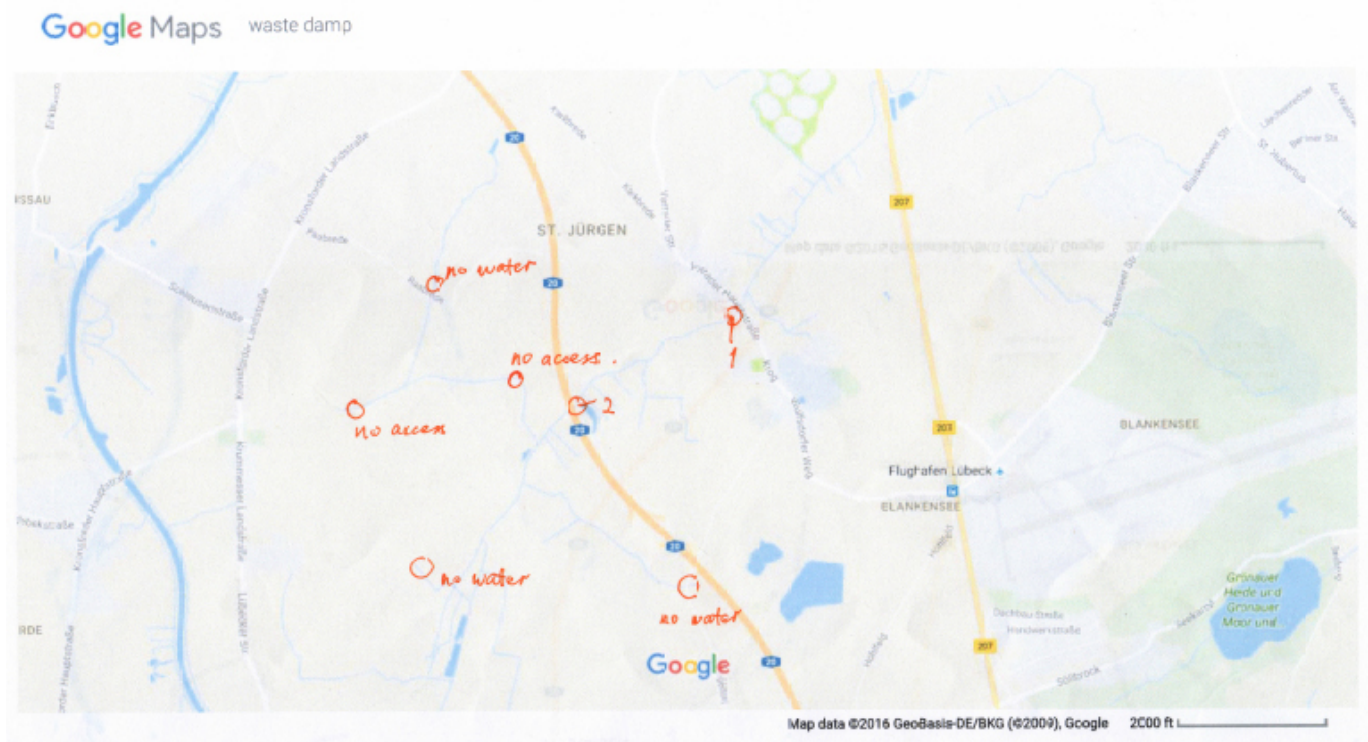


Niemarker Landgraben

This project is carried out by Mengyuan Cai, Minghao Qiu, and Yichen Xu, instructed by Prof. Dr. rer. nat. Dipl.-Hydr. KÜLLS and M. Eng. v.Grafenstein.

The task is to investigate the influence of waste dump of Lübeck to the water system nearby. Therefore, seven sampling points are chosen in order to evaluate the contamination of the waste dump sewage.



-Pic 1-

Pic 1 is the demonstration of sampling points. Among these sampling points, point 1, 2, 3, 4 are the inflow of waste dump, point 5 is the water in the waste dump, and point 6 and 7 are the out flow of the waste dump.

During the process, there is no water at point 1, 2, and 3, and there is no access to point 4 and 5. Thus, only at point 6 and 7 can samples be taken and measured. However, it leads to the assumption that most of the water at point 6 and 7 goes through the waste dump, which means the water sample can indicate the influence of waste dump on the water body.



-Pic 2-

Pic 2 is the sampling site of point 3. In the middle of the picture, the riverbed can be seen.



This is the sampling site of point 6. There are some farmlands nearby. The riverbed consists of mud.

The data of on-site measurements are as follows.

	Time	T(°C)	EC(μS/cm)	Salinity	TDS(g/l)	O2(mg/l)	O2(%)	redox(mV)	NO3(mg/l)
1	9:21	12.76	740	0.359	0.496	3.801	36.17	208.1	9.52
2	9:24	12.85	741	0.360	0.496	6.605	68.66	200.8	15.40
3	9:25	12.91	741	0.360	0.496	5.819	60.57	198.2	15.74

The water has no smell, and it is mostly transparent. A high concentration of nitrate and a low concentration of oxygen can be seen from the data. It may be the result of the nearby farmlands.



-Pic 3-

Pic 3 is the sampling site of point 7. In the middle of the picture, two groundwater inlets can be seen. The riverbed consist of mud.

	Time	T(°C)	EC(μS/cm)	Salinity	TDS(g/l)	O2(mg/l)	O2(%)	redox(mV)	NO3(mg/l)
1	9:46	12.57	722	0.350	0.484	8.240	85.12	250.9	13.12
2	9:49	12.64	717	0.348	0.481	8.204	84.86	237.8	13.45
3	9:52	12.69	717	0.348	0.481	8.184	84.76	234.1	13.83

The water has no smell, and it is mostly transparent. A high concentration of nitrate can be seen from the data.

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