Introduction

Welcome to Groundwater Nitrate Representation, a powerful data visualization tool designed to provide insightful representations of groundwater nitrate levels. Our application offers a comprehensive suite of charts and graphs, allowing users to analyze and understand groundwater nitrate data with ease.

By leveraging various visualization techniques such as Line Charts, Bar Charts, Bubble Charts, and more, our app empowers users to explore complex datasets and uncover meaningful patterns and trends. Whether you're a researcher, environmentalist, or policymaker, Groundwater Nitrate Representation offers valuable insights into groundwater quality.

To get started, users can upload their own datasets in the correct format, ensuring accurate representation of their specific data. Alternatively, users can explore and visualize existing datasets within the application, providing a convenient way to gain insights without the need for manual data entry.

Discover the story hidden within your groundwater nitrate data and gain a deeper understanding of environmental impacts with Groundwater Nitrate Representation.

Importing Dataset:

Firstly by default you can see the master data representing different charts and you can change the filter on the basis of Districts, Cities, Seasons and Years (From 1984 till 2023) and see the result in all the Visualizing charts accordingly.

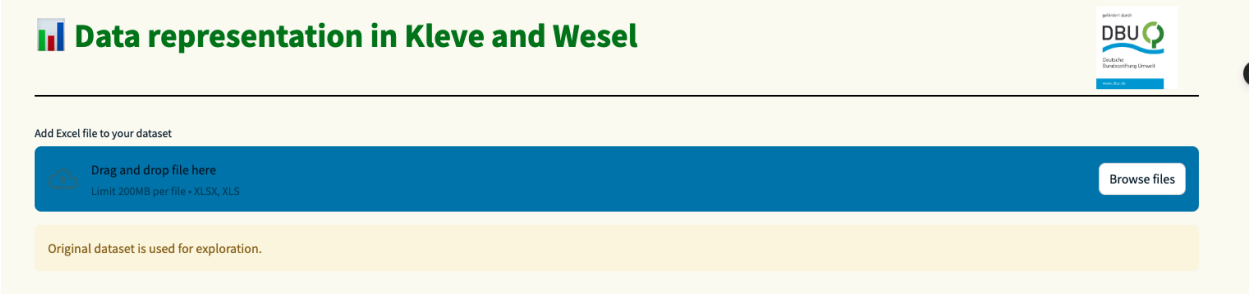


Figure 1: Upload Section of database

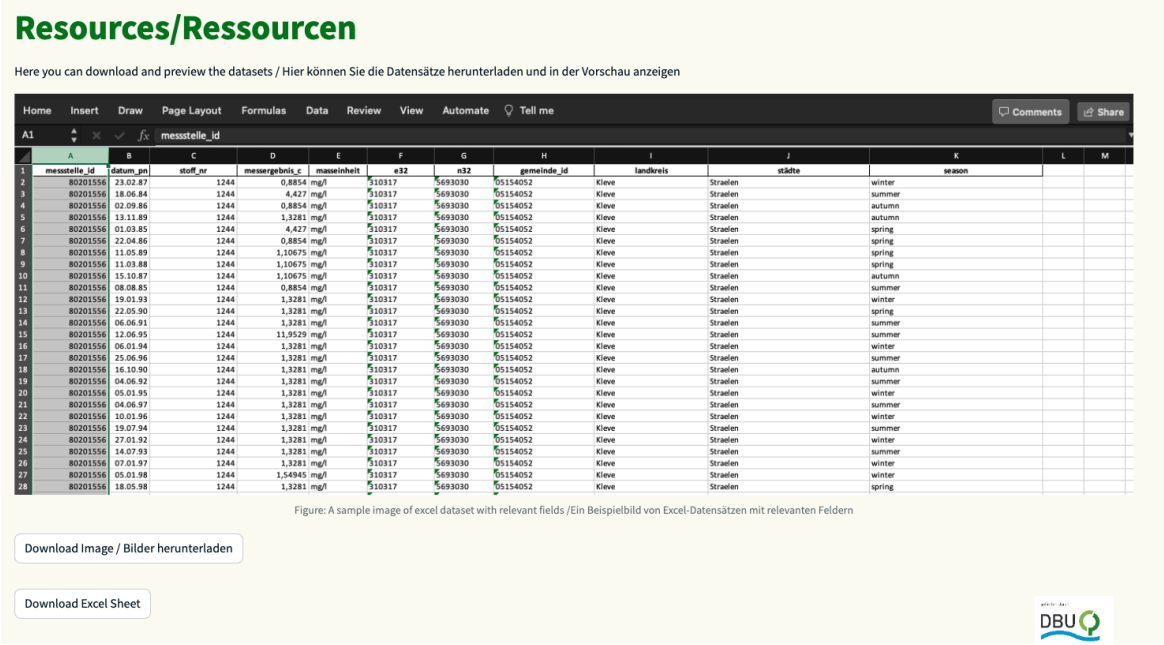
Secondly, if you want to visualize the new or your own dataset you have to click or **Browse files** or simply drag and drop your file in the blue section.

- To see the structure of excel sheet and data resources > Click in **Resources** tab as shown in Figure3 and Click To **Download Excel sheet** button and confirm it will download the sample excel sheet with a small chunk of datasets and you can upload and visualize it again.

Note *: If you tried to import invalid dataset it will throw the error message*

Figure 2: Available menus and highlighting resources

Figure 2 represents the Menus of the Application like Home, About Us, Resources and Contact Us, As Resources menu is highlighted ,if user click to Resources it will redirected to resources page as shown in Figure 3 below.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	messstelle_id	datum_pn	stoff_nr	messergebnis_c	masseinheit	e32	n32	gemeinde_id	landkreis	städte	season		
2	80201556	23.02.87	1244	0,8854	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
3	80201556	18.06.84	1244	4,427	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
4	80201556	02.09.86	1244	0,8854	mg/l	510317	5693030	05154052	Kleve	Straelen	autumn		
5	80201556	13.11.89	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	autumn		
6	80201556	01.03.85	1244	4,427	mg/l	510317	5693030	05154052	Kleve	Straelen	spring		
7	80201556	22.04.86	1244	0,8854	mg/l	510317	5693030	05154052	Kleve	Straelen	spring		
8	80201556	11.05.89	1244	1,10675	mg/l	510317	5693030	05154052	Kleve	Straelen	spring		
9	80201556	11.03.88	1244	1,10675	mg/l	510317	5693030	05154052	Kleve	Straelen	spring		
10	80201556	15.10.87	1244	1,10675	mg/l	510317	5693030	05154052	Kleve	Straelen	autumn		
11	80201556	08.08.85	1244	0,8854	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
12	80201556	19.01.93	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
13	80201556	22.05.90	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	spring		
14	80201556	06.06.91	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
15	80201556	12.06.95	1244	11,9529	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
16	80201556	06.01.94	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
17	80201556	25.06.96	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
18	80201556	16.10.90	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	autumn		
19	80201556	04.06.92	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
20	80201556	05.01.95	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
21	80201556	04.06.97	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
22	80201556	10.01.96	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
23	80201556	19.07.94	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
24	80201556	27.01.92	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
25	80201556	14.07.93	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	summer		
26	80201556	07.01.97	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
27	80201556	05.01.98	1244	1,54945	mg/l	510317	5693030	05154052	Kleve	Straelen	winter		
28	80201556	18.05.98	1244	1,3281	mg/l	510317	5693030	05154052	Kleve	Straelen	spring		

Figure 3: Filter option by districts

Figure 3 Illustrate mandatory fields in Excel Sheets to make the successful imports of datasets.

Figure 4: Filter option by districts

Figure 4 represent the available district from the dataset to perform the filter according to the District like Kleve and Wesel

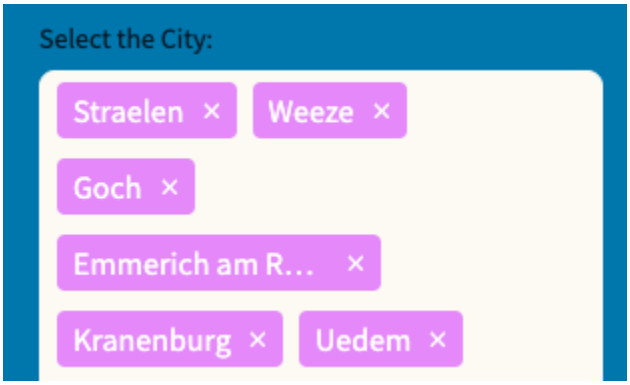


Figure 5: Filter option by Cities

Figure 5 represent the available Cities from the dataset to perform the filter according to the Cities and they are depend on the district you have selected

Figure 6: Filter option by Seasons

Figure 6 represents the available Seasons from the dataset to perform the filter according to the Seasons. You can select and remove and see the visualization effect on the various chart

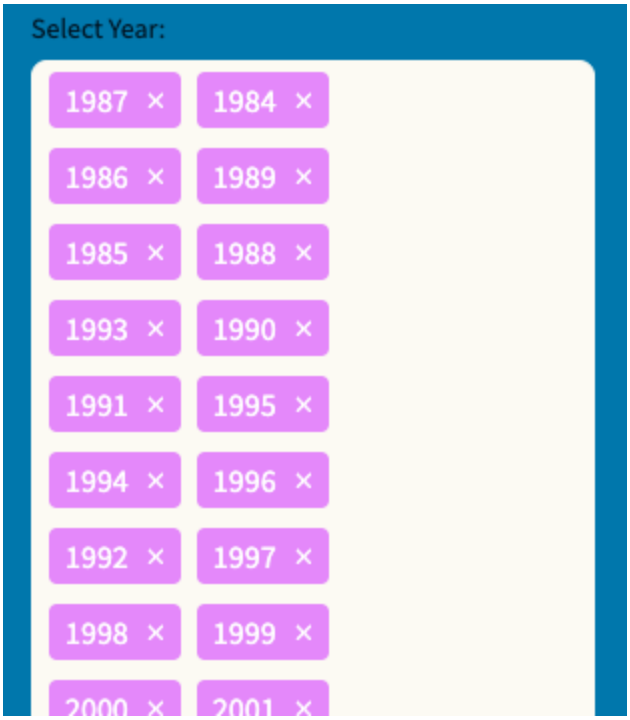


Figure 7: Filter option by Years

Figure 7 represents the available years from the dataset to perform the filter according to the specific years. You can select and remove the years accordingly and see the visualization effect on the various chart

Thank you !!