
Lab8 地圖學與GIS

定量主題地圖1：
分級符號圖、統計地圖

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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

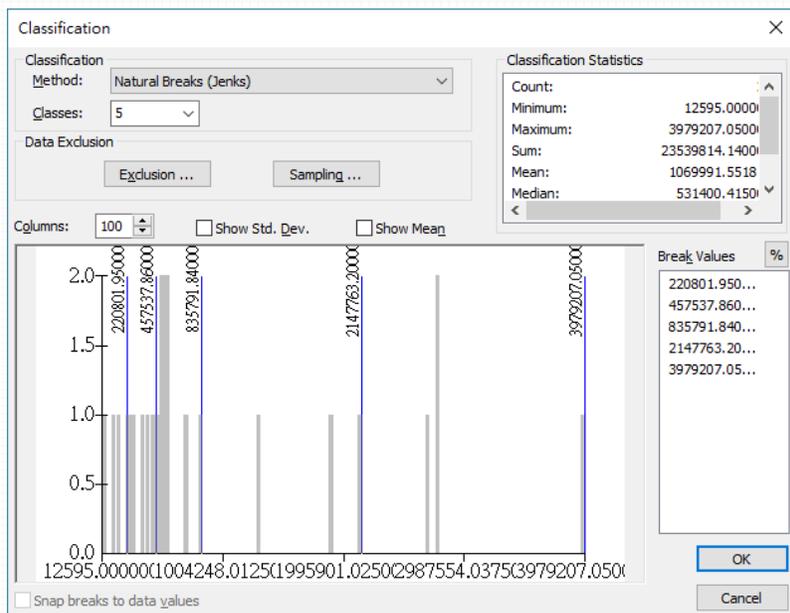
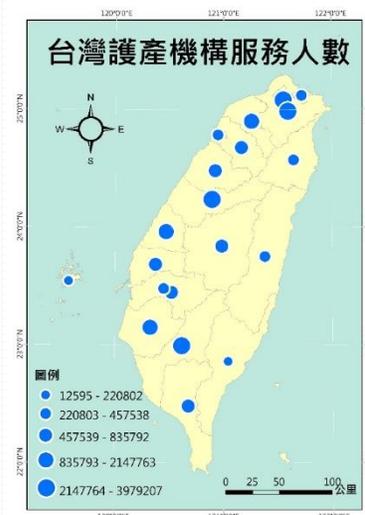
Data

- 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

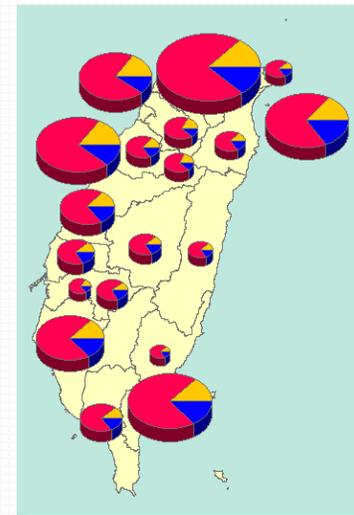
- 觀察資料 (attribute table)
- 資料處理
 - 資料計算 (field calculator)
- **Quantities → Graduated symbols**
 - 參照欄位
 - 分類方法 (如何切)



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

Layer Properties

Labels Joins & Relates Time HTML Popup
General Source Selection Display Symbology Fields Definition Query

Show:

- Features
- Categories
- Quantities
- Charts
 - Pie
 - Bar/Column
 - Stacked
- Multiple Attributes

Draw pie chart for each feature. Import...

Field Selection

Symbol	Field
Yellow	SUM_0_14
Red	SUM_15_64
Blue	SUM_65_99

Background: [Color Picker] Color Scheme: [Color Scheme]

Prevent chart overlap

Properties... Exclusion... Size...

確定 取消 套用(A)

Pie Chart Size

Variation Type

- Fixed size
- Vary size using the sum of the field values
- Vary size using a field: none

normalized by: none

Symbol

Size: 3 pts

Min Value

Max Value

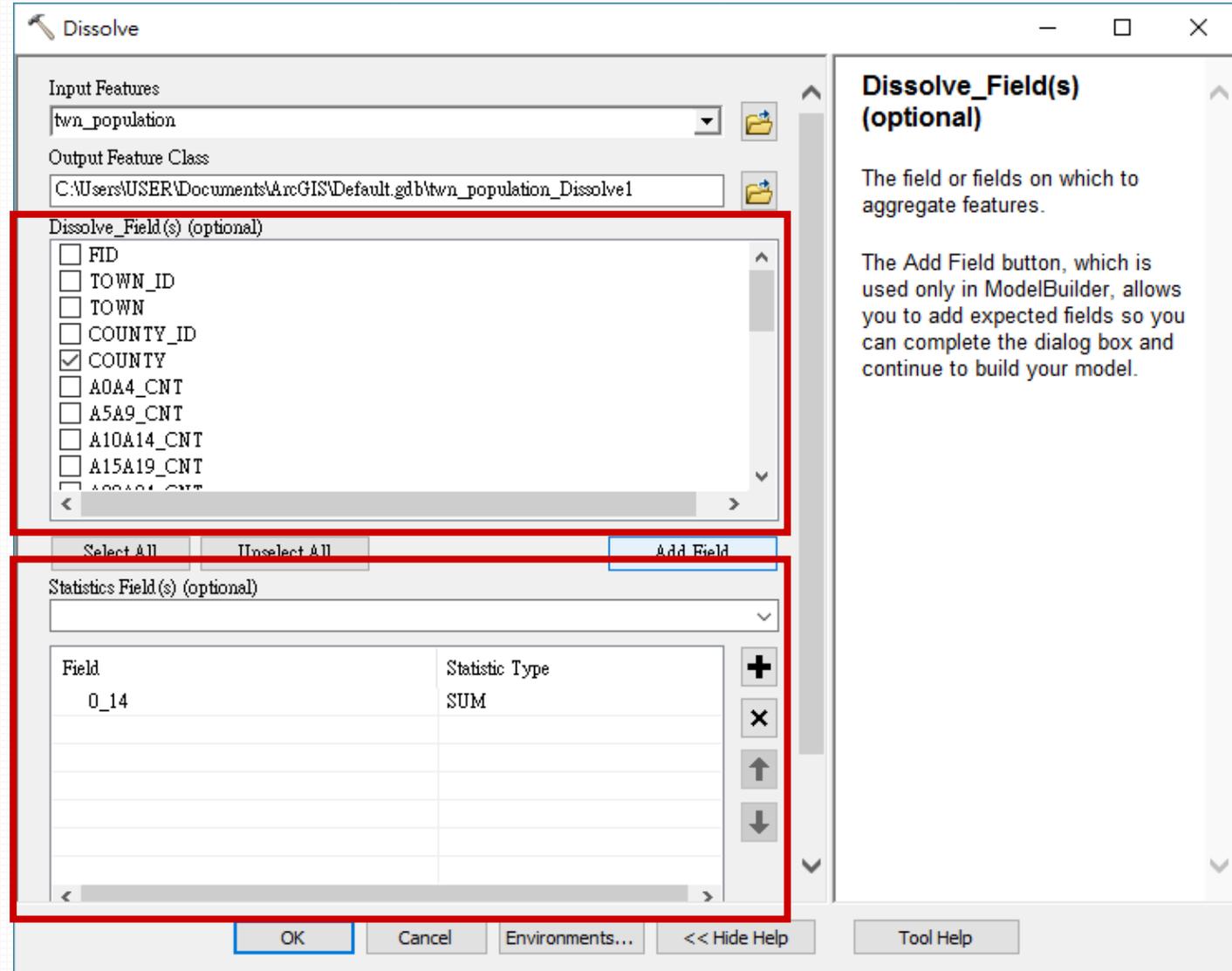
Appearance Compensation (Flannery)

Properties... Exclusion... OK Cancel

Dissolve

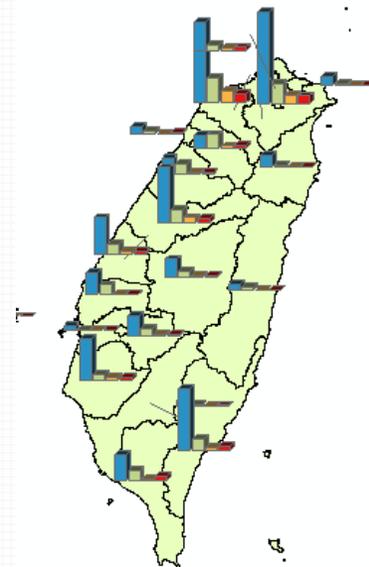
依照什麼欄位融合（合併資料）←

保留哪些欄位資料←
資料融合的規則←



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**

The screenshot shows the 'Layer Properties' dialog box in a GIS application, specifically the 'Symbology' tab. The 'Show:' section on the left has 'Bar/Column' selected under the 'Charts' category. The main area is titled 'Draw bar or column chart for each feature.' and contains a 'Field Selection' list with the following items: 縣市代碼, 越南配偶數, 印尼配偶數, 泰國配偶數, 菲律賓配偶數, 柬埔寨配偶數, 日本配偶數, and 韓國配偶數. Below the list are navigation arrows. To the right is a table with columns 'Symbol' and 'Field'. Below the table are 'Background' and 'Color Scheme' options. At the bottom, there are checkboxes for 'Prevent chart overlap' and 'Normalization' (set to 'none'). Buttons for 'Properties...', 'Exclusion...', and 'Size...' are also visible. At the very bottom of the dialog are buttons for '確定' (OK), '取消' (Cancel), and '套用(A)' (Apply).

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