
CFC-11eq[2]	0.1	0.1	0.1	0.1

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

2 CFC-11eq is a unit of measure used to compare the potential of various substances to deplete the ozone. Reference value 1 indicates the potential of CFC-11 to cause the depletion of the ozone layer.

Substances included: R-12, R-22, R-123, R-141b, R-401a, R-402a, R408a, R-409a, R-502, R-503.

Source for the emission factors: Montreal Protocol.

Other air emissions

metric kilotons	2017	2018[1]	2019	2020
Volatile organic compounds (VOC)	0.3	0.3	0.3	0.3
Nitrogen oxide	0.2	0.3	0.3	0.2
Sulfur dioxide	0.03	0.01	0.01	0.004
Dust	0.04	0.01	0.01	0.010

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

The VOC, nitrogen oxide, sulfur dioxide, and dust emissions reported here are attributable to production activities as well as energy generation. These figures do not include emissions from vehicles. Emissions are determined partially based on measurements and partially based on calculations or estimates. Only some sites are required to measure individual parameters.

Transport of finished goods, by means of transportation

	2017	2018	2019	2020
% truck	73	74	70	70
% boat	15	14	19	22
% airplane	12	12	11	8

The figures contain the volumes of the biggest global distribution centers of our Healthcare, Life Science and Performance Materials business sectors. These figures pertain to the total weight of transported products and indicate the primary means of transport.

In shipping finished goods from our production sites to the local warehouses of our subsidiaries, we have been working to reduce the use of air shipping in favor of sea freight. This change aims to both reduce costs as well as lower transport-related CO_2 emissions.

Energy consumption[1]

In GWh	2017	2018[2]	2019	2020 Merck Group	2020 thereof Merck KGaA
Total energy consumption	**2,073**	**2,158**	**2,178**	**2,372**	**596**
Direct energy consumption	**1,205**	**1,261**	**1,288**	**1,265**	**529**
Natural gas	1,140	1,194	1,222	1,178	521
Liquid fossil fuels[3]	32	33	33	52	8
Biomass and self-generated renewable energy	33	34	33	35	0
Indirect energy consumption	**868**	**897**	**890**	**1,107**	**67**
Electricity	723	749	745	944	67
Steam, heat, cold	145	148	145	163	0
Total energy sold	**0.1**	**0.0**	**0.1**	**0.2**	**0.0**
Electricity	0.1	0.0	0.1	0.2	0.0
Steam, heat, cold	0	0	0	0	0

In TJ					
Total energy consumption	**7,463**	**7,770**	**7,839**	**8,539**	**2,146**
Direct energy consumption	**4,338**	**4,541**	**4,637**	**4,554**	**1,905**
Natural gas	4,104	4,298	4,399	4,241	1,876
Liquid fossil fuels[3]	114	119	119	187	29
Biomass and self-generated renewable energy	120	124	119	126	0
Indirect energy consumption	**3,125**	**3,229**	**3,202**	**3,985**	**241**
Electricity	2,603	2,696	2,682	3,398	241
Steam, heat, cold	522	533	520	587	0
Total energy sold	**0.4**	**0.0**	**0.5**	**0.7**	**0.0**
Electricity	0.4	0.0	0.5	0.7	0.0
Steam, heat, cold	0.0	0.0	0.0	0.0	0.0

1 In line with the Greenhouse Gas Protocol, for all previous years (up to the 2006 baseline) energy consumption has been calculated based on the current corporate structure as of Dec. 31 of the reporting year and retroactively adjusted for acquisitions or divestments of (parts of) companies, or for changes in emission factors (portfolio-adjusted). Exceptions to this are company units that were added as a result of the acquisition of Versum Materials. Figures dating back to the 2006 baseline are not available for these units.

2 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

3 Light and heavy fuel oil, liquefied petroleum gas (LPG), diesel, biodiesel, gasoline and kerosene

At our sites in Billerica (MA, United States), Bedford (MA, United States), Molsheim (France), Tel Aviv (Israel), Rome (Italy), Guatemala City (Guatemala), Shizuoka-ken (Japan), and Shanghai (China), we use photovoltaics to produce power.

Merck currently only records purchased secondary energy – this is primarily electricity and, to a lesser extent, heat/steam/cold. Details on the local energy mix, including the respective percentage of primary energy, renewable energy, etc. are not available. Data on local energy efficiency in electricity or heat generation are not available either. Our production sites are located in countries with a widely varying energy mix.

Our Darmstadt and Gernsheim sites in Germany consume the most energy, representing 25% of our Group-wide total. Here, fossil energy (coal, gas, etc.) accounts for approx. 42%, nuclear energy approx. 14% and renewable energies approx. 44% of the energy mix. Renewable energies account for a higher share of electricity generation at production sites in Switzerland, with nuclear energy taking the lead in France. Based on an estimated global energy efficiency of 37% for the conversion and distribution of generated electricity, this results in a primary energy consumption of 2,551 GWh for 2020. Based on an estimated global energy efficiency of 85% for heat/steam/cold, this results in a primary energy consumption of 192 GWh for 2020. This yields a total primary energy consumption of 2,743 GWh for 2020. (The calculation is based on factors stated in the "Manual for energy management in practice - Systematically reducing energy costs" published by DENA, 12/2012.)

In 2020, Merck's energy intensity relative to net sales totaled 0.14 kWh/€.

Water withdrawal

millions of m^3	2017	2018[1]	2019	2020 Merck Group	2020 Water stress areas
Total water withdrawal	**14.0**	**14.7**	**14.0**	**14.2**	**0.7**
Surface water (rivers, lakes)	1.9	2.1	1.9	1.9	0.0
Groundwater	7.3	7.2	6.8	6.7	0.4
Drinking water (from local suppliers)	4.8	5.3	5.2	5.5	0.3
Rain water and other sources	0.00	0.05	0.05	0.08	0.00

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

These figures do not include the ground water that we use for safety measures at our Gernsheim site in Germany. Here, the water is fed back directly into natural circulation.

The volume of seawater and produced water withdrawn is not significant and is therefore not reported separately.

Water reused

millions of m^3	2017	2018[1]	2019	2020
Water reused	22.4	24.4	23.3	22.0

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

The recirculating cooling system at our Darmstadt, Germany facility accounts for the majority of reused water as it allows the water to be re-utilized multiple times. The volume of reused water is thus greater than the total volume of consumed water.

Wastewater volume

	2017	2018[1]	2019	2020 Merck Group[2]	2020 Water stress areas
Total wastewater volume (millions of m^3)	**13.1**	**13.5**	**13.2**	**13.4**	**0.6**
Wastewater discharged directly	9.0	9.6	9.3	9.2	**0.4**
Wastewater discharged to third parties	3.7	3.9	3.8	4.1	0.2

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

2 In 2020, we optimized the way we measure wastewater at our Gernsheim site. The figures reported no longer include wastewater from the municipality of Biebesheim.

The volume of seawater and groundwater discharged is not significant and is therefore not reported separately.

Discrepancies between total wastewater volume and the sum of directly discharged wastewater and wastewater sent to third parties arise from other disposal methods, which, however, only result in minor amounts of wastewater.

Direct discharges correspond to the "freshwater" classification of the GRI. Indirect discharges correspond to their "other water" classification.

Wastewater quality[1]

	2017	2018[2]	2019	2020
Chemical oxygen demand (metric tons of O_2)	1,537	1,509	1,568[3]	2,001
Phosphorous (metric tons)	8	10	12	15
Nitrogen (metric tons)	234	260	481	291
Nickel (kg)	32	30	32	30
Lead (kg)	35	30	34	37
Cadmium (kg)	6	6	6	6
Mercury (kg)	1	0	0	0

1 In alignment with ICCA reporting requirements specified by Cefic, we track heavy metal emissions from lead, cadmium, nickel, and mercury.
2 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.
3 Figure retroactively adjusted.

The wastewater treatment plant at our Gernsheim, Germany site also treats wastewater from the neighboring municipality of Biebesheim. The communal wastewater from Biebesheim is included in the emissions stated in the table.

Emissions are determined partially based on measurements and partially based on calculations or estimates. Only some sites are required to measure individual parameters.

These figures reflect the wastewater as it is when it leaves our facilities. Some of the substances in the water are then later removed by third-party purification plants before the water is ultimately discharged into the ecosystem.

Hazardous and non-hazardous waste

metric kilotons	2017	2018[1]	2019	2020
Total waste	**255**	**245**	**244**	**231**
Hazardous waste disposed[2]	43	44	44	38
Non-hazardous waste disposed[2]	33	54	41	34
Hazardous waste recycled[3]	72	75	78	89
Non-hazardous waste recycled[3]	107	72	81	70

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.
2 Disposed = incineration (without energy recovery) and landfill
3 Recycled = incineration (with energy recovery) and material recycling

We generally use external service providers in order to dispose of our waste outside our sites. Some material recycling of hazardous waste takes place directly at our sites (2020: approx. 46 metric kilotons).

Exported/Imported hazardous waste

metric kilotons	2017	2018[1]	2019	2020
Exported[2]	4.9	4.5	4.3	4.0
Imported	0.005	0.000	0.000	0.000

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.
2 Disposal primarily within the EU and the United States.

In 2020, approx. 3% of hazardous waste was shipped internationally.

Waste by disposal method

	2017	2018[1]	2019	2020
Total waste (metric kilotons)	**255**	**245**	**244**	**231**
Disposed waste	**76**	**98**	**85[2]**	**72**
Landfilled waste	13	35	26	17
Incinerated waste	63	63	59[2]	55
Recycled waste	**179**	**147**	**159[2]**	**159**
Material recycling	149	127	132	135
Waste-to-energy	30	20	27[2]	24
Recycling rate (%)	**70**	**60**	**65[2]**	**69**

1 Since 2018, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.
2 Figure retroactively adjusted.

As in previous years, the total waste generated continues to be heavily influenced by the waste from construction and remodeling activities. Construction, excavation and demolition waste accounted for 21% of our waste in 2020. Around 37 metric kilotons of construction, excavation and demolition waste was recycled.

We generally use external service providers in order to dispose of our waste outside our sites. Some material recycling of hazardous waste takes place directly at our sites (2020: approx. 46 metric kilotons).

Significant spills

	2017	2018	2019	2020[1]
Total number of significant spills	0	0	0	0

1 The data include the divested Allergopharma business up to March 31, 2020. See the Report profile for further information.

community

Spending on community engagement

€ million	2017	2018[1]	2019	2020
Total spending	33.8	35.7	46.2	53.6

1 From 2018 on, we are separating spending on programs of the Merck Foundation from our community involvement figures.

We calculate the value of pharmaceutical product donations according to the WHO Guidelines for Medicine Donations; for other product donations, we apply their fair value.

Community engagement spending by region[1]

	Europe	North America	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
2019					
€ million	10.6	3.4	2.3	0.5	29.3
%	23	7	5	1	64
2020					
€ million	**15.1**	**5.8**	**4.2**	**2.6**	**25.9**
%	**28**	**11**	**8**	**5**	**48**

1 This table presents the regions across the globe in which we support initiatives. For projects that benefit multiple regions, we have calculated the amount per region by dividing the project spending evenly per country.

Focus of our local community engagement[1]

%	2017	2018[2]	2019	2020
Global Health	38	34	33	36
Broad Minds: Education and culture	43	42	38	43
Sustainable Solutions: Environment	4	2	3	1
Disaster relief	2	2	2	1
Other	13	20	24	19

1 Based on number of projects
2 From 2018 on, we are separating spending on programs of the Merck Foundation from our community involvement figures.

Motivations for our community engagement[1]

%	2017	2018[2]	2019	2020
Charitable activities	9	7	6	23
Community investment	84	88	91	72
Commercial initiatives in the community	7	5	3	5

1 Based on total spending on all projects

2 From 2018 on, we are separating spending on programs of the Merck Foundation from our community involvement figures.

We categorize the motivations for our activities based on the London Benchmarking Group model as well as the guidelines of the Bertelsmann Foundation for corporate social responsibility. Projects that primarily aim to make improvements within the community are classified as community investment.

Initiatives that are predominantly aimed at company-relevant factors such as image or personnel recruitment are classified as commercial initiatives in the community. Charitable activities cover any other projects that benefit a charitable organization, but cannot be listed under either of the other two motivation categories due to missing data or their narrow scope.

Goals

Part of the non-financial report

Legend: New Goal Goal achieved In Progress Goal not achieved

Business ethics

Compliance management

Goal: Bring compliance closer to the business

Action(s)	By	Progress by end of 2020	Status:
Third Party Risk Management	July 2020	Stepwise implementation of the new Third-Party Risk Management process commenced in November 2020.	In Progress

Goal: Standardize process for disclosure and documentation and increase awareness

Action(s)	By	Progress by end of 2020	Status:
Global harmonization of the Conflict of Interest process	November 2020	The Group Conflict of Interest Policy went live in November 2020 and is applicable to all Merck employees worldwide, excluding the two Healthcare legal entities in France. A confirmation course was rolled out for a specific target group in November 2020. The self-service digital disclosure process, including the documentation of the respective mitigation actions, has been implemented in a new ServiceNow workflow in August 2020 but rolled out together with the policy and confirmation course in November 2020.	Goal achieved

Supply chain standards

Goal: Ensure that suppliers adhere to ethical, social, environmental and compliance standards

Action(s)	By	Progress by end of 2020	Status:
Develop a due diligence process for Responsible Minerals Sourcing according to the OECD guidance for upstream processes and integrate it into the working processes of the affected units.	End of Q3/ 2019 – extended to Q4/2020	In 2020, we finalized a Group-wide conflict minerals due diligence process and published our respective Responsible Minerals Sourcing Charter.	Goal achieved
Develop a due diligence process for palm oil sourcing according to international guidance and implement it within the working processes of the affected units.	Extended to end of 2021	In 2020, ad-hoc validations of palm oil suppliers took place as needed. In 2021, we aim to develop a structured due diligence process for the procurement of palm oil.	In Progress

Animal welfare

Goal: Consistently ensure high quality across our animal facilities

Action(s)	By	Progress by end of 2020	Status:
Re-accredit relevant animal facilities.	Ongoing	No AAALAC re-accreditation was due in 2020 and all accredited sites maintained their status. The next re-accreditation is due in 2021.	
Implement organizational changes and create a new framework of rules for animal welfare to empower the businesses and manage risks.	End of 2021	A new Animal Affairs unit with independent Animal Welfare Officers has been set up. The implementation of other organizational changes will be finished by end of 2021.We have rewritten our Animal Affairs Policy and adopted six new standards.	
Ensure transparency and ease processes by digitalizing the Animal Affairs unit and developing an internal reporting system for all animal-related activities.	End of 2025	We are implementing a centralized IT landscape to support cross-functional processes and knowledge exchange, to foster transparency and manage risks. We identified and set up working groups that will implement procedures to ensure that all external and internal animal work is reported and KPIs are managed.	

Goal: Ensure animal welfare in our supply chain

Action(s)	By	Progress by end of 2020	Status:
Develop and implement an audit plan for suppliers.	Ongoing	Due to Covid-19-related travel restrictions, only limited audits were performed. With the help of partners, we carried out a total of 11 on-site audits of CRO facilities. Additionally, we set up five remote audits. We have implemented standards across our vendors globally and will prioritize the qualification of vendors based on risk assessments.	

Goal: Promote the 4Rs (Reduction, Refinement, Replacement, Responsibility)

Action(s)	By	Progress by end of 2020	Status:
Develop a Group-wide 4R program.	Ongoing	We added a fourth R (Responsibility) and presented our internal 4Rs Award to increase awareness. By mid-2021, we will agree on aligned and binding 4Rs KPIs for all our businesses conducting animal work and for the Animal Affairs unit.	

Products

Health for all

Focus programs

Goal: Eliminate schistosomiasis

Hand in hand with partners, we aim to eliminate the tropical disease schistosomiasis worldwide.

Action(s)	By	Progress by end of 2020	Status:
Donate up to 250 million praziquantel tablets annually to the World Health Organization (WHO) for African school-age children	Ongoing	Following the orders for 2020 from WHO, we donated nearly 226 million tablets in 30 countries, 27 of which are in Africa. We continue to maintain production capacities at a level sufficient for manufacturing 250 million praziquantel tablets a year.	
Optimize the praziquantel formulation	End of 2020	In 2020, we further analyzed the results of the first bioequivalence study. We also concluded the second bioequivalence study successfully and submitted the results to WHO for pre-qualification.	
Initiate new partnerships to promote behavioral change in African school children Milestone 2020: Extend the partnership with the NALA Foundation	End of 2020	We extended our partnership with the NALA Foundation for an additional three years.	
Continue to strengthen the position of the Global Schistosomiasis Alliance (GSA) as a partner platform for advocacy, implementation, research, communication, and strategy development	Ongoing	In 2019 and 2020, the GSA contributed to the development of the WHO NTD roadmap 2021-2030 and will continue to work with its partners on its implementation.	

Goal: Availability – Address unmet needs through the research, development and optimization of health solutions

We aim to improve global health for underserved populations in low- and middle-income countries, with a focus on combating infectious diseases

Action(s)	By	Progress by end of 2020	Status:
Develop a pediatric formulation of praziquantel for the treatment of schistosomiasis in children under six. Milestone 2020: Completion of the clinical Phase III trial	End of 2020	The Phase III trial started in September 2019 at the Homa Bay clinical center in Kenya. The study is implemented in Kenya and Côte d'Ivoire. The Covid-19 pandemic impacted the implementation of this study; it was paused in line with national restrictions. As a result, project timelines have shifted, with an estimated completion of the Phase III in 2021.	
Develop a pediatric formulation of praziquantel for the treatment of schistosomiasis in children under six. Milestone 2020: Develop access strategy for selected countries	End of 2020	The access strategy identified the need for an implementation field study in African countries. As part of the strategy, procurement access mechanisms for the pediatric formulation of praziquantel, including local manufacturing, are being defined to ensure that the pediatric medication reaches pre-school age patients in need.	
Develop a new antimalarial (PeEF2 inhibitor) Milestone 2020: Design of Phase II and identification of combination partner	End of Q4 2020	In addition to bringing Phase Ib (for cure) to completion, our work focused on designing a Phase II study, identifying a combination partner, and devising a commercialization path to tailor further development.	

Prices of medicines

Goal: Update our access to medicine strategic plan

Action(s)	By	Progress by end of 2020	Status:
Create a dedicated cross-functional working group to update our universal strategy for equitable pricing.	Ongoing	In addition to existing initiatives, we have begun defining new equitable strategy plans to make Mavenclad® available in low- and middle-income countries. The lessons learnt will be evaluated in 2021 for upcoming projects and product launches as an ongoing initiative.	

Goal: Provide patients with access to affordable, high-quality products by making more of our branded generics (branded off-patent products) available.

Action(s)	By	Progress by end of 2020	Status:
Continue with the expansion of our branded generics portfolio.	Ongoing	We are in the process of registering further branded generics in low- and middle-income markets.	

Goal: Provide "beyond-the-pill" solutions to patients, caregivers and physicians to enable better management of the condition while maximizing treatment outcomes.

Action(s)	By	Progress by end of 2020	Status:
We entered a partnership on a leading medication adherence solution, Medisafe, to pilot a customized program to cardiometabolic patients in Brazil, Mexico and Russia.	Ongoing	Following the successful pilots of a customized program to cardiometabolic patients in Brazil, Mexico and Russia in 2018/2019, we continued to serve relevant patients in Brazil and Russia and observed important improvements in adherence rates.	
We entered a partnership with a leading digital diabetes prevention program provider, Blue Mesa Health, to offer an effective and customized lifestyle counselling program to prediabetic patients across different regions.	Ongoing (2019 goals achieved, continue to develop/expand in 2020)	Following the successful piloting of the digital lifestyle intervention program in collaboration with Blue Mesa Health (acquired by Virgin Pulse), we are supporting the Virgin Pulse program in LATAM.	
We entered a partnership with leading health technology and data science company Holmusk to offer a patient lifestyle support program on its GlycoLeap platform.	2021	We offer the digital lifestyle intervention program "GlycoLeap" in collaboration with Holmusk to prediabetics and/or diabetics in Asia, particularly in Hong Kong, Indonesia and Malaysia.	

Product safety and quality

Chemical product safety

Goal: Guided by the precautionary principle, establish a globally aligned hazard and risk communication system for all our relevant chemical products in the supply chain

Action(s)	By	Progress by end of 2020	Status:
Projects for hazard communication: Update safety data sheets for non-hazardous materials	End of 2020	In both our Life Science and Performance Materials business sectors, all safety data sheets for non-hazardous materials had been updated by the end of 2019, ahead of schedule. Since there are no non-hazardous materials in the Versum Materials portfolio and no chemicals at all in the Intermolecular portfolio, there were no safety data sheets for non-hazardous materials that required updating.	✓
Harmonize safety data sheets to align with a globally uniform standard	End of 2020	In our Life Science business sector, we have consolidated our SAP systems for hazard communication, creating a single platform approach. In Performance Materials, we generate safety data sheets through a centralized SAP system governed by globally consistent rules. The continued integration of Versum Materials focuses on converging work processes and requirements related to product compliance and sustainability.	✓

Patient safety

Goal: Enhance patient safety through stakeholder communication

Action(s)	By	Progress by end of 2020	Status:
Enhance patient interface in agReporter application and rollout of patient-centric pharmacovigilance videos.	Ongoing	We initiated the roll-out of the agReporter app in Kenya and Nigeria. As well optimized the usability of the app.	

Goal: Empower early and fully informed decisions by addressing unmet medical needs, deep biology and drug safety

Action(s)	By	Progress by end of 2020	Status:
Define a scoring model as basis for product prioritization and tiered portfolio management. Employ an objective scoring tool, based on critical safety and relevant cross-functional parameters.	2023	We incorporated the product prioritization tool during the development of the risk-based operating model in the Global Patient Safety unit. We published the initial version of the product prioritization tool in January 2020. Further details are in the chapter.	
Implement a risk-based approach in global patient safety processes to improve efficiency.	2023	We completed the design phase and started implementation of our risk-based operating model in the Global Patient Safety (GPS) unit.	
Develop real-time pharmacovigilance intelligence on global, regional and local levels to enable strategic decision-making..	2023	To ensure that requirements and guidance's of health authorities are met properly, we formed the Pharmacovigilance Intelligence Council. The council enables us to have better oversight and make decisions regarding our actions efficiently. To improve efficiency and timeliness in the assessment of new legislation, we are also working on a tool for process automation.	

Goal: Provide up-to-date safety information to our customers worldwide, based on the benefit-risk profiles of our products

Action(s)	By	Progress by end of 2020	Status:
Practice predictive safety by developing a robust, cross-functional benefit-risk strategy that helps us deliver therapies that are truly differentiated and provide transformational value to patients.	2023	We developed concepts, principles as well as guidance documents on the strategy of benefit-risk assessment We developed a change management plan to bring this new Benefit-Risk Strategy to every function. We are testing the new Benefit-Risk Strategy through several pilots, using products from our Healthcare portfolio.	
Optimize and automate the processing of individual case safety reports (ICSRs) from collection to reporting, in order to significantly reduce manual efforts and further improve quality, while maintaining a high level of timely compliance in reporting.	2023	The project team has worked on actions to streamline our activities and to move forward into long-term automation	

Product-related crime

Goal: Strengthening cross-functional collaboration within the global security network and raising awareness among other target audiences of the strategic relevance of counterfeit medicines.

Action(s)	By	Progress by end of 2020	Status:
Expand organizational structures and certify employees who deal with product-related crime.	Ongoing	In 2020, we started to build a regional corporate security management structure, which incorporates Product Crime Officers. This regional corporate security structure is intended to enable strong cross-functional collaboration. This is supposed to make security performance, incidents and risks at our sites more transparent. In addition, the new structure helps to establish a risk-based approach for more efficient security risk management. The introduction of this new structure is likely to be completed in 2021. In 2020, we also revised both of our internal guidelines for fighting product-related crime.	
Host conferences and seminars; share best practices and lessons learned through international networks	Ongoing	Due to Covid-19, no training sessions took place on site in 2020. We held virtual meetings.	
Establishing the "Security Academy" learning and communication platform with the aim of better imparting all Security functions and key stakeholder-relevant know-how.	Ongoing	Kick-off held in mid-February 2020, thereafter quarterly calls.	

Goal: Develop and implement security technologies and solutions for the authentication, identification, integrity, and security of the product supply chain

Action(s)	By	Progress by end of 2020	Status:
Support regional activities to counter product-related crime.	Ongoing	Completed a project in China in 2020 to monitor online marketplaces more purposefully and pinpoint suspected cases. As a result, we identified only a few counterfeit versions of our products.	
Step up Internet research to detect counterfeit products, illegal parallel imports as well as trademark infringements	Ongoing	Completed a project in China in 2020 to monitor online marketplaces in a more focused manner and investigate suspected cases. As a result, we identified only a few counterfeit versions of our products.	
Monitor counterfeit pharmaceuticals in conventional distribution channels as well as online sales	Ongoing	In 2020, we engaged a new Internet-monitoring provider to monitor counterfeit medicines worldwide.	

Goal: Provide and further develop the mobile compact laboratory Minilab™ by GPHF

Action(s)	By	Progress by end of 2020	Status:
Update the Minilab manuals and consolidate all test methods into one single volume.	End of 2020	French and Spanish versions of the manuals were completed in 2020.	

Transport and warehouse safety

Goal: Ensure warehouse and transport safety within our company and at contract warehouses and prevent incidents that pose a risk to people and the environment

Action(s)	By	Progress by end of 2020	Status:
Regularly evaluate audit results, incident reports and safety-related complaints and implement the resulting corrective actions	Ongoing	We drafted closure instructions for open shipping cartons intended for reuse and started implementing them in order to reduce our waste streams. Beyond this, in 2020 we did not identify any other aspects of transport and warehouse safety that could be improved by Group-wide measures.	

Employees

Career with us

Goal: Consistently fill at least two-thirds of leadership positions (Role 6+) with internal candidates

Action(s)	By	Progress by end of 2020	Status:
Use the Talent Management Process to identify suitable employees with leadership potential and optimize the process to systematically advance them	Ongoing	In 2020, 75% of vacant positions (Role 6+) were filled internally.	
Build a high-potential talent pool that reflects our demographic structure	Ongoing	We are continuously developing the talent pool further. The set-up of the pool reflects the diversity of the company.	

Goal: Position our Group as an attractive employer for university graduates

Action(s)	By	Progress by end of 2020	Status:
Participate in university fairs and organize in-house recruiting events for graduates; position our company via employer branding channels; partner with target universities, student initiatives and organizations/associations	Ongoing	We are continuously positioning ourselves as an attractive employer for university graduates. Due to the Covid-19 pandemic, there was less direct interaction with young talent. Career fairs did not take place at universities. Instead, we participated in virtual fairs nationally and internationally. Since we were unable to welcome student visitor groups to the Darmstadt site, our Visitor Communications team carried out the remaining site tours in virtual formats. As a result, student groups also continued to gain an insight into our company and our recruiters remained in contact with the student talent.	
Approach select target universities	Ongoing	We leveraged existing measures, for instance intensive collaboration with selected university departments and career services, to bolster our position as an attractive employer for university graduates.	

Goal: Increase the share of employees (Group-wide) with development plans to 70% by 2020

Action(s)	By	Progress by end of 2020	Status:
Conduct extensive internal communications and people development campaigns and optimize existing tools	End of 2020	The percentage of employees with development plans increased from 75% (2019) to 77% (2020).	
Create awareness and share knowledge	End of 2020	We are taking steps to raise awareness of development plans and help employees to create a solid one.	

Fairness and dialogue

Goal: Measure and improve employee engagement

Action(s)	By	Progress by end of 2020	Status:
Implement a regularly occurring process to measure employee engagement and derive actions to improve it..	Ongoing	In 2020 we once again conducted multiple employee surveys worldwide. Our leaders are responsible for analyzing the results, discussing them with their teams and taking appropriate action where necessary.	

Diversity and inclusion

Goal: Our target is to maintain a 30% representation of women in leadership roles (Role 4+) until 2021.

Action(s)	By	Progress by end of 2020	Status:
Deploy teams at business sector level to develop goals and measures to move women into positions in various hierarchies	End of 2021	All business sectors founded their own teams that are networked with one another and occupy themselves with objectives and measures. For example, all areas introduced our inclusion training. Moreover, we again offered specific sponsoring or mentoring programs for women.	

Health and safety

Goal: Reduce the lost time injury rate Group-wide (to 1.5 or less).

Action(s)	By	Progress by end of 2020	Status:
Reinforce our safety culture to prevent behavior-related accidents. Roll out our BeSafe! program at all legacy Sigma-Aldrich sites and monitor ongoing implementation via appropriate performance indicators.	End of 2020	In 2020, we achieved a Group-wide LTIR of 1.3. Manager training and safety walkabouts helped us maintain a high level of safety awareness. We implemented these measures across numerous sites.	

Environment

Environmental stewardship

Goal: Incorporate all production sites into our ISO 14001 Group certificate for environmental management systems.

Action(s)	By	Progress by end of 2020	Status:
At newly acquired production sites, introduce environmental management systems in line with our ISO 14001 Group certificate and certify them accordingly.	Ongoing	In 2020, 13 new sites were added to our Group certificate. All sites relevant to the Group certificate have already achieved ISO 14001:2015 certification.	

Climate action

Goal: 20% reduction in our direct and indirect greenhouse gas emissions (Scope 1 and 2) relative to the 2006 baseline

Action(s)	By	Progress by end of 2020	Status:
Systematically examine the energy consumption at our individual production sites	End of 2020	In 2020 we piloted a project on digital energy management. As part of the project, we developed software aimed at fully monitoring energy consumption, which will enable us to better analyze current consumption and devise targeted approaches to boosting energy efficiency.	
Identify and implement potential energy savings	End of 2020	In 2020, a variety of energy efficiency initiatives helped us save around 1,700 metric tons of CO_2eq at our global headquarters in Darmstadt.	
Reduce process-related emissions	End of 2022 (will be continued under new target)	Throughout 2018/2019, we initiated two process emission reduction projects that will continue through the year 2022. Taking 2018 production volumes as our baseline, these efforts are expected to save 55,000 metric tons of CO_2eq.	
Renewable energy	End of 2020	In 2020, we increased the percentage of electricity from renewable energy sources relative to total electricity purchased to 27% (2019: 19%). In line with the Greenhouse Gas Protocol (GHG Protocol), we are now capturing our emissions using both the market-based and the location-based approach.	

Goal: 50% reduction in our direct and indirect greenhouse gas emissions (Scope 1 and 2) by 2030 (2020 baseline)

Action(s)	By	Progress by end of 2020	Status:
We will start executing measures to achieve this goal in 2021.	2030		

Goal: 80% of purchased electricity will come from renewable sources

Action(s)	By	Progress by end of 2020	Status:
We will start executing measures to achieve this goal in 2021.	2030		

Goal: By 2040 achieve net zero carbon operations in terms of GHG Protocol Scope 1, 2 and 3 emissions

Action(s)	By	Progress by end of 2020	Status:
We will start executing measures to achieve this goal in 2021 alongside our efforts to achieve our 2030 targets.	2040		

Waste and recycling

Goal: Reduce the environmental impact of our waste disposal practices by a 5% reduction of our Waste Score by 2025 (2016 baseline)

Action(s)	By	Progress by end of 2020	Status:
Continuously look for ways to improve our production processes and disposal methods.	Ongoing	Through our ProMec initiative, we boosted the recycling rate of production waste at our Darmstadt site to 16%, thereby saving an additional 600 metric tons of waste in 2020. Furthermore, our site in St. Louis (Missouri, USA) shifted roughly 140 metric tons of its waste disposal from landfill to energy recovery in 2020.	

Water management

Goal: Introduce a sustainable water management system at 24 of our manufacturing facilities with high water consumption by 2020

Action(s)	By	Progress by end of 2020	Status:
Meet the "advanced" requirements set out in the CEFIC flagship self-assessment tool (stage 3). This will assess our sites' impact on the water situation in the vicinity of each individual site.	November 2020	During stage 3 of the self-assessment, we analyzed the environmental impacts caused by our discharged water. Building on this analysis, we stipulated mandatory requirements for our sites to be successfully implemented by the end of 2020.	

Goal: Reduce our water use at sites in water-stressed areas by 10% relative to the 2014 baseline

Action(s)	By	Progress by end of 2020	Status:
Processes optimized to curb water consumption at seven production sites in Mexico, Spain, Taiwan, and the United States.	2020	Water consumption has been reduced by 27% at the respective sites.	

Goal: Reduce our Water Intensity Score by 10% by 2025 (2019 baseline)

Action(s)	By	Progress by end of 2020	Status:
We will be implementing measures to achieve this goal starting in 2021.	2025		

Goal: Reduce environmentally relevant trace substance residues in the wastewater of all production sites to below the no-effect threshold

Action(s)	By	Progress by end of 2020	Status:
	2030	To drive our wastewater quality goal, we drafted a mandatory standard detailing the individual steps needed to achieve it.	

Recognition and rankings

The following overview presents a selection of major awards and recognition that we have received or achieved. Information on additional recognition and accolades received by individual businesses or sites can be found in the respective chapter of our 2020 Sustainability Report, or on our website.

Sustainability performance

Access to Medicine Index

Every two years, the Access to Medicine Foundation publishes the Access to Medicine Index. It benchmarks 20 of the world's largest research-based pharmaceutical companies on activities and initiatives that experts consider most relevant for access to medicine in low- and middle-income countries.

The Foundation revised the Access to Medicine Index methodology in 2020. The latest Index was published in January 2021. We came in eighth place (previously fourth place). Our position among the top ten confirms our continuous commitment to improving sustainable access to high-quality solutions for all. The ATM Index for 2021 recognized us for our performance in Research & Development, where we ranked fifth. Our leading role in Intellectual Property sharing also received accolades.

www.accesstomedicineindex.org

CDP climate and water

We've been reporting our climate actions to the CDP (formerly the Carbon Disclosure Project) since 2008. In 2020, our climate impact mitigation activities scored a B in the CDP, up from a C in 2019. This initiative measures the strategies companies use to reduce emissions along with their successes, as well as how they manage their risks and opportunities on climate change.

In addition to reporting on our climate action, since 2016 we have been reporting our water-related performance and processes to the CDP. In 2020, we again received a B for our water management practices.

The CDP evaluates companies' performance in the areas of climate and water on a scale from A to D-, with A being the top score.

www.cdp.net

EcoVadis rating

The independent rating agency EcoVadis evaluates suppliers from more than 160 countries across the categories of Environment, Labor and Human Rights, Ethics, and Sustainable Procurement. As a member of the Together for Sustainability initiative, we also undergo this assessment. We were again assessed in 2020, and with a score of 79/100 achieved platinum status, which put us among the top 1% of all participating companies.

www.ecovadis.com

ESG Rating from MSCI

MSCI ESG Research provides MSCI ESG Ratings on global public and a few private companies on a scale of AAA (leader) to CCC (laggard), according to exposure to industry-specific ESG risks and the ability to manage those risks relative to peers. In May 2020, we received a rating of AAA in the MSCI ESG Ratings assessment.

www.msci.com/esg-ratings

ESG Risk Rating from Sustainalytics

With the ESG Risk Rating Sustainalytics measures company's exposure to industry-specific material ESG risks and analyses how well companies are managing those risks. In December 2020, Sustainalytics ranked us 13th among 792 pharmaceutical companies with an overall “low” exposure to ESG risks.

www.sustainalytics.com

ESG company rating from ISS

In 2020, the Institutional Shareholder Services (ISS) group of companies again granted us Prime Status (“good” to “very good”) as in 2019.

www.issgovernance.com/esg

The 100 Most Sustainably Managed Companies in the World

In 2020, The Wall Street Journal newly ranked the world’s most sustainably managed companies focusing on companies’ ability to create long-term shareholder value. Among all companies ranked we took fourth place while reaching the first place in the subranking “Social and product issues management”. With the first place in the subranking we are recognized for our social initiatives such as our program to eliminate schistosomiasis.

www.wsj.com

The 200 most sustainable companies in Germany

In 2020, the magazine stern and the market research company Statista analyzed both the sustainability performance of German companies and the perception of these companies by citizens in the three ESG categories. Among 200 qualified companies, we took second place in the overall ranking on the most sustainable companies in Germany.

www.stern.de

sustainability indices

Ethibel Sustainability Index (ESI) Excellence Europe

Since 2015 we have been a constituent of the ESI Excellence Europe, a sustainability index that comprises the 200 top-rated European companies based on their corporate responsibility performance.

www.forumethibel.org

FTSE4Good Index Series

Since 2008, we have been included in the FTSE4Good Index Series, a leading international ethical investment stock market rating that annually measures the performance of companies in demonstrating strong environmental, social and governance practices.

www.ftserussell.com

STOXX® Global ESG Leaders Index

In 2020, our company was once again included in the STOXX Global ESG Leaders sustainability index, which assesses companies based on key environmental, social and governance criteria.

qontigo.com

Awards

Prize for research and development

The R&D 100 Awards are among the most prestigious innovation awards in the world, honoring research and development pioneers. In November 2019, one of these awards recognized our first-to-market innovation Eshmuno® CP-FT Resin, which can be used to efficiently remove aggregates from antibodies, thus lowering the risk to patients. Moreover, this product yields higher capacities than traditional methods and results in a smaller ecological footprint from manufacturing.

www.rdworldonline.com

Top Project of the Year Award

In July 2020, we received the "Top Project of the Year Award" from the Environment + Energy Leader journal for our web-based tool DOZN™. With DOZN™ users can estimate the green scores of their processes and products in order to increase their sustainability.

www.environmentalleader.com

HR Excellence Award

In 2020, we received the HR Excellence Award for our project "Empowering Leadership" to transform our leadership culture. By setting clear expectations, providing training for managers at all levels, as well as conducting communication campaigns, we have been able to achieve strong impact within the company and rising indicators of leadership quality.

www.hr-excellence-awards.de

Most Attractive Employers ranking

The success of our efforts is also confirmed by our ranking among the 100 most attractive employers for students and professional scientists in Germany. This index is published annually by employer branding specialist Universum and involves a survey of more than 47,000 people. In the category of Natural Sciences, we ranked eleventh out of 100 in the student survey.

www.universumglobal.com

Award from Science Magazine

Science, a leading peer-reviewed academic journal, once more named us a top employer. Almost 8,000 employees and managers from biotech and pharmaceutical companies took part in the magazine's online survey, ranking our company sixth in 2020.

www.sciencemag.org

Non-financial report

Part of the non-financial report

Index to the combined separate non-financial report

In publishing our combined separate non-financial report (referred to in the following as "non-financial report"), we are meeting the legal requirements. In accordance with sections 289b (3) and 298 (2) of the German Commercial Code, the separate non-financial report of the Merck Group has been combined with the separate non-financial report of our parent company (Merck KGaA) and incorporated into our Sustainability Report. The following index provides an overview of the content of the non-financial report and contains links to the passages in the Sustainability Report that are relevant to the non-financial report. Except for pointers to the Management Report in the Annual Report, pointers to other parts of the report or links to external websites are not included in this non-financial report.

As required by Sections 289d and 315c (3) of the German Commercial Code, we have prepared this report in line with the Global Reporting Initiative Standards ("comprehensive" option).

Description of our business model

Our business model as well as our Group structure, governance and strategy are described under Company profile.

Strategic and organizational approach to sustainability

Under Governance, we present external guidelines and projects to which we have made a commitment, along with Group-wide guidelines that are the cornerstone of our responsible governance. Our sustainability strategy sets out how we practice corporate responsibility, both in terms of strategy and at the organizational level.

Material aspects and topics

To determine the aspects and topics of relevance to the non-financial report, we conducted a materiality analysis that identified several issues that could not be assigned to any of the five aspects defined as minimum contents under section 289c (2) of the German Commercial Code. Along with these five aspects, we have therefore decided to report on the following additional material topics:

Aspect	Topic
Environmental matters	▪ Environmental stewardship (incl. production residues in the environment and abandoned hazardous waste) ▪ Greenhouse gas emissions ▪ Energy efficiency and renewable energy ▪ Plant and process safety ▪ Transport and warehouse safety ▪ Chemical product safety (incl. chemical labeling) ▪ Supply chain standards (incl. Mica supply chain)
Employee-related matters	▪ Health and safety ▪ Good leadership ▪ Employee engagement ▪ Employee development ▪ Recruiting and retaining employees (incl. work-life balance) ▪ Diversity ▪ Future of work
Social matters	▪ Patient safety ▪ Product-related crime ▪ Prices of medicines ▪ Responsible marketing ▪ Data protection
Respect for human rights	▪ Bioethics (incl. genome editing) ▪ Clinical studies ▪ Supply chain standards (incl. Mica supply chain)
Anti-corruption and anti-bribery	▪ Compliance ▪ Interactions with health systems
Other topics	▪ Innovation and R&D ▪ Digitalization

As part of our approach to comprehensive risk and opportunity management, we also identify current and potential risks and opportunities resulting from environmental, social and governance aspects. This includes tracking information on the gross risks in terms of potential damage and probability, as well as the residual net risks remaining after mitigation measures have been executed. We did not identify any net risks that fulfill the materiality criteria as set forth by section 289c (3) no. 3 and 4 of the German Commercial Code. Additional risks are described in the Report on Risks and Opportunities in the combined management report.

Aspect: Environmental matters

Under "Environmental matters", we report on environmental stewardship (including production residues in the environment and abandoned hazardous waste), greenhouse gas emissions, energy efficiency and renewable energies, plant and process safety, chemical product safety (including chemical labeling), transport and warehouse safety, and supply chain standards (including Mica supply chain).

Topic	Concepts incl. due diligence processes and outcome of activities
Environmental stewardship (incl. production residues in the environment and abandoned hazardous waste)	▪ Our approach to environmental stewardship ▪ How we structure environmental stewardship ▪ Our commitment: Standards and standard operating procedures ▪ Provisions for environmental protection ▪ Environmental stewardship projects and measures ▪ Goals and progress: Environmental stewardship
Greenhouse gas emissions	▪ Our contribution to climate action ▪ How we structure our climate action ▪ Our commitment: Standards and legal frameworks ▪ Climate action projects and measures ▪ Goals and progress: Climate action
Energy efficiency and renewable energies	▪ Our contribution to climate action ▪ How we structure our climate action ▪ Our commitment: Standards and legal frameworks ▪ Climate action projects and measures ▪ Goals and progress: Climate action
Plant and process safety	▪ Our approach to plant and process safety ▪ How we organize our plant and process safety ▪ Our commitment: Standards and legislation ▪ Plant and process safety projects and measures
Chemical product safety (incl. chemical labeling)	▪ Our approach to safe chemical products ▪ How we ensure chemical product safety ▪ Legal requirements and internal guidelines ▪ Chemical product safety projects and measures ▪ Goals and progress: Chemical product safety

Topic	Concepts incl. due diligence processes and outcome of activities
Transport and warehouse safety	■ Our approach to safe transport and storage ■ How we achieve transport and warehouse safety ■ Our commitment: Internal standards and international rules ■ Transport and warehouse safety projects and measures ■ Goals and progress: Transport and warehouse safety
Supply chain standards (incl. Mica supply chain)	■ Our approach to making our supply chains more sustainable ■ How we implement sustainability standards in the supply chain ■ Our commitment: Guidelines and standards ■ Supply chain standards projects and measures ■ Our approach to responsibility in the mica supply chain ■ How we organize our mica supply chain ■ Our commitment: Compliance with guidelines and standards ■ Mica supply chain projects and measures ■ Goals and progress: Supply chain standards

Aspect: Employee-related matters

Under employee-related matters, we report on concepts pertaining to being an attractive employer, which includes health and safety, good leadership, employee engagement, employee development, recruiting and retaining employees (including work-life balance), diversity, and future of work.

Topic	Concepts incl. due diligence processes and outcome of activities
Health and safety	■ Our approach to preventing accidents and promoting health ■ How we manage occupational health and safety ■ Our commitment: Policies and company agreements ■ Occupational health and safety projects and measures ■ Goals and progress: Health and safety
Good leadership	■ Our approach to good leadership ■ How we facilitate good leadership ■ Our commitment ■ Good leadership projects and measures

Employee engagement	▪ Our approach to employee engagement ▪ How we engage our employees ▪ Our commitment: Group-wide Social and Labor Standards Policy ▪ Fairness and dialogue projects and measures ▪ Goals and progress: Fairness and dialogue
Employee development	▪ Our approach to attracting and retaining talent ▪ How we organize recruiting, vocational training and advanced training ▪ Our commitment: Employee development guideline ▪ Projects and measures ▪ Goals and progress: Career with us
Recruiting and retaining employees (incl. work-life balance)	▪ Our approach to attracting and retaining talent ▪ How we organize recruiting, vocational training and advanced training ▪ Projects and measures ▪ Goals and progress: Career with us ▪ Our approach to ensuring a good work-life balance ▪ How we strengthen work-life balance ▪ Our commitment: Group guidelines and local regulations ▪ Work-life balance projects and measures
Diversity	▪ Our approach to diversity and inclusion ▪ Making diversity and inclusion a pillar of the company ▪ Our commitment: Industry-wide projects and regulations ▪ Diversity projects and measures ▪ Goals and progress: Diversity and inclusion
Future of work	▪ Digitalization in recruiting, vocational and advanced training ▪ Leveraging the opportunities of digitalization

Aspect: Social matters

“Social matters” encompasses our relationship with consumers. Under this heading, we report on concepts relating to patient safety, product-related crime, prices of medicines, responsible marketing, and data protection.

Topic	Concepts incl. due diligence processes and outcome of activities
Patient safety	▪ Our approach to ensuring patient safety ▪ How we monitor patient safety ▪ Our commitment: Guidelines and statutory requirements ▪ Patient safety projects and measures ▪ Goals and progress: Patient safety
Product-related crime	▪ Our approach to product-related crime ▪ How we are tackling product-related crime ▪ Our commitment: Group-wide guidelines and standards ▪ Product-related crime projects and measures ▪ Goals and progress: Product-related crime
Prices of medicines	▪ Our approach to pricing medicines ▪ Setting medicine prices ▪ Our commitment: Medicine price guidelines and principles ▪ Medicine pricing projects and measures
Responsible marketing	▪ Our approach to interacting with health systems ▪ How we ensure transparency and compliance ▪ Our commitment: Group-wide guidelines and industry standards ▪ Responsible marketing projects and measures
Data protection	▪ Our approach to data privacy ▪ How we ensure data privacy ▪ Our commitment: guidelines and standards ▪ Data privacy projects and measures

Aspect: Respect for human rights

Under "Respect for human rights", we report on concepts related to bioethics (including genome editing), clinical studies and supply chain standards (including Mica supply chain).

Topic	Concepts incl. due diligence processes and outcome of activities
Bioethics (incl. genome editing)	■ Our approach to ethical business conduct ■ How we assess bioethics and digital ethics ■ Our commitment: Identifying topics and issues early on ■ Bioethics projects and measures
Clinical studies	■ Our approach to safe and transparent clinical studies ■ How we govern clinical studies ■ Our commitment: International guidelines and requirements ■ Projects and measures for safe and transparent clinical studies
Supply chain standards (incl. Mica supply chain)	■ Our approach to making our supply chains more sustainable ■ How we implement sustainability standards in the supply chain ■ Our commitment: Guidelines and standards ■ Supply chain standards projects and measures ■ Our approach to responsibility in the mica supply chain ■ How we organize our mica supply chain ■ Our commitment: Compliance with guidelines and standards ■ Mica supply chain projects and measures ■ Goals and progress: Supply chain standards

Aspect: Anti-corruption and anti-bribery

Under anti-corruption and anti-bribery, we report on compliance and interactions with health systems.

Topic	Concepts incl. due diligence processes and outcome of activities
Compliance	▪ Our approach to compliance ▪ How we ensure compliance ▪ Our commitment: guidelines and standards ▪ Compliance projects and measures ▪ Goals and progress: Compliance management
Interactions with health systems	▪ Our approach to interacting with health systems ▪ How we ensure transparency and compliance ▪ Our commitment: Group-wide guidelines and industry standards ▪ Projects and measures for interactions with health systems

Other topics

In the following section, we report on material issues that are not covered in any of the five minimum aspects stipulated in section 289c (2) of the German Commercial Code:

Topic	Concepts incl. due diligence processes and outcome of activities
Innovation and R&D	▪ Our approach to creating innovation ▪ How we drive innovation ▪ Our commitment: Protecting innovative ideas ▪ Innovation and R&D projects and measures
Digitalization	▪ Our approach to creating innovation

GRI content index

General disclosures

GRI Standards and Disclosure Number		Comment	Reference
Organizational profile			
102-1	Name of the organization		Company profile
102-2	Activities, brands, products, and services		Company profile Products & Industries
102-3	Location of headquarters		Company profile
102-4	Location of operations		Company profile List of shareholdings
102-5	Ownership and legal form		Company profile
102-6	Markets served		Company profile Macroeconomic and Sector-Specific Environment
102-7	Scale of the organization		Company profile Net sales Capitalization Consolidated Balance Sheet
102-8	Information on employees and other workers	Supervised workers such as temps are not logged in our employee data system.	Indicators: employees
102-9	Supply chain		Supply chain standards Mica supply chain
102-10	Significant changes to the organization and its supply chain		Company profile Report profile Fundamental Information about the Group
102-11	Precautionary Principle or approach		Sustainability strategy Patient safety Transport and warehouse safety Chemical product safety Health and safety Environmental stewardship Climate action Plant and process safety
102-12	External initiatives		Governance Stakeholder dialogue Sustainable Development Goals Global strategy Open innovation sharing Compliance management Human rights Mica supply chain Chemical product safety Diversity and inclusion

102-13	Membership of associations		Stakeholder dialogue Animal welfare Global strategy Human rights Mica supply chain Transport and warehouse safety Diversity and inclusion
Strategy			
102-14	Statement from senior decision-maker		Letter from the CEO
102-15	Key impacts, risks, and opportunities		Sustainability strategy Materiality analysis Sustainable Development Goals Report on Risks and Opportunities
Ethics and integrity			
102-16	Values, principles, standards, and norms of behavior		Sustainability strategy Animal welfare Governance Compliance management Responsible interactions with health systems Human rights Supply chain standards Sustainable Development Goals Bioethics Clinical studies Product-related crime Transport and warehouse safety Chemical product safety Good Leadership Career with us Fairness and dialogue Diversity and inclusion Work-life balance Health and safety Environmental stewardship Climate action Waste and recycling
102-17	Mechanisms for advice and concerns about ethics		Compliance management Responsible interactions with health systems Human rights Bioethics Clinical studies Animal welfare Diversity and inclusion Health and safety Indicators: business ethics

Governance

102-18	Governance structure		Sustainability strategy Management Statement on Corporate Governance
102-19	Delegating authority		Sustainability strategy Statement on Corporate Governance
102-20	Executive-level responsibility for economic, environmental, and social topics		Sustainability strategy Environmental stewardship Good Leadership
102-21	Consulting stakeholders on economic, environmental, and social topics		Sustainability strategy Stakeholder dialogue Materiality analysis Global strategy Responsible interactions with health systems
102-22	Composition of the highest governance body and its committees		Management Statement on Corporate Governance The Executive Board The Supervisory Board Objectives of the Supervisory Board with respect to its composition
102-23	Chair of the highest governance body		Management Statement on Corporate Governance
102-24	Nominating and selecting the highest governance body		Diversity and inclusion Management Statement on Corporate Governance Gender quota Diversity policy Objectives of the Supervisory Board with respect to its composition
102-25	Conflicts of interest		Compliance management Responsible interactions with health systems Information on corporate governance practices
102-26	Role of highest governance body in setting purpose, values, and strategy		Sustainability strategy Values and compliance Report of the Supervisory Board
102-27	Collective knowledge of highest governance body		Sustainability strategy The Executive Board Statement on Corporate Governance
102-28	Evaluating the highest governance body's performance		Board of Partners The Supervisory Board Articles of Association Statement on Corporate Governance
102-29	Identifying and managing economic, environmental, and social impacts		Sustainability strategy Materiality analysis Compliance management Report on Risks and Opportunities Statement on Corporate Governance
102-30	Effectiveness of risk management processes		Sustainability strategy Compliance management Report on Risks and Opportunities Report of the Supervisory Board

102-31	Review of economic, environmental, and social topics		Sustainability strategy Compliance management Report on Risks and Opportunities Report of the Supervisory Board
102-32	Highest governance body’s role in sustainability reporting		Report profile
102-33	Communicating critical concerns		Compliance management Values and compliance
102-34	Nature and total number of critical concerns	Due to the sensitive nature of critical concerns these figures are only for internal use (except where external reporting is legally required). Significant additions to or changes in the risk register are disclosed in due course to the Executive Board on an ad hoc basis, as per stipulations in the risk policy.	Compliance management Values and compliance
102-35	Remuneration policies		Compensation report
102-36	Process for determining remuneration		Career with us Compensation report
102-37	Stakeholders’ involvement in remuneration		Career with us Compensation report Voting results Annual General Meeting 2020
102-38	Annual total compensation ratio	Competitive salaries and additional benefits not only increase our attractiveness as an employer; they also motivate our people and build loyalty to the company. The compensation we offer is based on market analyses in the relevant field and the value of the respective position, as well as the employee's skill set and performance. Our Global Rewards Policy defines the framework for compensation and benefits across the entire Group. As far as possible, we strive to offer all our employees comparable compensation structures. Furthermore, we monitor Compliance with minimum standards. We do not consider the information required under GRI 102-38 and GRI 102-39 to be relevant to assessing the fairness of our compensation structures.	Career with us

102-39	Percentage increase in annual total compensation ratio	Competitive salaries and additional benefits not only increase our attractiveness as an employer; they also motivate our people and build loyalty to the company. The compensation we offer is based on market analyses in the relevant field and the value of the respective position, as well as the employee's skill set and performance. Our Global Rewards Policy defines the framework for compensation and benefits across the entire Group. As far as possible, we strive to offer all our employees comparable compensation structures. Furthermore, we monitor Compliance with minimum standards. We do not consider the information required under GRI 102-38 and GRI 102-39 to be relevant to assessing the fairness of our compensation structures.	Career with us
Stakeholder engagement			
102-40	List of stakeholder groups		Stakeholder dialogue
102-41	Collective bargaining agreements		Fairness and dialogue
102-42	Identifying and selecting stakeholders		Stakeholder dialogue
102-43	Approach to stakeholder engagement		Stakeholder dialogue Materiality analysis Good Leadership Fairness and dialogue
102-44	Key topics and concerns raised		Materiality analysis Bioethics Transport and warehouse safety Fairness and dialogue

Reporting practice

102-45	Entities included in the consolidated financial statements		Report profile Company profile Notes to the Consolidated Financial Statements
102-46	Defining report content and topic Boundaries		Materiality analysis Report profile
102-47	List of material topics		Materiality analysis
102-48	Restatements of information		Report profile
102-49	Changes in reporting		Materiality analysis
102-50	Reporting period		Report profile
102-51	Date of most recent report		Report profile
102-52	Reporting cycle		Report profile
102-53	Contact point for questions regarding the report		Report profile
102-54	Claims of reporting in accordance with the GRI Standards		GRI Content Index Report profile
102-55	GRI content index		GRI Content Index
102-56	External assurance		Report profile Assurance Report

Economic standards

GRI Standards and Disclosure Number		Comment	Reference
GRI 201: ECONOMIC PERFORMANCE 2016			
103-1	Explanation of the material topic and its Boundary		Company profile Statement on Corporate Governance Economic performance Pension schemes Report on Risks and Opportunities
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
201-1	Direct economic value generated and distributed		Indicators: employees Indicators: economics Indicators: community Community engagement Consolidated Income Statement Consolidated Cash Flow Statement Operating Activities Personnel expenses
201-2	Financial implications and other risks and opportunities due to climate change	We report in detail on various aspects of climate change as part of our participation in the CDP (formerly known as the Carbon Disclosure Project).	Water management CDP Report on Risks and Opportunities
201-3	Defined benefit plan obligations and other retirement plans		Indicators: employees Pension schemes
201-4	Financial assistance received from government		Accounting: Property, plant and equipment Research and development costs
GRI 202: MARKET PRESENCE 2016			
103-1	Explanation of the material topic and its Boundary		Career with us
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	This indicator is not relevant to us, which is why we do not collect data on the ratio of the standard entry level wage compared to local minimum wage. Our Global Rewards Policy applies to all our subsidiaries worldwide and guarantees a systematic compensation structure. Both base pay and short-term variable compensation are oriented to the median base pay of the relevant reference market. Our pay brackets are reviewed on an annual basis and reflect market conditions. It goes without saying that we always adhere to local minimum wage levels.	Career with us

202-2	Proportion of senior management hired from the local community	We promote both the recruitment of local employees and their international deployment at all hierarchical levels. We do not record the proportion of local managers, as this is not relevant for the strategic personnel management of our company.	Good Leadership
GRI 203: INDIRECT ECONOMIC IMPACTS 2016			
103-1	Explanation of the material topic and its Boundary		Global strategy Focus programs Prices of medicines Pharmaceutical supply chain Health awareness
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
203-1	Infrastructure investments and services supported		Global strategy Pharmaceutical supply chain Mica supply chain Community engagement
203-2	Significant indirect economic impacts		Prices of medicines Pharmaceutical supply chain Focus programs Community engagement
GRI 204: PROCUREMENT PRACTICES 2016			
103-1	Explanation of the material topic and its Boundary		Supply chain standards Mica supply chain Human rights
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
204-1	Proportion of spending on local suppliers	We have no internal guidelines stipulating that preference be given to local vendors in allocating contracts and therefore do not collect this type of data. In some countries local laws require contracts to be awarded to regional suppliers.	Supply chain standards
GRI 205: ANTI-CORRUPTION 2016			
103-1	Explanation of the material topic and its Boundary		Compliance management Supply chain standards Values and compliance
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
205-1	Operations assessed for risks related to corruption		Compliance management Indicators: business ethics Values and compliance Report on Risks and Opportunities
205-2	Communication and training about anti-corruption policies and procedures		Compliance management Indicators: business ethics
205-3	Confirmed incidents of corruption and actions taken	As applicable, we report on risks from litigation and legal proceedings in our Report on Risks and Opportunities.	Compliance management Indicators: business ethics Report on Risks and Opportunities

GRI 206: ANTI-COMPETITIVE BEHAVIOR 2016			
103-1	Explanation of the material topic and its Boundary		Compliance management
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		Indicators: business ethics

Additional material topics

TECHNOLOGY (Innovation and R&D, Digitalization)			
103-1	Explanation of the material topic and its Boundary		Innovation and digitalization Good Leadership Career with us
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
DATA PROTECTION			
103-1	Explanation of the material topic and its Boundary		Data privacy
103-2	The management approach and its components		
103-3	Evaluation of the management approach		

Environmental standards

GRI Standards and Disclosure Number		Comment	Reference
GRI 301: MATERIALS 2016			
103-1	Explanation of the material topic and its Boundary	We only record the weight of the raw materials that are directly used in our pharmaceuticals and chemicals, which came to 387 kilotons in 2020 (2019: 434 kilotons). Additionally, we utilize operating supplies and packaging materials such as folding boxes, glass bottles and ampules.	Sustainable product design Packaging and recycling
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
301-1	Materials used by weight or volume	We only record the weight of the raw materials that are directly used in our pharmaceuticals and chemicals, which came to 387 kilotons in 2020 (2019: 434 kilotons). Additionally, we utilize operating supplies and packaging materials such as folding boxes, glass bottles and ampules.	Sustainable product design Packaging and recycling
301-2	Recycled input materials used	In all our endeavors, we attempt to efficiently utilize materials and recycle as much as possible. Where feasible, we use recycled materials (in packaging, for instance.) Overall, our company considers material consumption to be a major concern. There are few opportunities to use recycled material in our production processes, because our business model puts us at the start of the value chain. We therefore do not collect such data at the Group level. Individual data and measures are reported in the respective chapters.	Sustainable product design Packaging and recycling
301-3	Reclaimed products and their packaging materials	Owing to the multitude of products we supply and the minimal comparability of our various initiatives, we do not collect quantitative data at the Group level. The individual measures taken by our various businesses are reported in the respective chapters.	Sustainable product design Packaging and recycling
GRI 302: ENERGY 2016			
103-1	Explanation of the material topic and its Boundary		Climate action Environmental stewardship Sustainable product design
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
302-1	Energy consumption within the organization		Climate action Indicators: environment

302-2	Energy consumption outside of the organization	To date, we have not been tracking energy consumption outside our organization, but we are working to create more transparency on our Scope 3 emissions. In particular, we are currently analyzing Scope 3 emissions from categories 1, 4 and 10. In the coming years, we will be including all Scope 3 categories in our reporting and will also be incorporating indirect emissions from energy consumption outside our organization as well.	Indicators: environment
302-3	Energy intensity		Climate action Indicators: environment
302-4	Reduction of energy consumption		Climate action Indicators: environment
302-5	Reductions in energy requirements of products and services		Sustainable product design
GRI 303: WATER AND EFFLUENTS 2018			
103-1	Explanation of the material topic and its Boundary		Water management Environmental stewardship
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
303-1	Interactions with water as a shared resource		Water management
303-2	Management of water discharge-related impacts		Water management
303-3	Water withdrawal	The amount of seawater and produced water withdrawn is not significant and is therefore not reported separately.	Water management Indicators: environment
303-4	Water discharge	The volume of seawater and groundwater discharged is not significant and is therefore not reported separately.	Water management Indicators: environment
303-5	Water consumption	Most of the water we use in our production streams is released back into aquatic ecosystems through direct or indirect discharges. Evaporation processes are not a material part of our manufacturing operations. At individual manufacturing sites, we incorporate small amounts of water into our products. We are working to implement systems to track this. Because we lack the capacity for water storage, such information is irrelevant to our company.	Water management

GRI 304: BIODIVERSITY 2016			
103-1	Explanation of the material topic and its Boundary		Environmental stewardship Sustainable product design
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Our land use planning takes biodiversity impacts into account, with appropriate protective measures being taken on a case-by-case basis.	Environmental stewardship
304-2	Significant impacts of activities, products, and services on biodiversity		Environmental stewardship
304-3	Habitats protected or restored		Environmental stewardship
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Our land use planning takes biodiversity impacts into account, with appropriate protective measures being taken on a case-by-case basis.	Environmental stewardship

GRI 305: EMISSIONS 2016			
103-1	Explanation of the material topic and its Boundary		Climate action Environmental stewardship
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
305-1	Direct (Scope 1) GHG emissions		Climate action Indicators: environment
305-2	Energy indirect (Scope 2) GHG		Climate action Indicators: environment
305-3	Other indirect (Scope 3) GHG emissions		Climate action Indicators: environment CDP
305-4	GHG emissions intensity		Climate action Indicators: environment
305-5	Reduction of GHG emissions		Climate action Packaging and recycling Indicators: environment CDP
305-6	Emissions of ozone-depleting substances (ODS)		Indicators: environment
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		Indicators: environment

GRI 306: WASTE 2020			
103-1	Explanation of the material topic and its Boundary		Waste and recycling Environmental stewardship
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
306-1	Waste generation and significant waste-related impacts		Waste and recycling
306-2	Management of significant waste-related impacts		Waste and recycling
306-3	Waste generated		Waste and recycling
306-4	Waste diverted from disposal		Indicators: environment
306-5	Waste directed to disposal		Waste and recycling Indicators: environment
GRI 307: ENVIRONMENTAL COMPLIANCE 2016			
103-1	Explanation of the material topic and its Boundary		Environmental stewardship
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
307-1	Non-Compliance with environmental laws and regulations		Environmental stewardship
GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT 2016			
103-1	Explanation of the material topic and its Boundary		Supply chain standards Mica supply chain
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
308-1	New suppliers that were screened using environmental criteria		Supply chain standards
308-2	Negative environmental impacts in the supply chain and actions taken		Supply chain standards Mica supply chain

social standards

GRI Standards and Disclosure Number		Comment	Reference
GRI 401: EMPLOYMENT 2016			
103-1	Explanation of the material topic and its Boundary		Career with us Fairness and dialogue Work-life balance Human rights
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
401-1	New employee hires and employee turnover		Indicators: employees
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Part-time employees receive the same eligibility for employee benefits as full-time workers. Employees with temporary contracts, however, are not entitled to all company benefits, such as a company pension.	Career with us
401-3	Parental leave		Work-life balance Indicators: employees
GRI 402: LABOR/MANAGEMENT RELATIONS 2016			
103-1	Explanation of the material topic and its Boundary		Fairness and dialogue
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
402-1	Minimum notice periods regarding operational changes	The regulations on periods of notice vary worldwide. We apply the rules that are in force locally. There is no need for us to track periods of notice at Group level.	

GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018

103-1	Explanation of the material topic and its Boundary	The disclosures under GRI 403 relate to our employees and other supervised staff, both internal and external. The employees of third-party contractors are not included.	Health and safety Transport and warehouse safety
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
403-1	Occupational health and safety management system		Health and safety
403-2	Hazard identification, risk assessment, and incident investigation		Health and safety Plant and process safety
403-3	Occupational health services		Health and safety
403-4	Worker participation, consultation, and communication on occupational health and safety	Occupational health and safety committees are required by law in Germany. All employees of Merck KGaA are therefore represented by such committees, which operate at the site level. These workers account for around 15% of our total workforce. The majority of sites outside Germany also have health and safety committees to represent their employees. The organization of these committees is the responsibility of our individual sites. Health and safety issues are governed Group-wide by our EHS Policy. The organizational implementation of this policy is the responsibility of our individual sites and is subject to local laws and regulations. Merck KGaA which accounts for approximately 15% of our total workforce, has works agreements in place on occupational health and safety.	Health and safety
403-5	Worker training on occupational health and safety		Health and safety Transport and warehouse safety Plant and process safety
403-6	Promotion of worker health		Health and safety
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		Health and safety Transport and warehouse safety Human rights Plant and process safety
403-8	Workers covered by an occupational health and safety management system		Health and safety
403-9	Work-related injuries	We have identified the lost time injury rate (LTIR) as a key performance indicator for our company.	Health and safety Plant and process safety Indicators: employees

403-10	Work-related ill health	No fatalities resulting from verified work-related illnesses were reported to Merck during the reporting period. Regarding types of work-related illnesses we do not collect quantitative data at the Group level. Our sites may collect occupational illness data as deemed necessary.	Health and safety Plant and process safety Indicators: employees
GRI 404: TRAINING AND EDUCATION 2016			
103-1	Explanation of the material topic and its Boundary		Good Leadership Career with us Diversity and inclusion
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
404-1	Average hours of training per year per employee	We do not keep track of the average hours our employees spend on vocational training and continuing education because this indicator does not have any bearing on the quality or success of our efforts.	
404-2	Programs for upgrading employee skills and transition assistance programs		Supply chain standards Human rights Product-related crime Transport and warehouse safety Good Leadership Career with us Fairness and dialogue Diversity and inclusion Work-life balance Environmental stewardship Plant and process safety
404-3	Percentage of employees receiving regular performance and career development reviews		Career with us Indicators: employees
GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016			
103-1	Explanation of the material topic and its Boundary		Diversity and inclusion Fairness and dialogue Objectives of the Supervisory Board with respect to its composition
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
405-1	Diversity of governance bodies and employees		Diversity and inclusion Indicators: employees The Executive Board The Supervisory Board Objectives of the Supervisory Board with respect to its composition

405-2	Ratio of basic salary and remuneration of women to men	We cannot make any statements about the ratio of the basic salary and remuneration of women compared with men because our compensation systems and processes do not distinguish between women and men. The salaries we offer are predicated on the respective job description and are based on our Global Job Catalog, which has fixed salary bands that are identical for men and women. Variable salary components that fall under performance-based compensation are paid on the basis of whether mutually agreed targets have been achieved. A performance management system governs this process.	Career with us
GRI 406: NON-DISCRIMINATION 2016			
103-1	Explanation of the material topic and its Boundary		Diversity and inclusion Fairness and dialogue
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
406-1	Incidents of discrimination and corrective actions taken		Diversity and inclusion Indicators: business ethics
GRI 407: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING 2016			
103-1	Explanation of the material topic and its Boundary		Supply chain standards Human rights Fairness and dialogue
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk		Supply chain standards Human rights
GRI 408: CHILD LABOR 2016			
103-1	Explanation of the material topic and its Boundary		Supply chain standards Mica supply chain Human rights Fairness and dialogue
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
408-1	Operations and suppliers at significant risk for incidents of child labor		Supply chain standards Mica supply chain Human rights
GRI 409: FORCED OR COMPULSORY LABOR 2016			
103-1	Explanation of the material topic and its Boundary		Supply chain standards Human rights Fairness and dialogue
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor		Supply chain standards Human rights

GRI 410: SECURITY PRACTICES 2016			
103-1	Explanation of the material topic and its Boundary		Human rights
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
410-1	Security personnel trained in human rights policies or procedures	We are in the process of formalizing our processes for security risk assessments as part of our security governance framework and are planning to integrate human rights aspects into security-relevant processes such as trainings for security personnel in the future.	
GRI 412: HUMAN RIGHTS ASSESSMENT 2016			
103-1	Explanation of the material topic and its Boundary		Human rights Fairness and dialogue
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
412-1	Operations that have been subject to human rights reviews or impact assessments		Human rights Indicators: business ethics
412-2	Employee training on human rights policies or procedures		Human rights
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening		Human rights
GRI 414: SUPPLIER SOCIAL ASSESSMENT 2016			
103-1	Explanation of the material topic and its Boundary		Supply chain standards Mica supply chain Human rights
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
414-1	New suppliers that were screened using social criteria		Supply chain standards
414-2	Negative social impacts in the supply chain and actions taken		Supply chain standards Mica supply chain
GRI 415: PUBLIC POLICY 2016			
103-1	Explanation of the material topic and its Boundary		Stakeholder dialogue
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
415-1	Political contributions		Stakeholder dialogue

GRI 416: CUSTOMER HEALTH AND SAFETY 2016			
103-1	Explanation of the material topic and its Boundary		Clinical studies Patient safety Product-related crime Chemical product safety Sustainable product design Report on Risks and Opportunities
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
416-1	Assessment of the health and safety impacts of product and service categories		Chemical product safety
416-2	Incidents of non-Compliance concerning the health and safety impacts of products and services	As applicable, we report on risks from litigation and legal proceedings in our Report on Risks and Opportunities.	Clinical studies Chemical product safety Report on Risks and Opportunities
GRI 417: MARKETING AND LABELING 2016			
103-1	Explanation of the material topic and its Boundary		Compliance management Responsible interactions with health systems Patient safety Chemical product safety
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
417-1	Requirements for product and service information and labeling	All pharmaceuticals are subject to reporting and notification requirements, which we fulfill. In line with the statutory requirements, we provide our customers with easily accessible and relevant information on the safe handling and use of our chemical products. We report on the individual requirements in the respective chapters.	Patient safety Chemical product safety
417-2	Incidents of non-Compliance concerning product and service information and labeling		Patient safety Chemical product safety Report on Risks and Opportunities
417-3	Incidents of non-Compliance concerning marketing communications	As applicable, we report on risks from litigation and legal proceedings in our Report on Risks and Opportunities.	Report on Risks and Opportunities
GRI 418: CUSTOMER PRIVACY 2016			
103-1	Explanation of the material topic and its Boundary		Data privacy Clinical studies
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		Data privacy Clinical studies Indicators: business ethics
GRI 419: SOCIOECONOMIC Compliance 2016			
103-1	Explanation of the material topic and its Boundary		Compliance management Report on Risks and Opportunities
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
419-1	Non-Compliance with laws and regulations in the social and economic area	As applicable, we report on risks from litigation and legal proceed-	Report on Risks and Opportunities

		ings in our Report on Risks and Opportunities.	

Additional material topics

ETHICAL CONDUCT (bioethics, clinical studies, animal welfare)			
103-1	Explanation of the material topic and its Boundary		Animal welfare Bioethics Clinical studies
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
HEALTH FOR ALL (access to health, prices of medicines, health awareness)			
103-1	Explanation of the material topic and its Boundary		Global strategy Focus programs Open innovation sharing Pharmaceutical supply chain Prices of medicines Health awareness
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
PRODUCT-RELATED CRIME			
103-1	Explanation of the material topic and its Boundary		Product-related crime
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
COMMUNITY ENGAGEMENT			
103-1	Explanation of the material topic and its Boundary		Community engagement
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
FUTURE OF WORK			
103-1	Explanation of the material topic and its Boundary		Good Leadership Career with us
103-2	The management approach and its components		
103-3	Evaluation of the management approach		

Global Compact COP

2020 UN Global Compact Communication on Progress

We have been a participant in the United Nations Global Compact since 2005. As a signatory to the initiative, we have committed ourselves to ten principles derived from key UN conventions on human rights, labor, environment, and anti-corruption. At the same time, the UN Global Compact calls on all participating companies to work to implement these principles within their own sphere of influence.

The following table summarizes the key actions we took in 2020 to advance the principles of the Global Compact.

COMMUNICATION ON PROGRESS

UN GLOBAL COMPACT

This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

Link: www.unglobalcompact.org

Human rights

Principle 1:	**Key actions in 2020:**	**Relevant GRI disclosures:**	**Reference:**
Businesses should support and respect the protection of internationally proclaimed human rights.	▪ Monitored our human rights performance and practices through our "Compliance Risk Reporting and Self-Monitoring Process" ▪ Incorporated human rights and modern slavery into our "EHS StartUp!" training for new EHS managers ▪ Offered e-learning courses on our Human Rights Charter and our Social and Labor Standards Policy, targeted to all managing directors and senior leaders reporting directly to the Executive Board ▪ Integrated humans rights into our Site Security Standard ▪ Adopted and published our Conflict Mineral Charter ▪ Analyzed human rights risks connected to the deployment of new technologies	103-2: 412-1, 412-2	Compliance management Human rights

Principle 2: Businesses should make sure that they are not complicit in human rights abuses.	**Key actions in 2020:** ▪ Invited suppliers to a Together for Sustainability seminar in Asia ▪ Conducted internal and external sustainability audits and inspections of suppliers and collected self-reported information ▪ Held the presidency of the Responsible Mica Initiative	**Relevant GRI disclosures:** 412-3, 414-1, 414-2	**Reference:** Compliance management Supply chain standards Mica supply chain Human rights

Labor standards

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	**Key actions in 2020:** ▪ Conducted internal audits on workplace matters covered in our Human Rights Charter, which are specified in more detail in our Social and Labor Standards Policy ▪ Regularly and extensively included local employee representatives in company decision-making ▪ Reviewed human rights issues within the scope of our Site Security Risk Assessments ▪ Kept track of human rights issues through our "Compliance Risk Reporting and Self-Monitoring Process"	**Relevant GRI disclosures:** 102-41, 402-1, 407-1	**Reference:** Compliance management Human rights Fairness and dialogue
Principle 4: Businesses should support the elimination of all forms of forced and compulsory labor.	**Key measures in 2020** ▪ Conducted internal audits on workplace matters covered in our Human Rights Charter, which are specified in more detail in our Social and Labor Standards Policy ▪ Published on our website our UK Modern Slavery Statement, which has been endorsed by our Executive Board ▪ Incorporated human rights and modern slavery into our "EHS StartUp!" training for new EHS managers	**Relevant GRI disclosures:** 409-1	**Reference:** Compliance management Supply chain standards Human rights Fairness and dialogue

Principle 5: Businesses should support the effective abolition of child labor.	**Key measures in 2020**	**Relevant GRI disclosures:**	**Reference:**
	▪ Conducted internal audits on workplace matters covered in our Human Rights Charter, which are specified in more detail in our Social and Labor Standards Policy ▪ Held the presidency of the Responsible Mica Initiative ▪ Conducted internal and external sustainability audits and inspections of suppliers and collected self-reported information	408-1	Compliance management Supply chain standards Mica supply chain Human rights Fairness and dialogue
Principle 6: Businesses should support the elimination of discrimination in respect of employment and occupation.	**Key actions in 2020:**	**Relevant GRI disclosures:**	**Reference:**
	▪ Developed goals and measures to achieve a more balanced gender structure across different hierarchical levels of our business sectors exceeded our 2021 target of maintaining a 30% representation of women (2020: 35%) in leadership roles (Role 4+) ▪ Supported numerous local and global employee networks ▪ Expanded the mandate of our Diversity Council in terms of LGBTQI+, disability and ethnicity ▪ Became a sustaining member of Charta der Vielfalt e.V., a German organization that promotes diversity in the workplace ▪ Executed a Group-wide training program on unconscious bias ▪ Expanded our flexible work options	102-8, 202-1, 202-2, 401-1, 401-3, 404-1, 404-3, 405-1, 405-2, 406-1	Diversity and inclusion Work-life balance

Environmental stewardship

Principle	Key actions in 2020	Relevant GRI disclosures	Reference
Principle 7: Businesses should support a precautionary approach to environmental challenges.	**Key actions in 2020:** ▪ Passed third-party ISO 14001:2015 audits at 13 sites ▪ Performed 10 internal EHS audits, with all audited sites being rated as "good" or "satisfactory" ▪ Reduced CO_2 emissions around 25% below our 2006 baseline (2019: 15%) amid operating business growth (2020 reduction target: 20% below 2006 baseline) ▪ Defined new climate action targets for 2030 and 2040 ▪ Took action to lower greenhouse gas emissions ▪ Reduced our water consumption at sites in water-stressed areas by 27% relative to the 2016 baseline (2019: 21%) ▪ Defined new water targets for 2025 and 2030 ▪ Worked towards shrinking the environmental footprint of our waste by 5% by 2025, as measured by our waste scoring system. In 2020, we achieved a 4.6% reduction (2019: 1.6%) ▪ Took measures to ensure product safety (for instance REACH, GHS), plant and process safety, and transport and warehouse safety (such as internal EHS audits)	**Relevant GRI disclosures:** 201-2, 301-1, 302-1, 303-1, 305-1, 305-2, 305-3, 305-6, 305-7	**Reference:** Chemical product safety Transport and warehouse safety Environmental stewardship Climate action Waste and recycling Water management Plant and process safety
Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.	**Key actions in 2020:** ▪ Systematically examined potential energy savings at our production sites ▪ Commercialized greener alternative products such as Cyrene™, our Stericup E filtration system and our microplastic-free functional filler RonaFlair ▪ Deployed reusable and recyclable packaging, which we also offer to our customers ▪ Offered sustainable mobility options to employees (such as "Jobticket" public transit passes and shared bicycles) ▪ Installed at our global headquarters an extensive electric vehicle charging infrastructure, part of which is available to our employees for their own personal use	**Relevant GRI disclosures:** 301 - 308	**Reference:** Sustainable product design Packaging and recycling Climate action

Principle 9:	Key measures in 2020	Relevant GRI disclosures:	Reference:
Businesses should encourage the development and diffusion of environmentally friendly technologies.	▪ Leveraged DOZN™, our web-based tool for evaluating greener alternatives to various chemicals. It is also available in a customer-facing version. ▪ Developed sustainable products such as liquid crystal technologies, raw materials for natural cosmetics and "greener" alternatives to chemicals expanded our range of "green" solvents ▪ Reduced packaging materials and deployed more sustainable packaging as part of our SMASH Packaging sustainable packaging strategy ▪ Continued to expand the recycling programs for our Life Science and Performance Materials customers	302-4, 302-5, 305-5	Sustainable product design Packaging and recycling

Anti-corruption

Principle 10:	Key measures in 2020	Relevant GRI disclosures:	Reference:
Businesses should work against corruption in all its forms, including extortion and bribery.	▪ Performed 52 internal audits on corruption-related risks ▪ Expanded our range of e-learning courses to include anti-corruption and money laundering ▪ Expanded and carried out anti-corruption, antitrust, data privacy, and healthcare compliance training ▪ Continued to operate our SpeakUp Line, a free hotline for reporting corruption anonymously ▪ Formed partnerships and engaged stakeholders to coordinate and enhance anti-corruption efforts ▪ Published annual EFPIA transparency reports ▪ Rolled out new guiding principles and standards for ethical interactions with health systems	102-16, 102-17, 205-1, 205-2, 205-3, 415-1	Compliance management Responsible interactions with health systems

Assurance reports

Assurance report NFR

Part of the non-financial report

Limited Assurance Report of the Independent Auditor regarding the combined separate non-financial report[1]

To the Supervisory Board of Merck KGaA, Darmstadt

We have performed an independent limited assurance engagement on the non-financial statement of Merck KGaA (further "Company" or "Merck") according to § 315b of the German Commercial Code (HGB), that is combined with the non-financial statement of the parent company in accordance with § 289b HGB and integrated in the Sustainability Report 2020 of Merck (further "combined separate non-financial report") for the period from January 1 to December 31, 2020.

Management's Responsibility

The legal representatives of Merck are responsible for the preparation of the combined separate non-financial report in accordance with §§ 315b, 315c in conjunction with 289b to 289e HGB.

This responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the combined separate non-financial report and the use of assumptions and estimates for individual disclosures which are reasonable under the given circumstances. Furthermore, the legal representatives are responsible for the internal controls they deem necessary for the preparation of the combined separate non-financial report that is free of – intended or unintended – material misstatements.

Practitioner's Responsibility

It is our responsibility to express a conclusion on the combined separate non-financial report based on our work performed within a limited assurance engagement.

We conducted our work in the form of a limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information", published by IAASB. Accordingly, we have to plan and perform the assurance engagement in such a way that we obtain limited assurance as to whether any matters have come to our attention that cause us to believe that the combined separate non-financial report of the Company for the period from January 1 to December 31, 2020, has not been prepared, in all material respects in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB. We do not, however, issue a separate conclusion for each disclosure. As the assurance procedures performed in a limited assurance engagement are less comprehensive than in a reasonable assurance engagement, the level of assurance obtained is substantially lower. The choice of assurance procedures is subject to the auditor's own judgement.

Within the scope of our engagement, we performed, amongst others, the following procedures:

- Inquiries of group-level personnel who are responsible for the materiality analysis in order to understand of the processes for determining material topics and respective reporting boundaries for Merck
- A risk analysis, including media research, to identify relevant information on Merck's sustainability performance in the reporting period
- Evaluation of the design and the implementation of systems and processes for the collection, processing and monitoring of disclosures, including data consolidation, on environmental, employee and social matters, respect for human rights, and anti- corruption and bribery matters
- Inquiries of group-level personnel who are responsible for determining disclosures on concepts, due diligence processes, results and risks, performing internal control functions and consolidating disclosures
- Inspection of selected internal and external documents
- Analytical procedures for the evaluation of data and of the trends of quantitative disclosures as reported at group level by all sites

[1] Our engagement applied to the German version of the combined separate non-financial report 2020. This text is a translation of the Independent Assurance Report issued in German, whereas the German text is authoritative.

- Evaluation of local data collection, validation and reporting processes as well as of the reliability of reported data based on a sample of the sites in Hometown in the USA and in Nantong in China in the form of virtual meetings
- Assessment of the overall presentation of the disclosures

As described in the combined separate non-financial report, Merck engaged external providers to perform assessments and audits. The evaluation of the adequacy and accuracy of the conclusions from these external assessments was not part of our limited assurance engagement.

In our opinion, we obtained sufficient and appropriate evidence for reaching a conclusion for the assurance engagement.

Independence and Quality Assurance on the Part of the Auditing Firm

In performing this engagement, we applied the legal provisions and professional pronouncements regarding independence and quality assurance, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

Conclusion

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the combined separate non-financial report of Merck KGaA for the period from January 1 to December 31, 2020 has not been prepared, in all material respects, in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB.

Restriction of Use/General Engagement Terms

This assurance report is issued for purposes of the Supervisory Board of Merck KGaA, Darmstadt, only. We assume no responsibility with regard to any third parties.

Our assignment for the Supervisory Board of Merck KGaA, Darmstadt, and professional liability as described above was governed by the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf). By reading and using the information contained in this assurance report, each recipient confirms notice of the provisions contained therein including the limitation of our liability as stipulated in No. 9 and accepts the validity of the General Engagement Terms with respect to us.

Frankfurt am Main, February 17, 2021

KPMG AG
Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Glöckner **ppa. Meldau**
Wirtschaftsprüfer
[German Public Auditor]

Assurance report SR

Limited Assurance Report of the Independent Auditor regarding Sustainability Information[1]

To the Executive Board of Merck KGaA, Darmstadt

We have performed an independent limited assurance engagement on the qualitative and quantitative disclosures on sustainability in the "Sustainability Report 2020" (further "Report") of Merck KGaA, Darmstadt, (further "Company" or "Merck") for the period from January 1 to December 31, 2020, published at https://www.merckgroup.com/en/sustainability-report/2020/.

It was not part of our engagement to review product- or service-related information, references to external information sources, expert opinions and future-related statements in the Report.

Management's Responsibility for the Report

The legal representatives of the Company are responsible for the preparation of the Report in accordance with the Reporting Criteria. Merck applies the principles and standard disclosures of the Standards of the Global Reporting Initiative (GRI) in combination with the Corporate Accounting and Reporting Standard (Scope 1 und 2) and the Corporate Value Chain Standard (Scope 3) of the Greenhouse Gas Protocol initiative by the World Resources Institute and the World Business Council for Sustainable Development (WBCSD) as Reporting Criteria (further "Reporting Criteria").

The responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the Report and the use of assumptions and estimates for individual qualitative and quantitative sustainability disclosures which are reasonable under the circumstances. Furthermore, the legal representatives are responsible for the internal controls they deem necessary for the preparation of the Report that is free of – intended or unintended – material misstatements.

Practitioner's Responsibility

It is our responsibility to express a conclusion on the Report based on our work performed within a limited assurance engagement.

We conducted our work in the form of a limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" and the International Standard on Assurance Engagements (ISAE) 3410: "Assurance Engagements on Greenhouse Gas Statements", published by IAASB. Accordingly, we have to plan and perform the assurance engagement in such a way that we obtain limited assurance as to whether any matters have come to our attention that cause us to believe that the Report was not prepared, in all material respects, in accordance with the Reporting Criteria. We do not, however, issue a separate conclusion for each disclosure. As the assurance procedures in a limited assurance engagement are less comprehensive than in a reasonable assurance engagement, the level of assurance obtained is substantially lower. The choice of assurance procedures is subject to the auditor's own judgement.

Within the scope of our engagement, we performed, amongst others, the following procedures:

- Inquiries of group-level personnel responsible for the materiality analysis in order to understand the processes for determining material topics and respective reporting boundaries of Merck KGaA.
- A risk analysis, including media search, to identify relevant information on Merck KGaA's sustainability performance in the reporting period.
- Evaluation of the design and implementation of systems and processes for the collection, processing and monitoring of the qualitative and quantitative disclosures included in the scope of this engagement, including the consolidation of data
- Inquiries of group-level personnel who are responsible for determining and consolidating disclosures and for performing internal controls, including the explanatory notes
- Inspection of selected internal and external documents
- Analytical procedures for the evaluation of data and of the trends of quantitative disclosures as reported at group level by all sites
- Evaluation of local data collection, validation and reporting processes as well as of the reliability of reported data based on a sample of the sites in Hometown in the USA and in Nantong in China in the form of virtual meetings

[1] Our engagement applied to the German version of the Sustainability Information contained in the Sustainability report 2020. This text is a translation of the Independent Assurance Report issued in German, whereas the German text is authoritative.

- Use of the insights and relevant work regarding audit procedures performed for the group and statutory audit of the (consolidated) financial statements for the fiscal year 2020 of Merck KGaA for the information and indicators that were derived from those consolidated financial statements
- Evaluation of the consistency of GRI Standards in accordance with option "Comprehensive" as reported by Merck with the qualitative and quantitative disclosures in the Report
- Assessment of the overall presentation of the disclosures

As described in the Report, Merck engaged external providers to perform assessments and audits. The evaluation of the adequacy and accuracy of the conclusions from these external assessments was not part of our limited assurance engagement.

In our opinion, we obtained sufficient and appropriate evidence for reaching a conclusion for the assurance engagement.

Independence and Quality Assurance on the Part of the Auditing Firm

In performing this engagement, we applied the legal provisions and professional pronouncements regarding independence and quality assurance, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

Conclusion

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the qualitative and quantitative disclosures on sustainability for the period from January 1 to December 31, 2020, published in the Sustainability Report, have not been prepared, in all material respects, in accordance with the Reporting Criteria.

Restriction of use/General Engagement Terms

This assurance report is issued for purposes of the Executive Board of Merck KGaA, Darmstadt, only. We assume no responsibility with regard to any third parties.

Our assignment for the Executive Board of Merck KGaA, Darmstadt, and professional liability as described above was governed by the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf). By reading and using the information contained in this assurance report, each recipient confirms notice of the provisions contained therein including the limitation of our liability as stipulated in No. 9 and accepts the validity of the General Engagement Terms with respect to us.

Frankfurt am Main, March 12, 2021

KPMG AG
Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Glöckner **ppa. Meldau**
Wirtschaftsprüfer
[German Public Auditor]