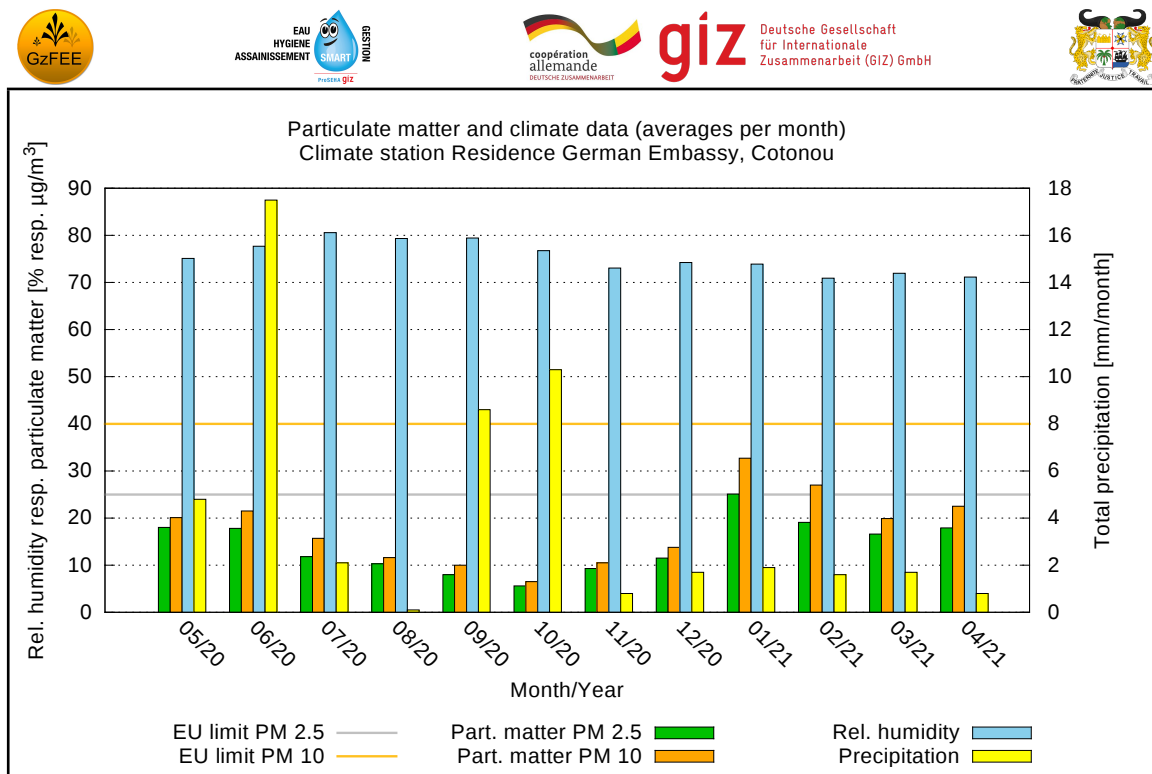


# Particulate matter and climate values at the German Embassy

To record the dust pollution on the Boulevard de la Marina in Cotonou, Benin, a climate station was installed in October 2019, which in addition to the usual meteorological data such as air humidity, temperature, solar radiation, etc. also measures dust particles (particle matter) of classes PM1, PM2.5, PM4 and PM10. The number behind PM here indicates the particle diameter in  $\mu\text{m}$ .

## Monthly journal for the past 12 months

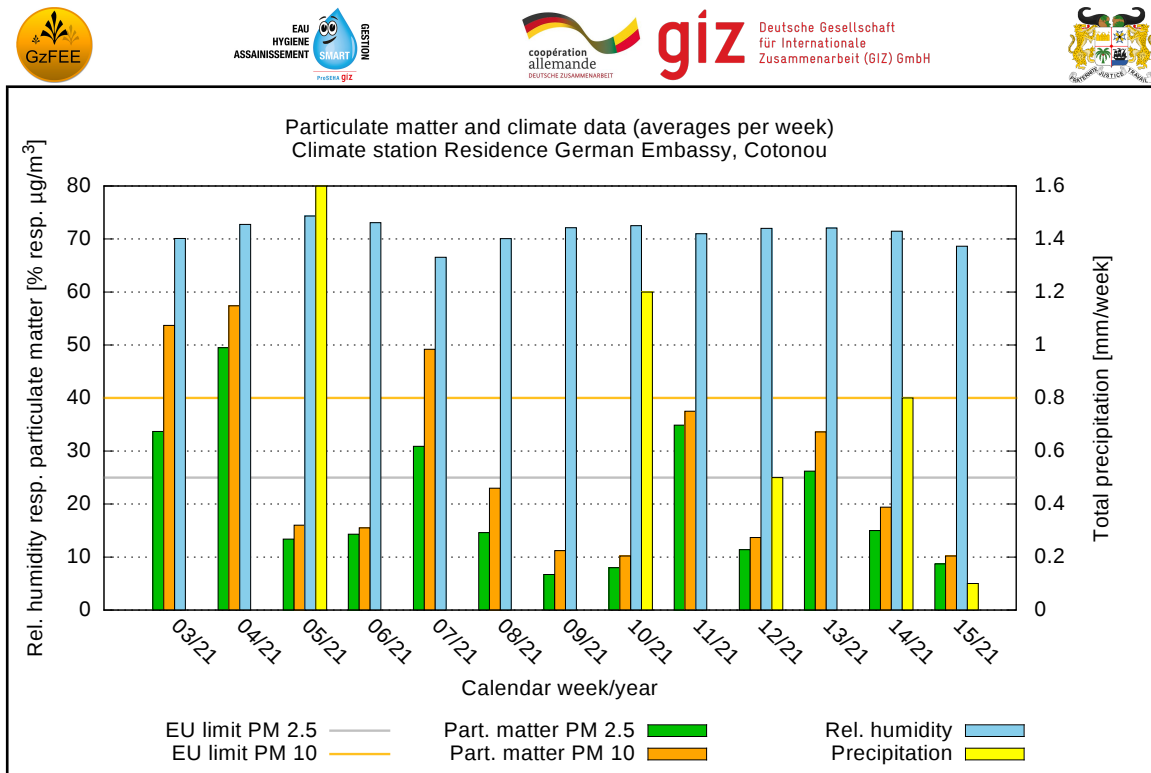
The diagram below shows an overview of the average fine dust pollution as well as the relative humidity and precipitation for the period of the past 12 months. To classify the level of dust exposure EU limit values are shown as horizontal lines. The numerical values on which the diagram is based can be found in the following table. If the limit values have been exceeded, the values are printed in bold. In the documented period from month 05/20 to 04/21, the maximum average PM2.5 pollution was  $25.1 \mu\text{g}/\text{m}^3$  in month 01/21. The limit values for PM2.5 were exceeded in just one month.



Month /Year	Part. matter PM 2.5 on average [ $\mu\text{g}/\text{m}^3$ ]	Part. matter PM 10 on average [ $\mu\text{g}/\text{m}^3$ ]	Rel. humidity on average [%]	Precipitation in total [mm]
05/20	18.0	20.1	75.1	4.8
06/20	17.8	21.5	77.7	17.5
07/20	11.8	15.7	80.6	2.1
08/20	10.3	11.6	79.3	0.1
09/20	8.0	10.0	79.4	8.6
10/20	5.6	6.5	76.7	10.3
11/20	9.3	10.5	73.1	0.8
12/20	11.5	13.8	74.2	1.7
01/21	<b>25.1</b>	32.7	73.9	1.9
02/21	19.1	27.0	70.9	1.6
03/21	16.6	19.9	72.0	1.7
04/21	17.9	22.5	71.2	0.8

## Weekly journal for the past 13 weeks

The representation of the mean measured values for calendar weeks provides a higher resolution. The following diagram shows the values for the past 13 calendar weeks (approx. 3 months). The EU limit values are again drawn in as horizontal lines, analogous to the monthly representation. In the period shown from calendar week 03/21 to 15/21, the maximum average PM2.5 pollution was  $49.5 \mu\text{g}/\text{m}^3$  in calendar week 04/21. The limit values for PM2.5 were exceeded in 5 calendar weeks. The numerical values for this diagram can be taken from the table below.



Cal.week /Year	Part. matter PM 2.5 on average [ $\mu\text{g}/\text{m}^3$ ]	Part. matter PM 10 on average [ $\mu\text{g}/\text{m}^3$ ]	Rel. humidity on average [%]	Precipitation in total [mm]
03/21	<b>33.7</b>	<b>53.7</b>	70.1	0.0
04/21	<b>49.5</b>	<b>57.4</b>	72.7	0.0
05/21	13.4	16.0	74.3	1.6
06/21	14.3	15.5	73.1	0.0
07/21	<b>30.9</b>	<b>49.2</b>	66.5	0.0
08/21	14.6	23.0	70.1	0.0
09/21	6.7	11.2	72.1	0.0
10/21	8.0	10.2	72.5	1.2
11/21	<b>34.9</b>	37.5	71.0	0.0
12/21	11.4	13.7	72.0	0.5
13/21	<b>26.2</b>	33.6	72.1	0.0
14/21	15.0	19.4	71.5	0.8
15/21	8.7	10.2	68.6	0.1