

Climate and Environmental Data / 2019

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 2019', 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 2019. The figures for Germany are the totals as at 18 November 2020. The assessment system for other countries was expanded in 2019. Previous publications may show other data.

SUMMARY OF CLIMATE AND ENVIRONMENTAL DATA

WORKFORCE

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Total number of internal staff [FTE]	3,998	4,410	5,183	No distinction between internal and external staff is made.		
Total number of external staff [FTE]	189	210	315			
Total number of internal and external staff [FTE]	4,187	4,620	5,497	16,789	17,284	18,228

GHG EMISSIONS

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Total GHG Emissions						
Total GHG Emissions in tonnes (t)	25,166	28,669	29,669	100,327	98,135	115,586
Total GHG Emissions per staff member in t	6.26	6.47	5.69	5.98	5.68	6.34
Scope 1						
Natural gas heating (in t CO ₂ e)	1,920	2,258	2,339	847	898	1,850
Fuel for company vehicles (in t CO ₂ e)	53	41	23	8,949	10,537	11,550
Coolants (in t CO ₂ e)	62	85	89	Data not mapped in the CSH		4,048
Generators (in t CO ₂ e)	3	3	3	1,577	1,392	1,765
Scope 2						
Electricity (in t CO ₂ e)	420	482	458	10,473	8,841	9,693
District heating (in t CO ₂ e)	351	422	429	Data not mapped in the CSH		351
District cooling (in t CO ₂ e)	14	40	35			76
Scope 3						
Commuting (in t CO ₂ e)	3,143	3,483	3,018	Data not mapped in the CSH		
Business trips (in t CO ₂ e)	19,200	21,855	23,275	78,481	76,468	86,254

GHG EMISSIONS (TOTAL)

	Entire company ^{1,2}		
	2017	2018	2019
Scope 1 in t CO ₂ e	13,411	15,214	21,667
Scope 2 in t CO ₂ e	11,258	9,785	11,041
Scope 3 in t CO ₂ e	100,824	101,806	112,547
Emissions in t CO₂e	125,493	126,805	145,254

OTHER AIRBORNE EMISSIONS

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
NO _x (nitrogen oxides) in kg	12,120	13,879	14,890	Data not mapped in the CSH		
SO ₂ (sulfur dioxide) in kg	9,225	10,621	11,059			
PM 10 (coarse particulate matter) in kg	482	549	590			

¹ As of 18.11.2020. Due to a posteriori improvements in the data availability, the balancing of the data for 2018 and 2019 has been updated accordingly.

² The accounting for abroad data has been extended in 2019 and earlier publications might display different data. The values for 2017 consist of data from years 2016 and 2017 combined, as until 2017 the data has been balanced in a two-years cycle. Since 2018 the data is collected yearly in all CSH-countries. Additionally, from 2019 on, a new extrapolation systemology is in place.

MOBILITY

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Total flights in 1,000 km	55,395	63,278	69,621	No data	330,322	361,454
Distance flown per staff member in km	13,855	14,350	13,434	No data		
Total rail trips in 1,000 km	12,028	11,571	12,357	Data not mapped in the CSH		
Distance travelled by rail per staff member in km	3,008	2,624	2,384			
Total trips using company vehicles in 1,000 km	255	198	137			
Total distance travelled in 1,000 km	67,678	75,048	82,115			
Distance travelled per staff member in km	16,927	17,019	15,845			

ENERGY CONSUMPTION

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Total energy consumption						
Total energy consumption in kWh	22,588,266	23,645,867	24,507,991	61,907,429	68,060,204	80,277,407
Total energy consumption per staff member in kWh	5,395	5,118	4,458	3,687	3,938	4,404
Electricity						
Total electricity consumption in kWh	9,436,887	9,823,444	9,939,494	16,978,607	18,550,541	19,717,828
Total electricity consumption per staff member in kWh	2,254	2,126	1,808	1,011	1,073	1,082
Green electricity percentage	85.6%	85.3%	85.4%	Data not mapped in the CSH		
Heating / Cooling energy						
Total heating / cooling energy in kWh	13,151,379	13,822,423	14,568,497	4,006,224	4,290,389	7,083,143
Total heating / cooling energy per staff member in kWh	3,141	2,992	2,650	239	248	389
Percentage of heating energy from renewable sources	12.4%	10.9%	15.8%	Data not mapped in the CSH		
Fuel for company vehicles and generators						
Total energy consumption from motor vehicle fuel in kWh	230,314	163,635	94,826	34,607,212	39,670,808	46,036,759
Total energy consumption from motor vehicle fuel per staff member in kWh	58	37	18	2,061	2,295	2,526
Total energy consumption by generators in kWh		5,498	5,498	6,315,387	5,548,467	7,439,677
Total energy consumption by generators per staff member in kWh	No data	1.2	1.0	376	321	408

WATER

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Total drinking water consumption in m ³	43,643	52,302	53,345	395,212	358,441	608,612
Total drinking water consumption per staff member in l	10,424	11,321	9,704	24,888	20,738	33,390

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PAPER CONSUMPTION

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Paper consumption (sheets)	13,375,246	13,102,634	11,897,087	79,061,190	54,282,225	63,796,381
Per-capita paper consumption (sheets per staff member)	3,345	2,971	2,164	4,979	3,141	3,500
Percentage of recycled paper used	99.0%	98.3%	94.8%	8.9%	9.6%	15.5%

WASTE

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Total non-hazardous waste (in t) ³	1,011	1,217	1,009			
Total non-hazardous waste per staff member (in kg) ³	241	263	184			
Total residual waste in t	457	621	294			
Total residual waste per staff member in kg	109	134	53			
Total paper waste in t	187	249	283			
Total paper waste per staff member in kg	45	54	51			
Total hazardous waste in t	11	11	5			

Data not mapped in the CSH

BIODIVERSITY

	Germany ¹			Abroad ²		
	2017	2018	2019	2017	2018	2019
Usable space in m ²	123,679	139,372	157,389			
Usable space per staff member in m ²	29.5	30.2	28.6			

Data not mapped in the CSH

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³ The total non-hazardous waste consists of different waste fractions (and not only 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. We have set ourselves the goal of increasing the quality of data from outside Germany to a level comparable with our German figures by 2020.

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 18 November 2020. Due to better availability of data, some figures have been updated for 2018 and 2019. The assessment system for other countries was expanded in 2019 and previous publications may show other data. Figures for 2017 are based on data from 2016 and 2017. Up until that point, environmental data was assessed on a biannual basis. Since 2018, environmental data has been collected annually in all CSH countries. From 2019 onwards, a new extrapolation system will also be 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. 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 will also be 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 on the TREMOD 6.03 database. 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.



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