
Lab8 地圖學與GIS

定量主題地圖1：
分級符號圖、統計地圖

助教：廖皓宇、劉怡慧、王崧阡
2018/05/11

本週實習內容

- 定量地圖

- ① 分級符號圖 (proportional symbol map)
- ② 統計地圖 (statistical map)
 - 圓餅圖 (pie chart)
 - 長條圖 (bar chart)

- 資料處理

- Dissolve
- Join attribute table based on column

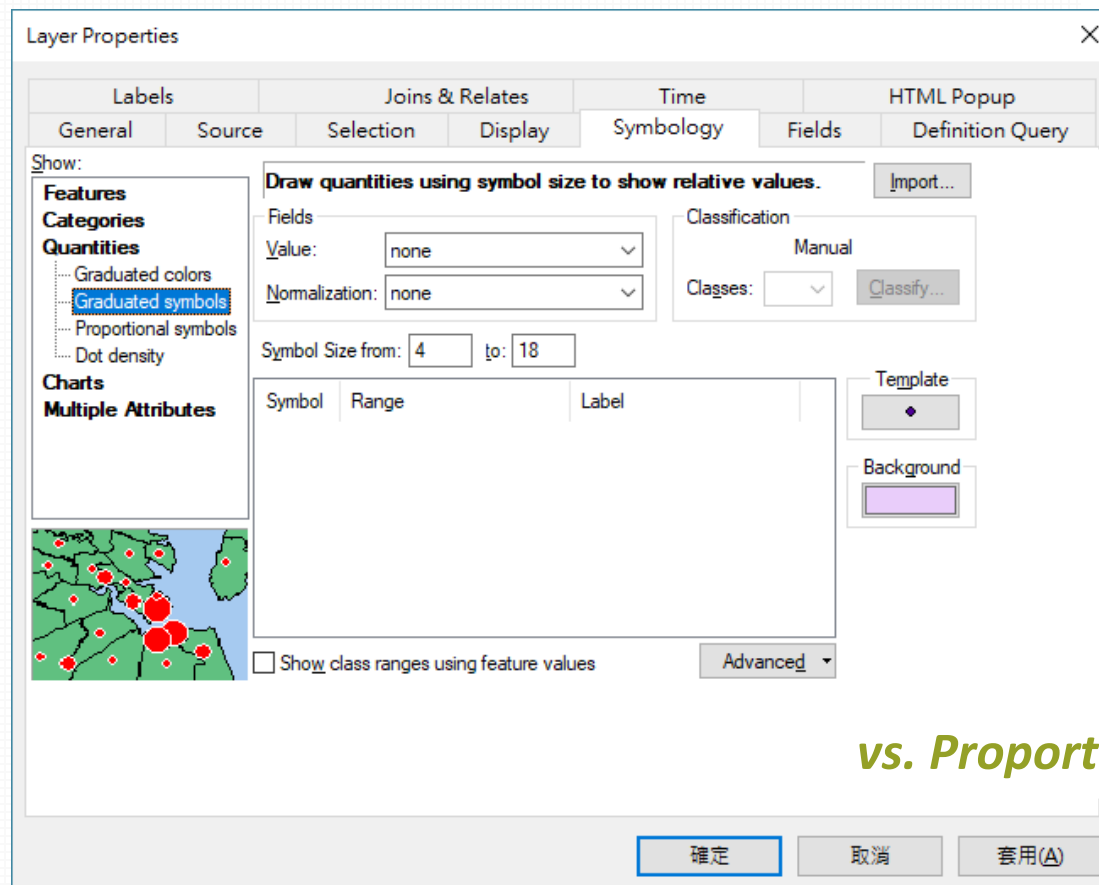
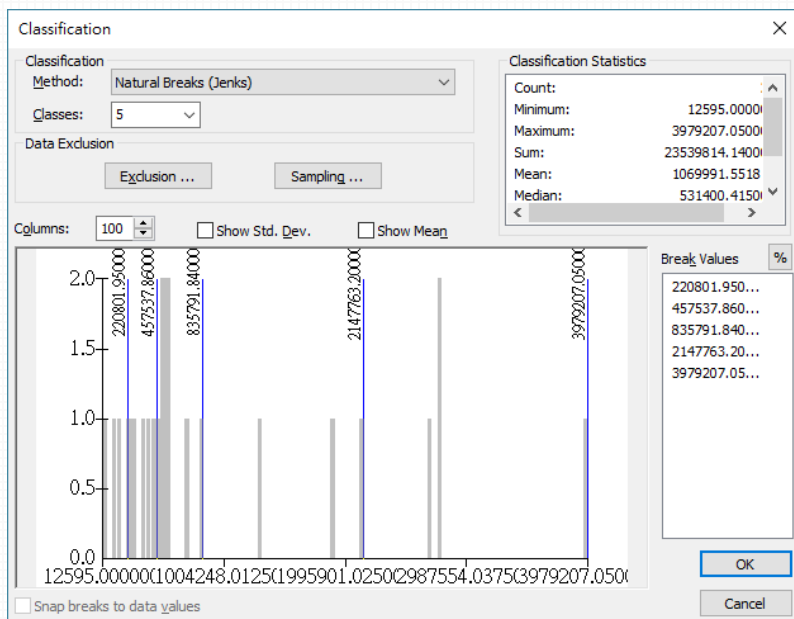
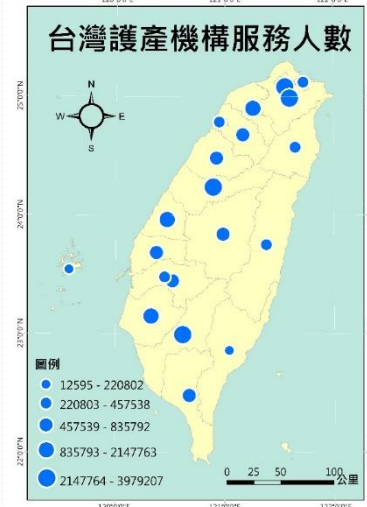
Data

- 人口資料 – 105年五歲年齡組人口統計 (鄉鎮市區)
 - *tw_n_population.shp*
- 台灣縣市界
 - *tw_n_county.shp*
- 護產機構統計資料
 - *nursing_institute.shp*
- 外籍配偶人數統計資料
 - *foreign_marriage.csv*

① 分級符號圖

護產機構服務人數

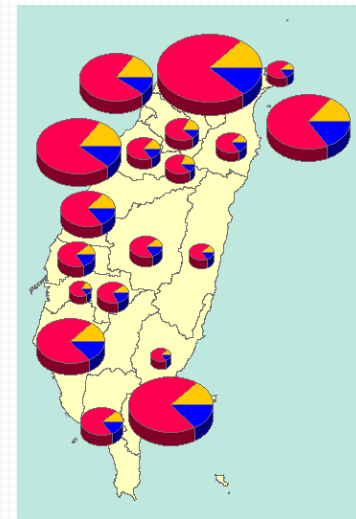
- 觀察資料 (attribute table)
- 資料處理
 - 資料計算 (field calculator)
- **Quantities → Graduated symbols**
 - 參照欄位
 - 分類方法 (如何切)



vs. Proportional symbols

② 統計地圖(圓餅圖)

105年老、中、青人口結構



- 觀察資料 (open attribute table)

- 資料單位：鄉鎮市區

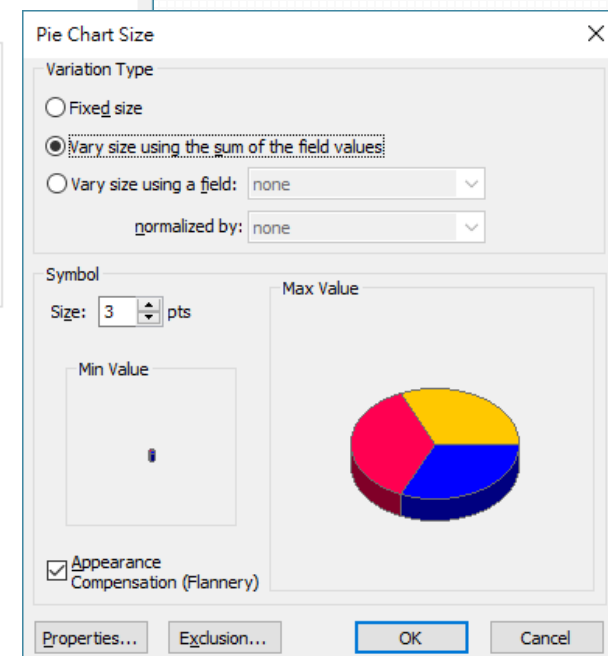
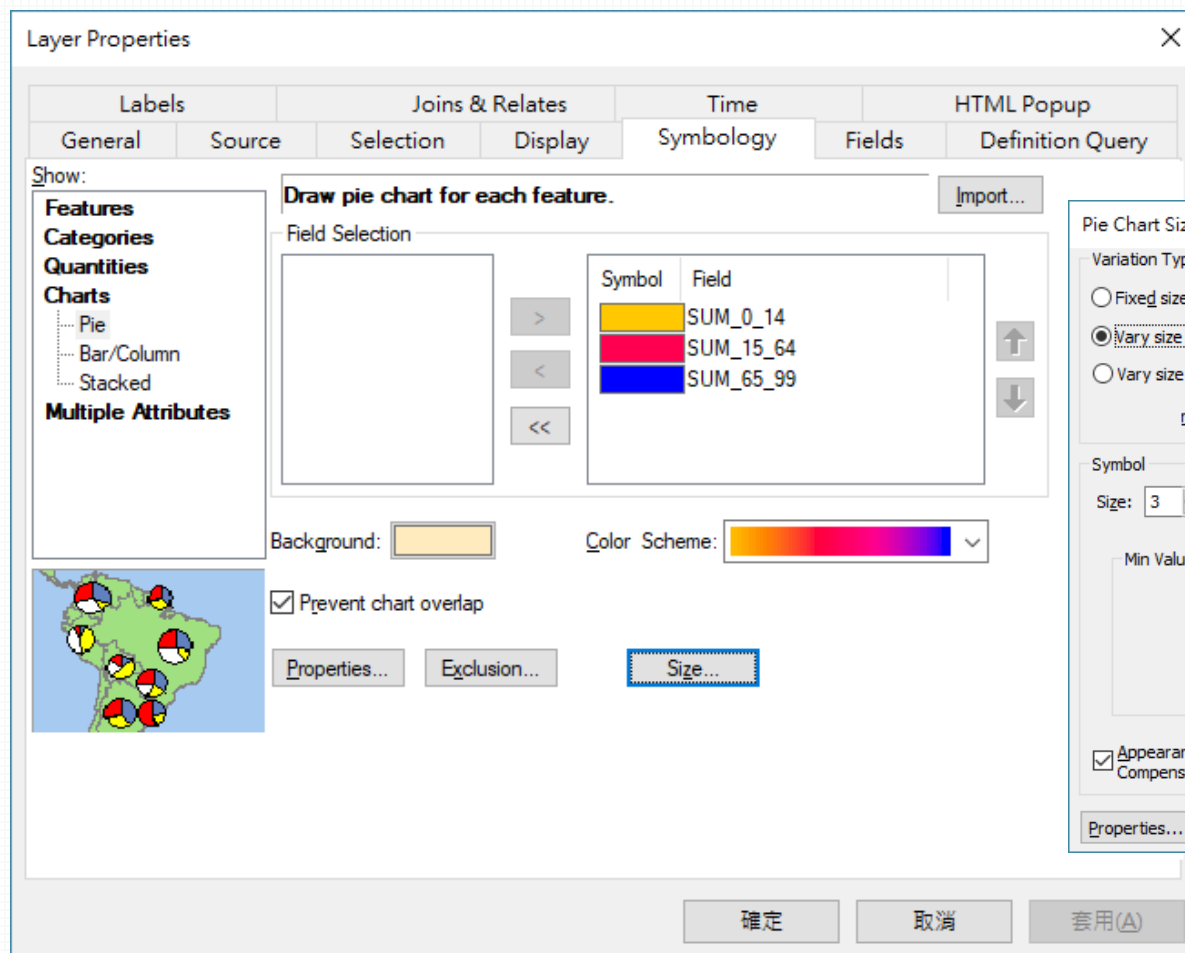
- 資料處理

- 資料計算 (field calculator)

- **Dissolve**

- **Charts → Pie**

- 參照欄位
 - 餅的大小



Dissolve

依照什麼欄位融合（合併資料）←

保留哪些欄位資料←
資料融合的規則←

Dissolve

Input Features
tw_n_population

Output Feature Class
C:\Users\USER\Documents\ArcGIS\Default.gdb\tw_n_population_Dissolve1

Dissolve_Field(s) (optional)

- ☐ FID
- ☐ TOWN_ID
- ☐ TOWN
- ☐ COUNTY_ID
- ☒ COUNTY
- ☐ A0A4_CNT
- ☐ A5A9_CNT
- ☐ A10A14_CNT
- ☐ A15A19_CNT
- ☐ A20A24_CNT

Select All Unselect All Add Field

Statistics Field(s) (optional)

Field	Statistic Type
0_14	SUM

OK Cancel Environments... << Hide Help Tool Help

Dissolve_Field(s) (optional)

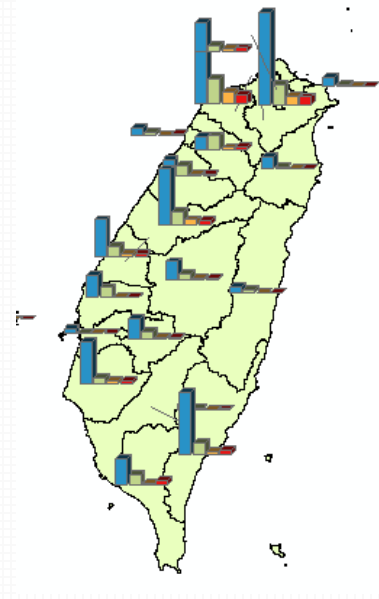
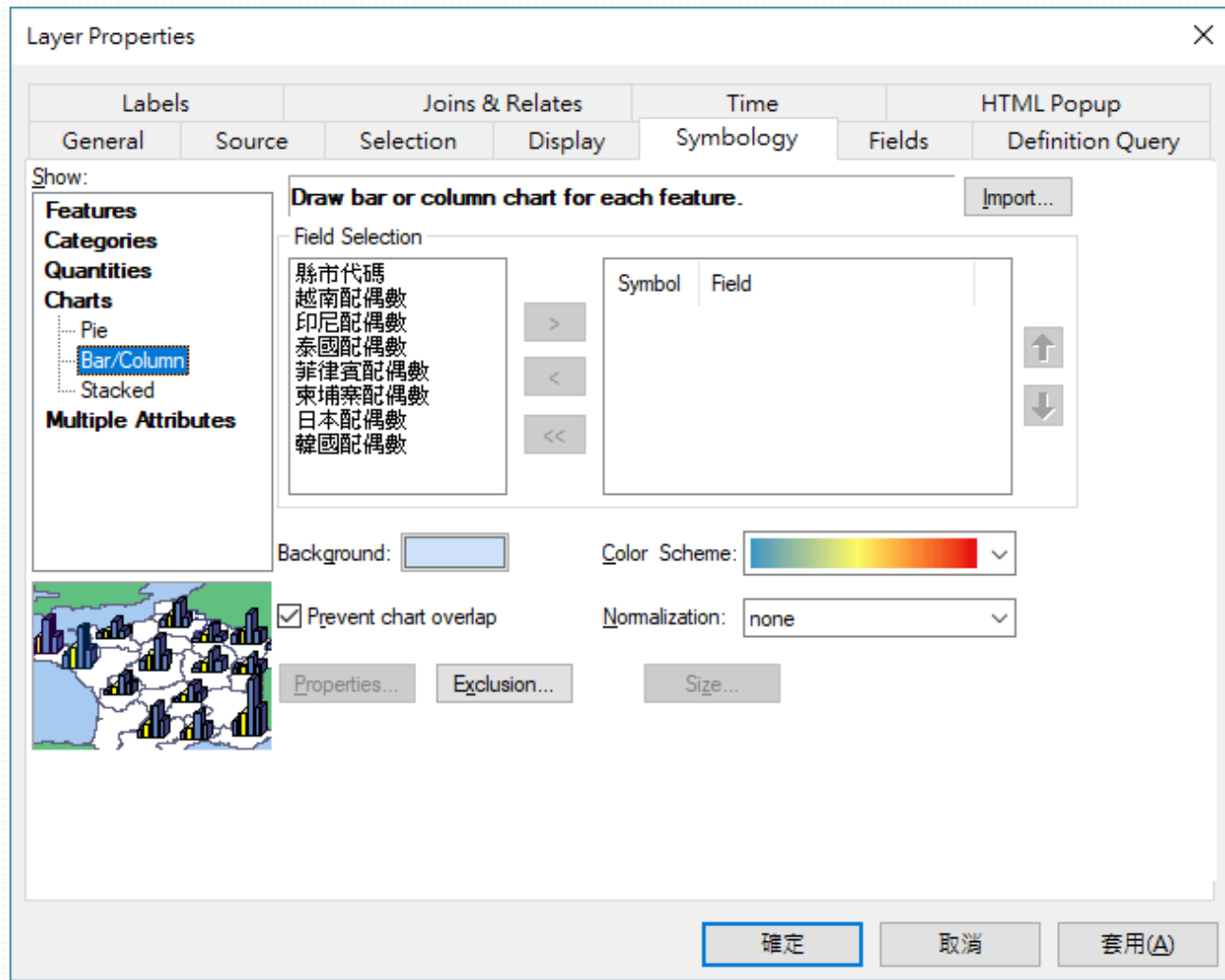
The field or fields on which to aggregate features.

The Add Field button, which is used only in ModelBuilder, allows you to add expected fields so you can complete the dialog box and continue to build your model.

③ 統計地圖(長條圖)

國內前四大外籍配偶數

- 觀察資料 (open attribute table)
 - 資料格式(csv file)
 - Statistics
- 資料處理
 - Join data
- Charts → Bar/Column



Join attribute table based on column

參照欄位 (this layer) ←

要join過來的資料 ←

參照欄位 (the table) ←

Join Data

Join lets you append additional data to this layer's attribute table so you can, for example, symbolize the layer's features using this data.

What do you want to join to this layer?

Join attributes from a table

1. Choose the field in this layer that the join will be based on:

COUNTYNAME

2. Choose the table to join to this layer, or load the table from disk:

foreign_marriage.csv

☒ Show the attribute tables of layers in this list

3. Choose the field in the table to base the join on:

縣市名稱

Join Options

☒ Keep all records

All records in the target table are shown in the resulting table. Unmatched records will contain null values for all fields being appended into the target table from the join table.

☐ Keep only matching records

If a record in the target table doesn't have a match in the join table, that record is removed from the resulting target table.

Validate Join

About joining data

OK Cancel

This lab...

- 地圖繪製：繪製分級符號圖、統計地圖
- **資料處理**
 - 欄位計算 (Field calculator)
 - 敘述性統計資料 (Statistics)
 - 面圖層的邊界融合 (Dissolve)、資料統計
 - 串連表格資料 / 屬性表 (Join data)

本週作業

1. 護產機構服務人數地圖
 2. 105年老、中、青人口結構圓餅圖
 3. 2016 年前四名外籍配偶數長條圖
- 繳交檔案：3 張地圖(.jpg) 壓縮上傳至ceiba作業區
 - 繳交期限：5/18 (五) 中午12點