

LAB 4: Spatial Interpolation

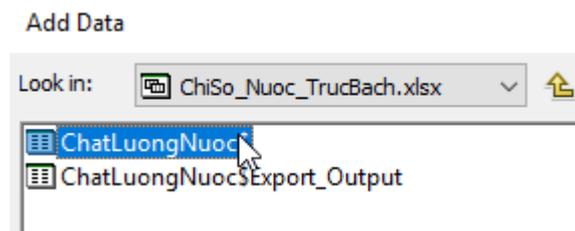
Tran Quang Bao

1. Input data into ArcGIS

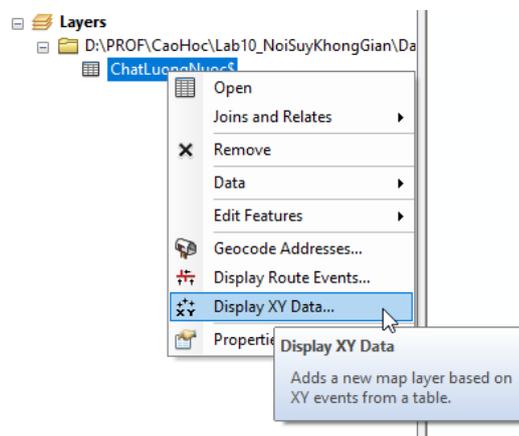
From Excel, Notepad...

	A	B	C	D	E	F	G	H	I	J	K
1	STT	Diem	Y	X	pH	DoDuc_NTU	DO_mgl	TSS_mgl	BOD5_mgl	Cl_mgl	COD_mgl
2	1	M1	21.04841667	105.8392028	6.5	9.08	3.36	74	3.4	15.29	44
3	2	M2	21.04761111	105.8380167	8	8.88	2.97	98	6.54	28.36	45
4	3	M3	21.04767778	105.8391528	7.5	9.14	1.89	80	6.7	37.5	40
5	4	M4	21.04766667	105.8402972	8	6.8	4.97	46	6.78	29.07	58
6	5	M5	21.04763056	105.8414306	6.5	7.1	3.35	18	7.62	12.12	66
7	6	M6	21.04654167	105.8368222	7	9.02	3.26	74	7.58	42.08	68
8	7	M7	21.04635556	105.8380889	8	9.13	3.1	80	3.88	42.54	50
9	8	M8	21.04658056	105.8393139	7.5	8.42	4.39	130	3.94	38.99	63
10	9	M9	21.04560556	105.8368222	6.5	5.93	2.99	184	8.26	39.7	55
11	10	M10	21.04556944	105.8381583	7	6.19	3.13	178	8.62	42.54	64
12	11	M11	21.04555833	105.8390333	7.5	8.41	4.06	66	7.04	41.83	64
13	12	M12	21.04466389	105.8369028	7	8.72	2.09	92	8.64	22.68	53
14	13	M13	21.04455833	105.839025	7	5.54	2.02	42	4.12	43.66	66
15	14	M14	21.04462778	105.8379778	7	7.68	2.36	140	6.74	33.07	33
16	15	M15	21.04468889	105.839875	8	8.48	2.59	56	8.48	38.29	35
17	16	M16	21.04458611	105.8414111	7	7.22	3.49	180	8.38	19.14	61

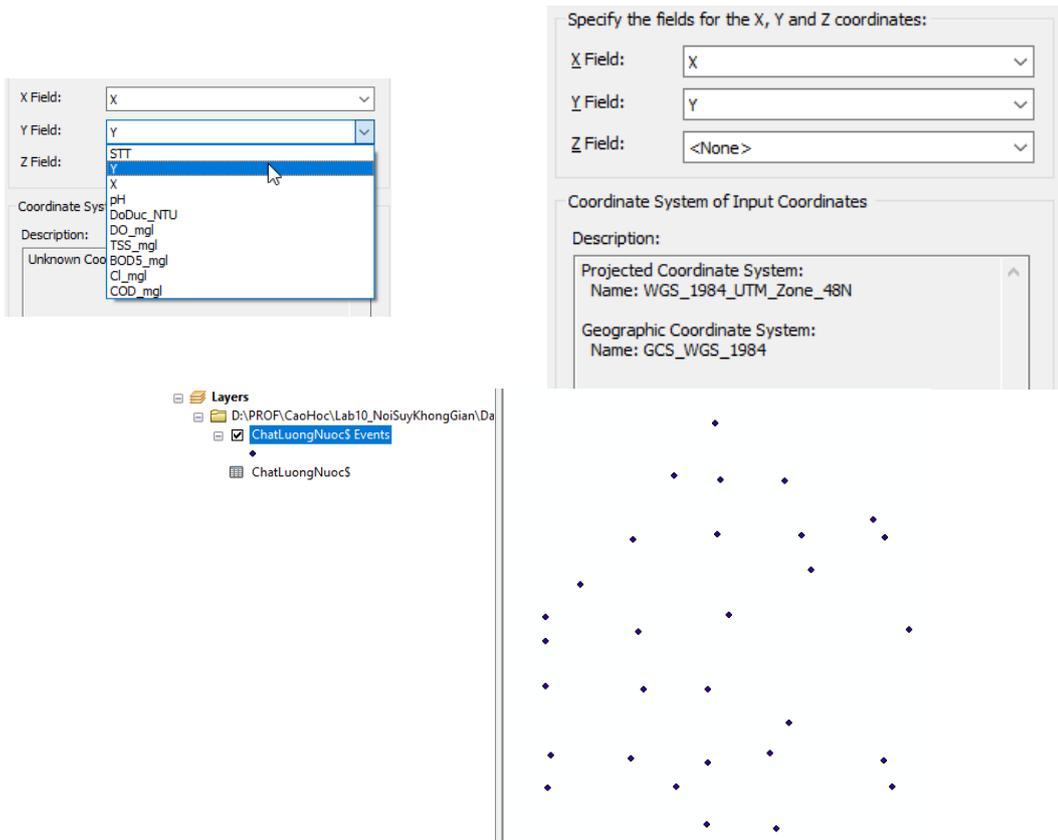
- Adding data from ArcMap.



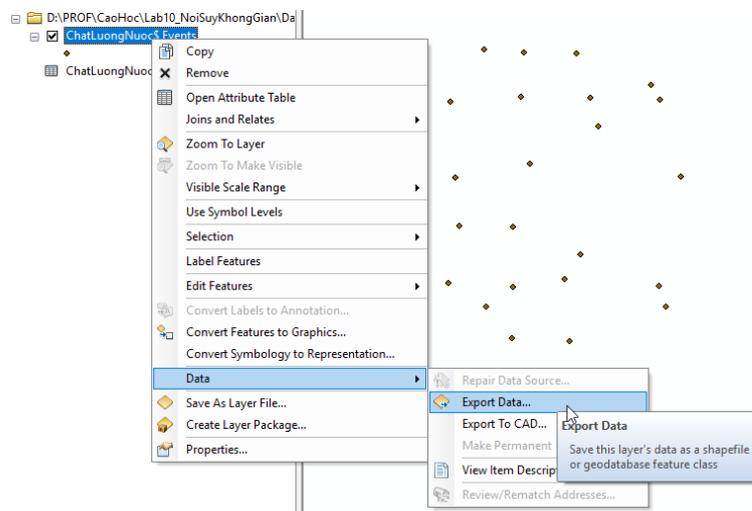
- Right Click => Display XY data.



- Choose X (longtitude), Y (latitude) and appropriated projection (WGS_1984_UTM_Zone_48N) for the data

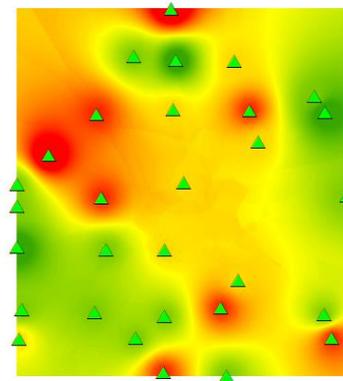
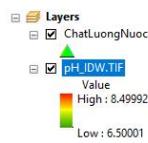
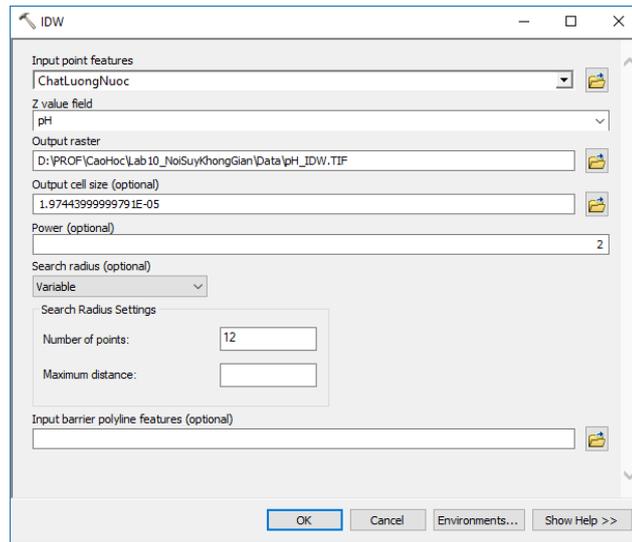


- *Export data to shapefile*
- **Right Click → Export.**

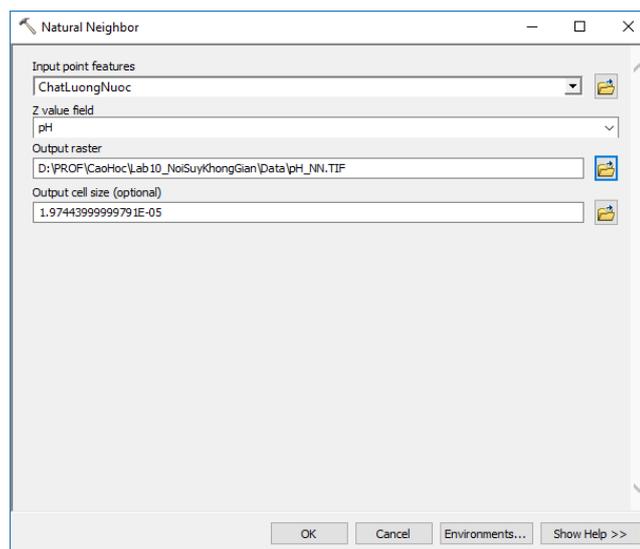


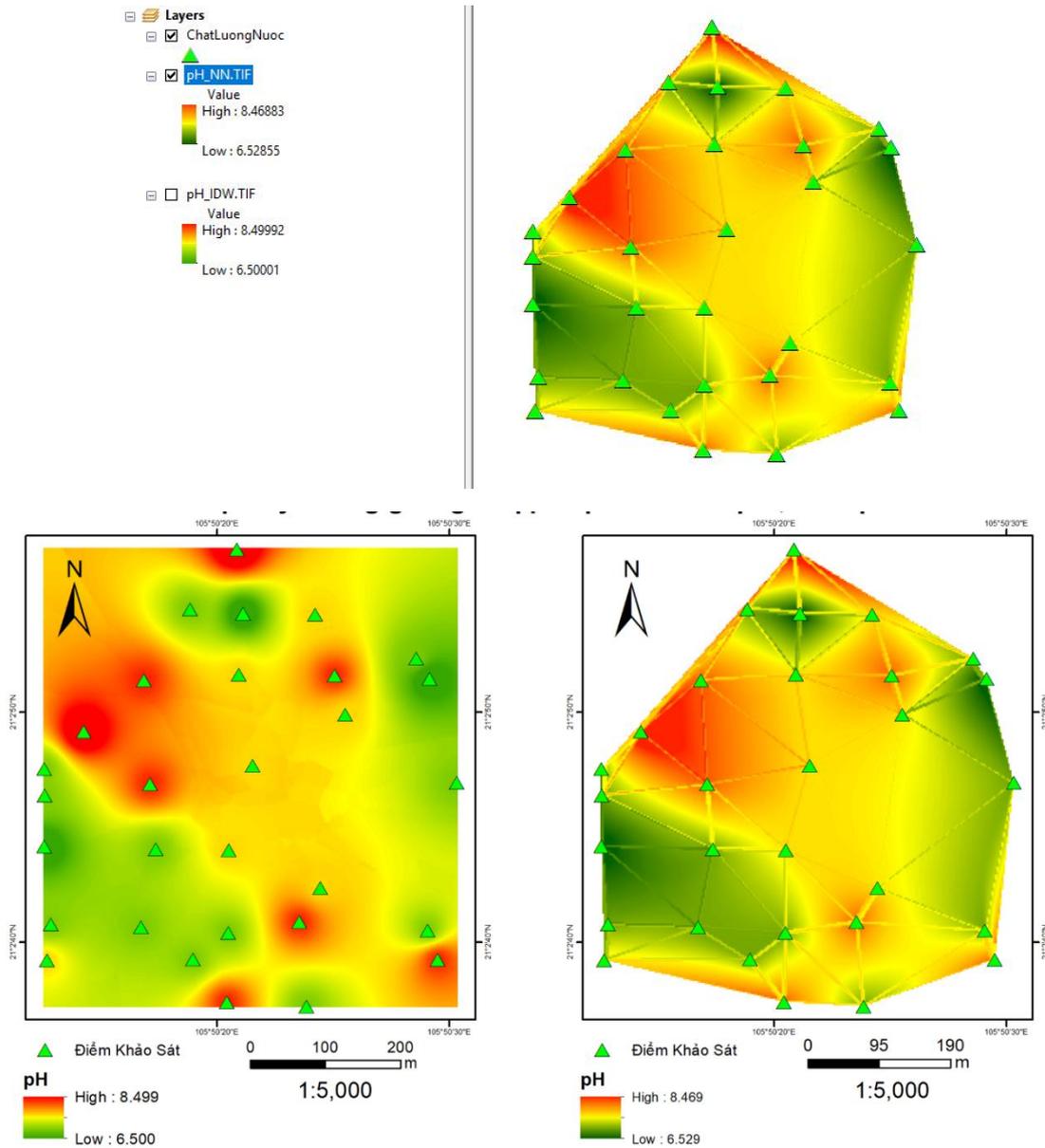
2. Spatial Interpolation

- *Inverse Distance Weight (IDW)*
- Spatial Analysis Tools → Interpolation → IDW**



- *Natural Neighbor (Thiessen Polygon)*
- **Spatial Analysis Tools → Interpolation → Natural Neighbor**





IDW

Thiessen Polygons

- **Requirement for Lab Handout**
- + Choose a water indication to analyze water quality
- + Apply IDW and Natural Neighbor method to interpolate
- + Create a layout showing your result
- + Answer the question: What are different/similar of temperature distribution interpolated by two methods?
- + Short writing about spatial distribution of selected indicator in Truc Bach Lake

Turn in:

A layout of the interpolated map and its analyzing as requirement

Lab 4 due date: One week after having instruction!