

2020



Climate and Environmental Data

ABOUT THIS REPORT

Sustainability is GIZ's guiding principle and forms the basis for our contributions to shaping a society that is fit for the future. We compile and analyse all the most important climate and environmental data every year to gain a better understanding of our environmental sustainability and continuously improve our performance. Externally validated information about our activities in Germany is provided by the Eco-Management and Audit Scheme (EMAS). We have also developed our own environmental management tool, the Corporate Sustainability Handprint® (CSH), as a source of data on our operations in other countries.

GIZ has gathered climate and environmental data for its German locations since 1999. Following the adoption of EMAS in 2013, environmental figures are now checked each year by an accredited environmental consultant to ensure that they are complete and plausible. In the same year, we piloted systematic data collection in our partner countries. The CSH was rolled out to include all country offices in 2016, and in 2018 we introduced a requirement to compile environmental data every year. Further information about the methods we use to calculate climate and environmental data can be found in the section entitled 'Notes on calculation methods'.

We have summarised all this information in the publication 'Climate and environmental data 2020', which is aimed at all employees and anyone outside the company with a professional interest in our environmental performance. This document includes all the most important climate and environmental data for our sites in both Germany and our partner countries for the period from 1 January to 31 December 2020. The figures for Germany are the totals as at 31 July 2021. Previous publications may show other data.

SUMMARY OF CLIMATE AND ENVIRONMENTAL DATA

WORKFORCE

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Total number of internal staff [FTE]	4,410	5,183	5,782	No distinction between internal and external staff is made.		
Total number of external staff [FTE]	210	315	234			
Total number of internal and external staff [FTE]	4,620	5,497	6,016	17,284	18,228	18,962

GHG EMISSIONS

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Total GHG Emissions						
Total GHG Emissions in tonnes (t)	29,025	29,794	7,598	98,135	115,586	43,711
Total GHG Emissions per staff member in t	6.54	5.71	1.3	5.68	6.34	2.31
Scope 1						
Natural gas heating (in t CO ₂ e) ³	2,627	2,428	2,236	898	1,850	2,383
Fuel for company vehicles (in t CO ₂ e)	41	23	13	10,537	11,550	8,236
Coolants (in t CO ₂ e)	85	89	23	Data not mapped in the CSH.	4,048	3,876
Generators (in t CO ₂ e)	3	3	7	1,392	1,765	2,256
Scope 2						
Electricity (in t CO ₂ e)	472	455	389	8,841	9,693	6,904
District heating (in t CO ₂ e)	416	443	137	Data not mapped in the CSH.	351	574
District cooling (in t CO ₂ e) ⁴	44	35	27	76		0.5
Scope 3						
Commuting (in t CO ₂ e)	3,483	3,042	1,587	Data not mapped in the CSH.		
Business trips (in t CO ₂ e)	21,855	23,275	3,179	76,468	86,254	19,481

GHG EMISSIONS (TOTAL)

	Entire company ^{1,2}		
	2018	2019	2020
Scope 1 in t CO ₂ e	15,583	21,756	19,030
Scope 2 in t CO ₂ e	9,773	11,053	8,031
Scope 3 in t CO ₂ e	101,806	112,571	24,247
Emissions in t CO₂e	127,162	145,380	51,308

OTHER AIRBORNE EMISSIONS

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
NO _x (nitrogen oxides) in kg	8,690	9,779	5,478	Data not mapped in the CSH.		
SO ₂ (sulfur dioxide) in kg	5,171	5,052	2,143			
PM10 (coarse particular matter) in kg	455	334	155			

¹ As of 31 July 2021. Due to a posteriori improvements in the data availability, the balancing of the data for 2018 and 2019 has been updated accordingly.

² Since 2019, a new extrapolation systemology is in place.

³ In 2020 a changeover to emission factors with an upstream chain was completed. Previously, emission factors without upstream chain were applied. For the sake of comparability, the GHG emissions for 2018 and 2019 were also converted to emission factors with an upstream chain.

⁴ In 2020, the data collection was corrected for abroad, which is why the values differ to a great extent.

MOBILITY

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Total flights in 1,000 km	63,278	69,621	9,515	330,322	361,454	78,670
Distance flown per staff member in km	14,350	13,434	1,646	No data.		
Total rail trips in 1,000 km	11,571	12,357	3,195	Data not mapped in the CSH.		
Distance travelled by rail per staff member in km	2,624	2,384	553			
Total trips using company vehicles in 1,000 km	198	137	107			
Total distance travelled in 1,000 km	75,048	82,115	12,817			
Distance travelled per staff member in km	17,019	15,845	2,217			

ENERGY CONSUMPTION

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Total energy consumption						
Total energy consumption in kWh	24,526,074	23,961,919	22,213,208	68,060,204	80,277,407	66,717,089
Total energy consumption per staff member in kWh	5,309	4,359	3,692	3,938	4,404	3,518
Electricity						
Total electricity consumption in kWh	10,022,712	10,036,389	9,793,714	18,550,541	19,717,828	15,778,096
Total electricity consumption per staff member in kWh	2,170	1,826	1,628	1,073	1,082	832
Green electricity percentage	93%	93%	94%	Data not mapped in the CSH.		
Heating / Cooling energy						
Total heating / cooling energy in kWh	14,503,362	13,925,530	12,419,494	4,290,389	7,083,143	8,430,613
Total heating / cooling energy per staff member in kWh	3,139	2,533	2,064	248	389	445
Percentage of heating energy from renewable sources	10%	12%	20%	Data not mapped in the CSH.		
Fuel for company vehicles and generators						
Total energy consumption from motor vehicle fuel in kWh	163,635	94,826	49,087	39,670,808	46,036,759	33,489,005
Total energy consumption from motor vehicle fuel per staff member in kWh	37	18	8	2,295	2,526	1,766
Total energy consumption by generators in kWh	5,498	5,498	24,343	5,548,467	7,439,677	9,019,375
Total energy consumption by generators per staff member in kWh	1.2	1.0	4.0	321	408	476

WATER

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Total drinking water consumption in m ³	52,045	50,678	33,535	358,441	608,612	476,944
Total drinking water consumption per staff member in l	11,266	9,219	5,574	20,738	33,390	25,153

¹ As of 31 July 2021. Due to a posteriori improvements in the data availability, the balancing of the data for 2018 and 2019 has been updated accordingly.

² Since 2019, a new extrapolation systemology is in place.

PAPER CONSUMPTION

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Paper consumption (sheets)	13,102,634	11,897,087	6,067,587	54,282,225	63,796,381	37,054,564
Per-capita paper consumption (sheets per staff member)	2,836	2,164	1,009	3,141	3,500	1,954
Percentage of recycled paper used	98.3%	94.8%	100.0%	9.6%	15.5%	20.0%

WASTE

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Total non-hazardous waste (in t) ³	1,217	1,009	694			
Total non-hazardous waste per staff member (in kg) ³	263	184	115			
Total residual waste in t	589	303	169			
Total residual waste per staff member in kg	127	55	28			
Total paper waste in t	249	283	188			
Total paper waste per staff member in kg	54	51	31			
Total hazardous waste in t	11	5	15			

Data not mapped in the CSH.

BIODIVERSITY

	Germany ¹			Abroad ²		
	2018	2019	2020	2018	2019	2020
Usable space in m ²	139,336	157,352	161,917			
Usable space per staff member per staff member in m ²	30.2	28.6	26.9			
Sealed outer surface in m ²			35,609.6			
Green areas (not sealed) in m ²	Data not yet mapped		25,147.5			
Near-natural, biodiversity-friendly areas in m ²	Data not yet mapped		26,570.5			

Data not mapped in the CSH.

¹ As of 31 July 2021. Due to a posteriori improvements in the data availability, the balancing of the data for 2018 and 2019 has been updated accordingly.

² Since 2019, a new extrapolation systemology is in place.

³ The total non-hazardous waste consists of different waste fractions besides residual and paper waste.

NOTES ON CALCULATION METHODS

For Germany, data on the amount of energy, water and paper we use and the waste we produce is compiled and submitted to the Sustainability Office by the participating organisational units at our six EMAS sites in Bonn, Eschborn, Berlin, Bonn-Röttgen and Feldafing and then reviewed in collaboration with an external service provider. The corresponding figures for smaller non-EMAS locations are extrapolated from this compiled data. Drawing on historical data, we calculate an approximate figure to indicate the resources consumed by a single, statistically average employee. This figure is then multiplied by the number of employees at our smaller locations to represent consumption levels at sites without EMAS validation. Outside Germany, consumption data for energy, water and paper are compiled and totalled using the CSH. Even though challenges still exist in terms of data availability and quality in our partner countries, the system for gathering climate and environmental data using the CSH is improving rapidly.

The climate and environmental figures per employee shown in the report are based on the number of full-time equivalent (FTE) posts for the corresponding years. These notes on our calculation methods apply to the latest reporting year. The figures for Germany are the totals as at 31 July 2021. Due to better availability of data, some figures have been updated for 2018 and 2019. Since 2018, environmental data has been collected annually in all CSH countries. From 2019 onwards, a new extrapolation system is also being used.

Both EMAS and the CSH provide data for calculating GIZ's greenhouse gas (GHG) emissions, which we publish annually. In doing so, we are guided by an international standard known as the Greenhouse Gas Protocol (GHGP). The GHGP distinguishes between direct and indirect emissions within three scopes:

- Scope 1: Direct sources of GHG emissions that are owned or controlled by the company, such as fuel for cars or heating energy from combustion processes;
- Scope 2: Indirect emissions from purchased energy such as electricity or district heating/cooling;
- Scope 3: Other indirect emissions that lie along the value chain and therefore also within the responsibility of the company (e.g. business flights).

The emission factors for **electricity and heating energy** from combustion processes and for **fuels and generators** in Germany are taken from the Global Emission Model for Integrated Systems (GEMIS) 5.0 and refer to emissions factors including upstream emissions. Outside Germany, GHG emissions from electricity consumption are calculated on the basis of country-specific emission factors set by the International Energy Agency (IEA 2019). Other emission factors are obtained from the GEMIS database.

The emission factors for **district heating and cooling** in Germany are based on specific data provided by each energy supplier. Starting in 2019, consumption figures for district heating and cooling were also recorded for our sites outside Germany and then converted into GHG emissions using emission factors set by the UK Department for Environment, Food and Rural Affairs (DEFRA 2020).

GHG emissions from flights are calculated using the German Business Travel Association (VDR) standard. We then apply a radiative forcing index (RFI) factor of 2.7 to reflect the additional greenhouse effect of high-altitude emissions. In Germany, our travel agency reports all business trips to an external service provider once a year. Outside Germany, the local travel agencies under contract with GIZ pass raw data for all flight bookings to an external service provider. These service providers then calculate the data for specific employee groups. GHG emissions from **commuting** in Germany were compiled using the results of a mobility survey. The corresponding emission factors were based among others on the database of the German Federal Environmental Agency (UBA). Emissions for **rail travel** in Germany are calculated using the data specifically provided for GIZ by Deutsche Bahn.

The global warming potential (GWP) from **coolants** is determined using conversion factors specified by the Intergovernmental Panel on Climate Change (IPCC) IV. In Germany, this calculation is based on actual reported amounts of coolant refilled during maintenance work. In 2019, we also compiled data on coolant emissions from our operations outside Germany. These figures are based on whole life-cycle emissions.

The tables summarising our climate and environmental data also show the climate impact of **other air pollutants** such as nitrogen oxides (NO_x), sulphur dioxide (SO₂) and particulate matter (PM10) as well as GHG emissions. The total figures for these additionally recorded air pollutants come from building-related emissions (e.g. from electricity and district heating/cooling), company cars and commuting. Emission factors are taken from the GEMIS 5.0 database and refer to emissions factors including upstream emissions.



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