Ideas

Diverging Bar — Temperature

Year

Chloropleth Map

Proportional Symbol Map

Temperature each day over Summer

Calendar Heatmap

Line Chart

- Streamgraph
CO_2 emissions vs trended targets
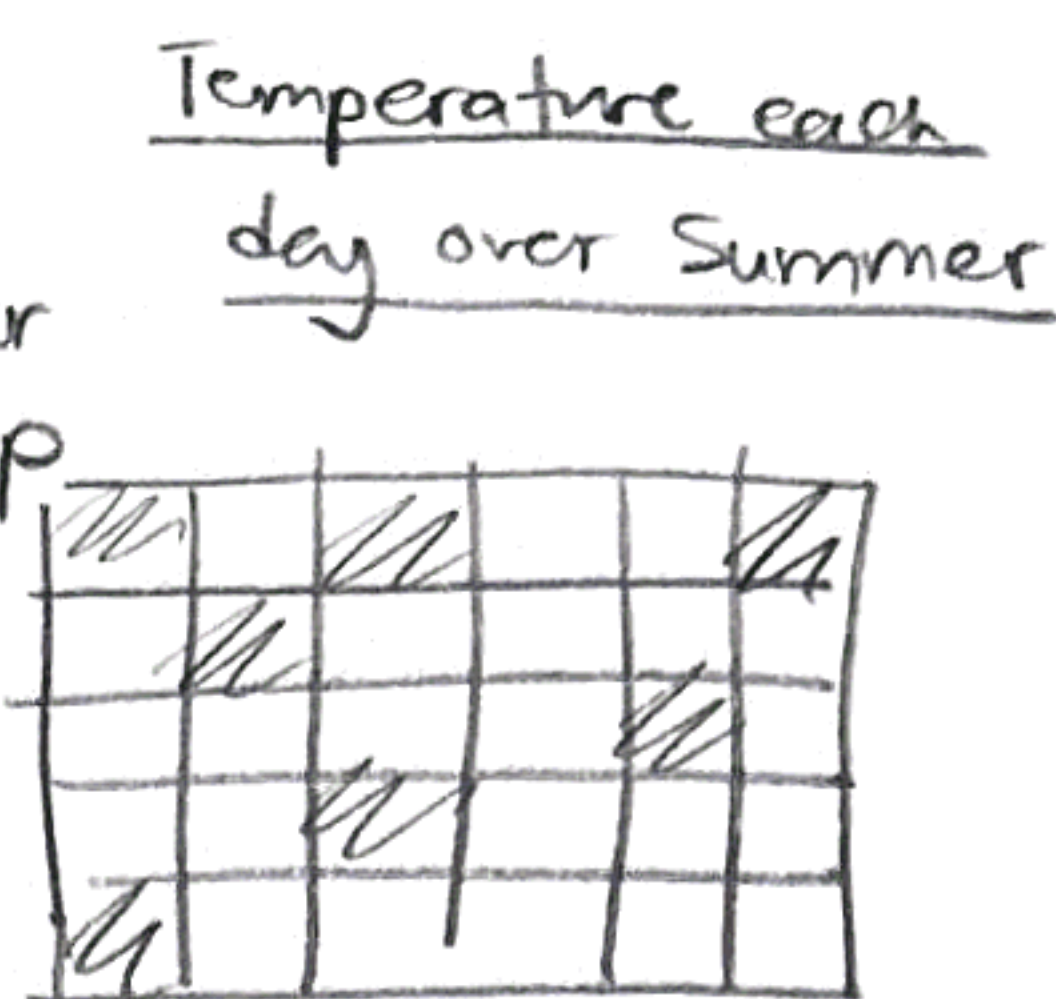
Targets

Proportion of Total Area burned by State

Treemap

VIC 〰	NSW 〰
	NT 〰
	WA	SA

Amount of rainfall throughout Summer

Histogram (B)

CO_2 emissions by Industry

Ordered Bar
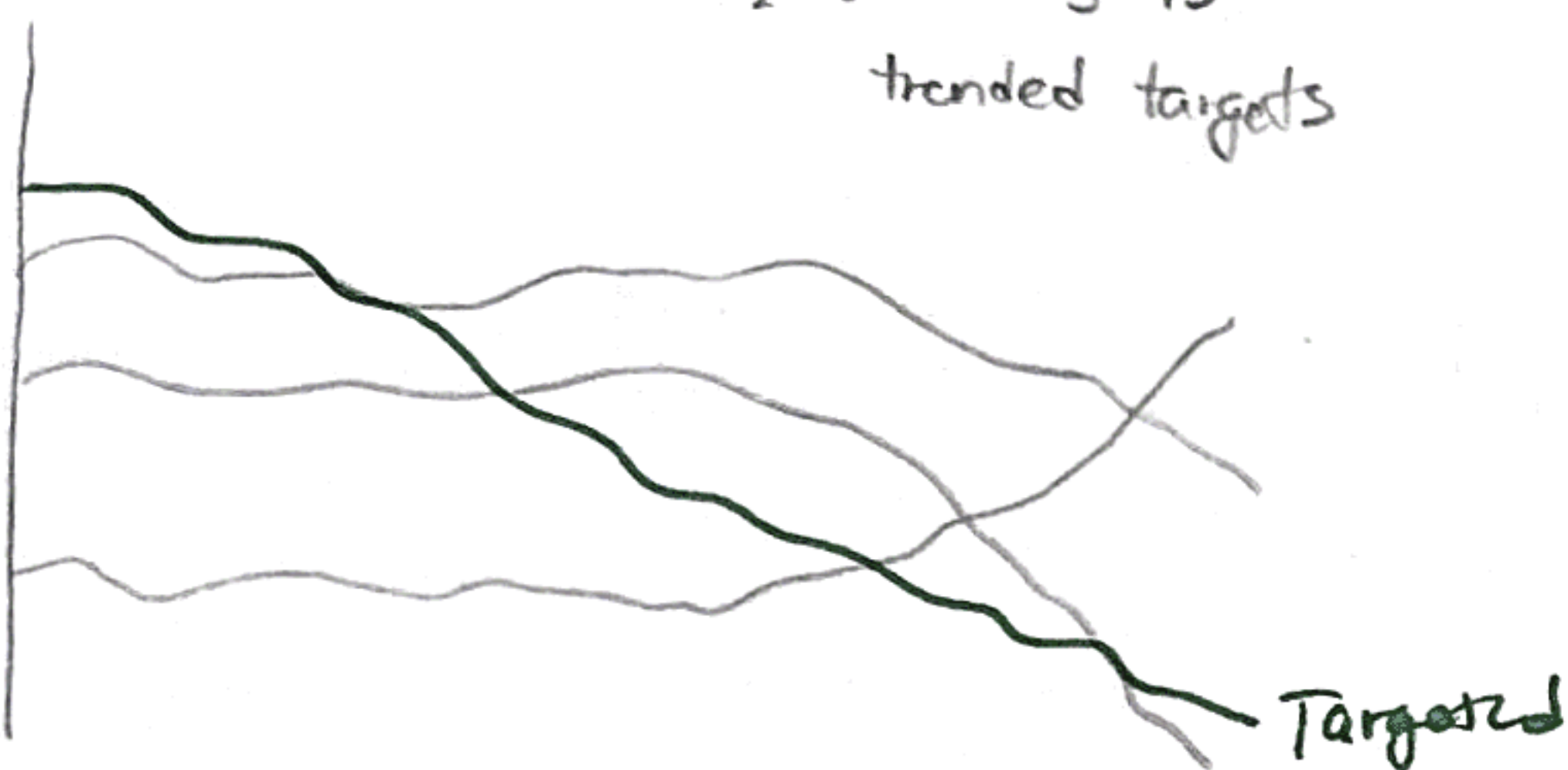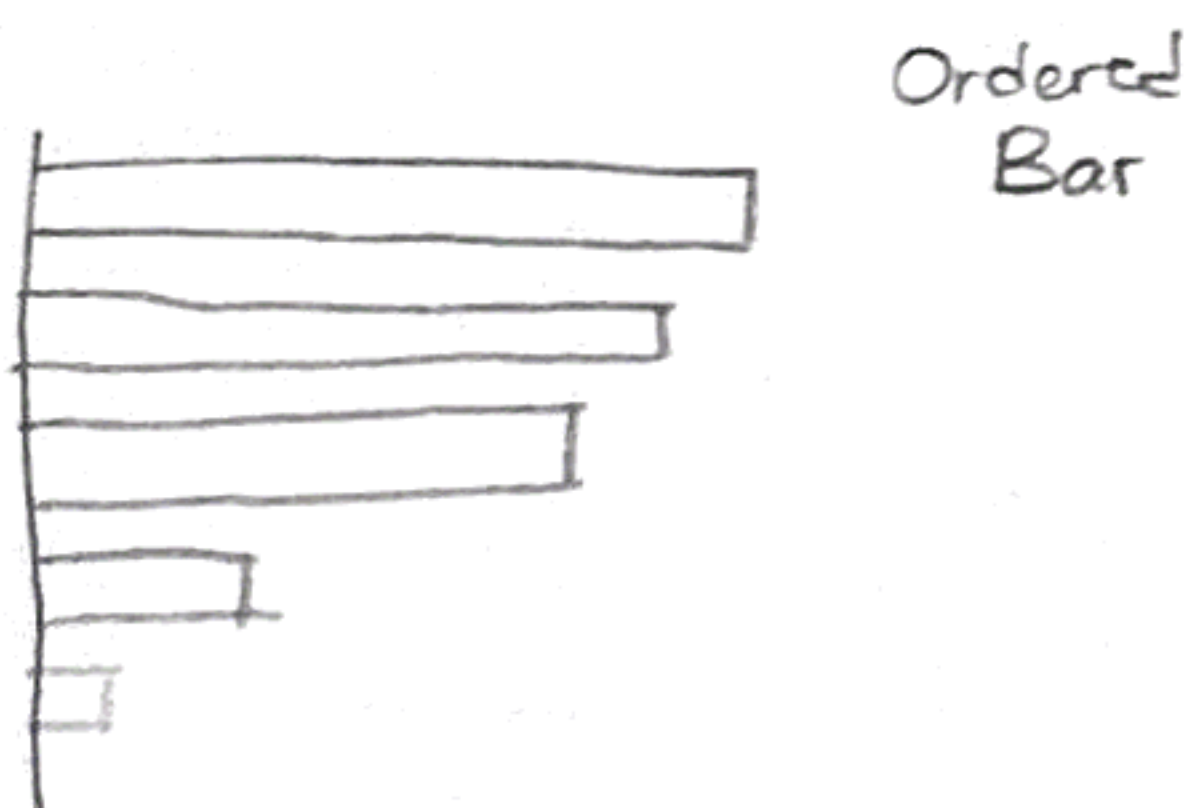
Temperature in different cities   (A)

Boxplot

Filter

Population

Bubble size by CO_2 emissions

GDP per capita
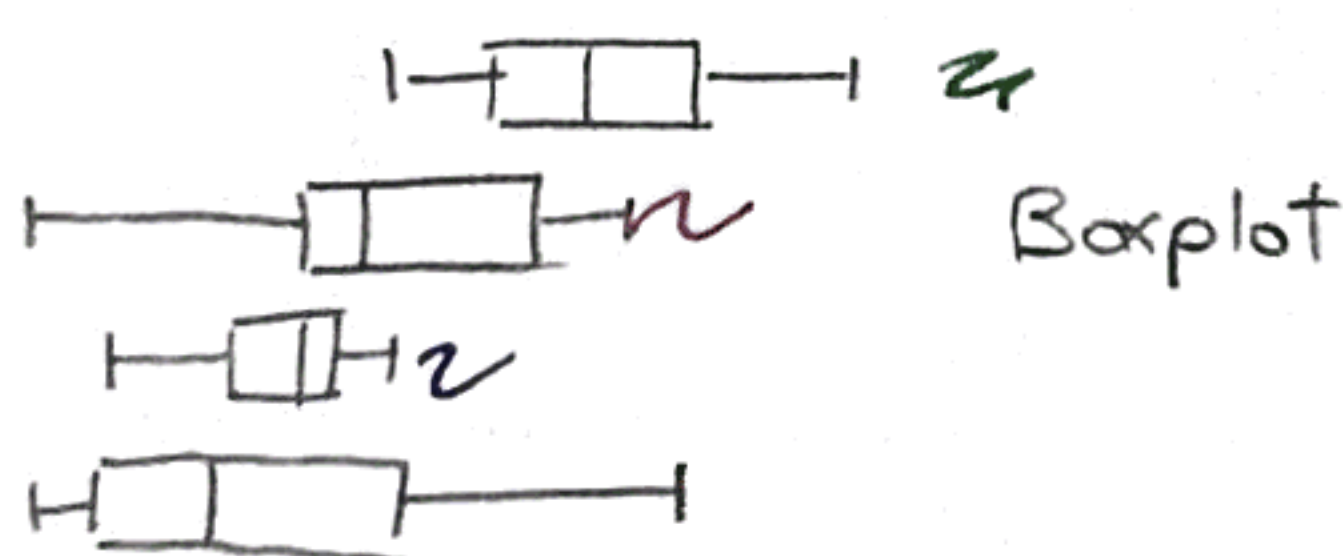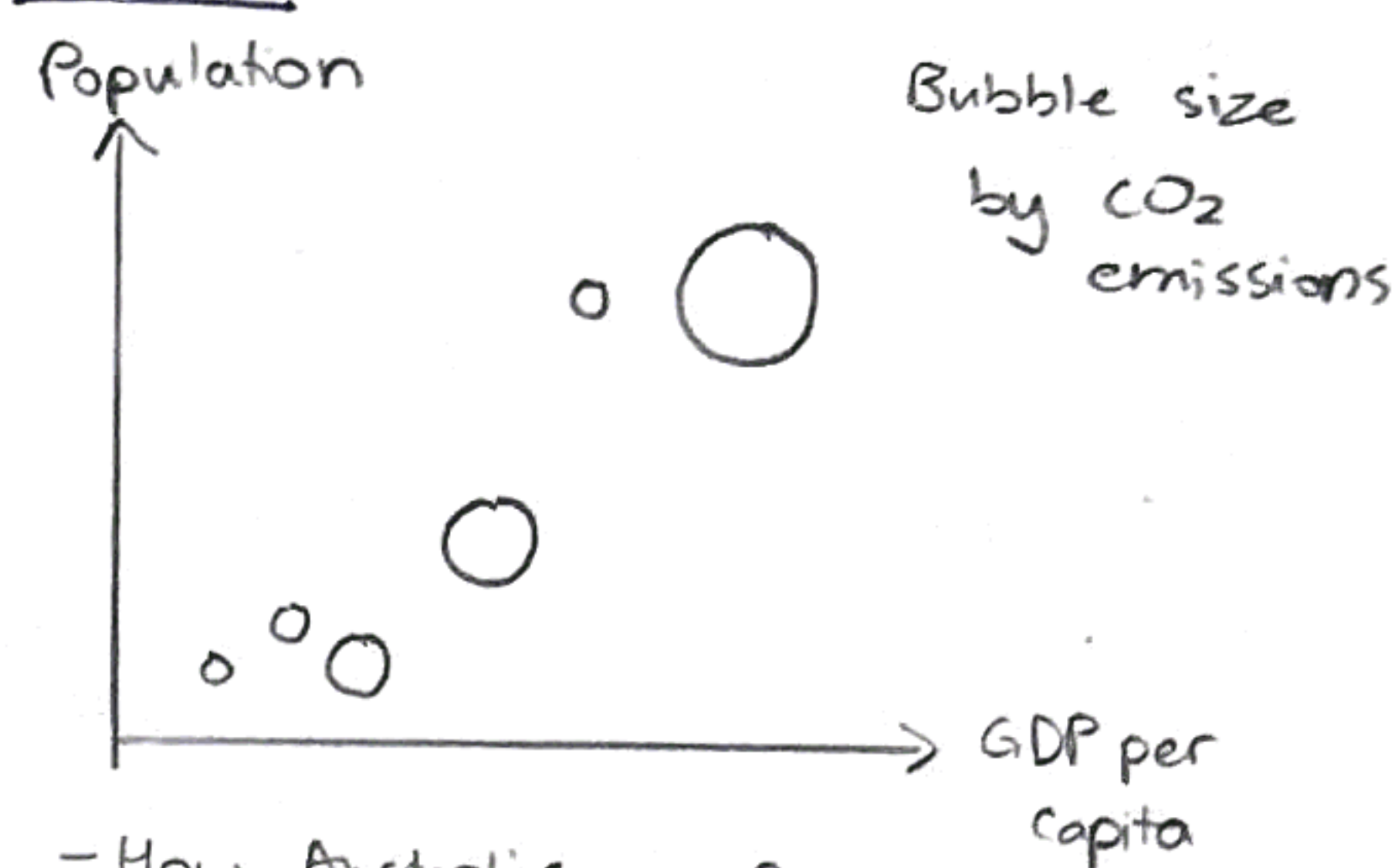
- How Australia compares to the rest of the world.

Temperature change
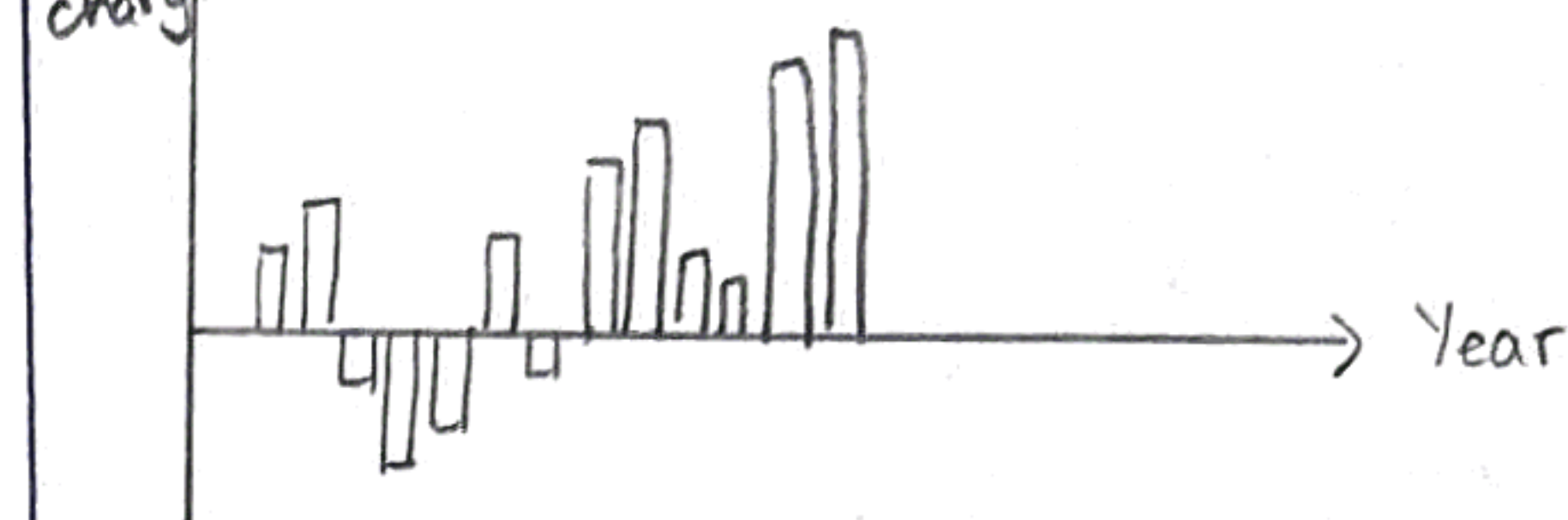
Year

- Keep Proportional Symbol / Chloropleth

- Keep rainfall data visualisation

Categorise

Different attributes

Categorical / Quantitative

Categorical
- Country
- States
- Industry

Quantitative
- Rainfall
- Temperature
- Brightness
- Year

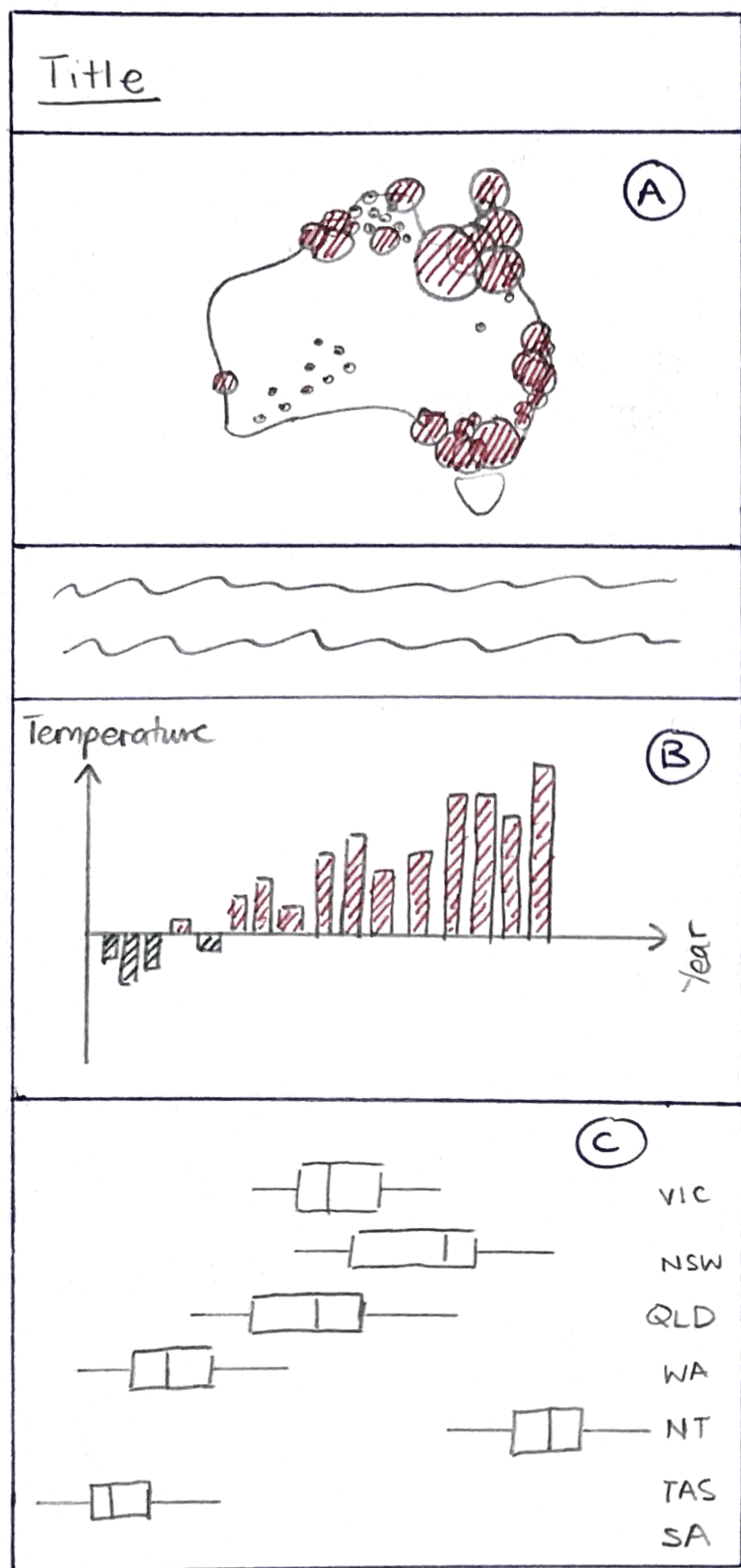Author: KAI WILLIAMS

Date: 20/09/2025

Sheet: 1

Combine and Refine

- Chart A may not provide much additional input, could possibly try and link it with chart B to hopefully make a link.

- May be difficult to change longitude and latitude data into Chloropleth form. So proportional symbol may be the way to go.

- Uncertain about using data from different countries.

Questions

- Does comparing different countries CO_2 emissions really help in telling a story about fires in Australia?

- What is the focus of the visualisation? (Wildfires, Climate Change, CO_2 emissions, Weather?)

Layout

Title

A

Temperature

B

Year

C

VIC

NSW

QLD

WA

NT

TAS

SA

Operation

When you click on state, the relative circles on the proportional symbol match get map highlighted.

- Filter by range of Years.

2010   2015

- Filter by State (Map zooms in).

☒ WA

Focus

- No main focus, all graphs are important in telling the story.

- Graphs such as A should be bigger to emphasize its features (fire location + area burned / brightness data from satellite)
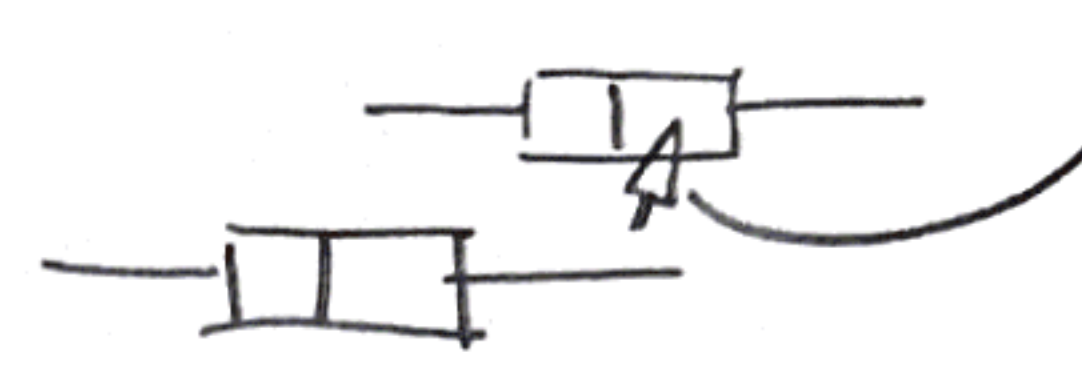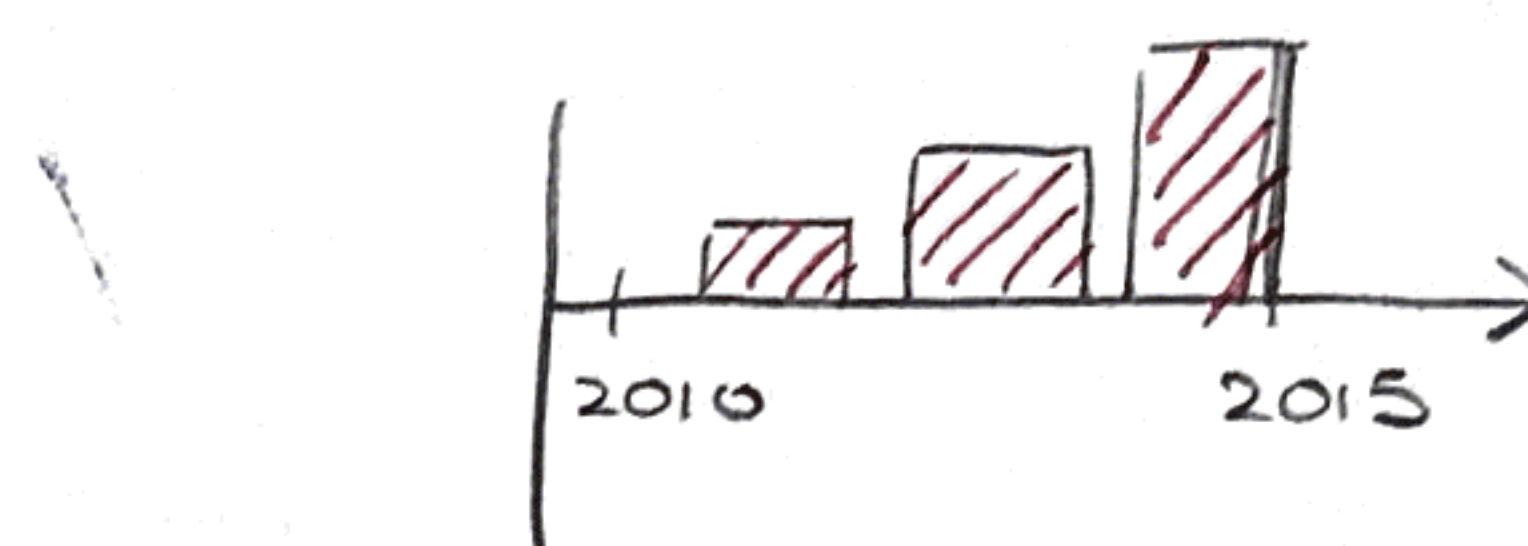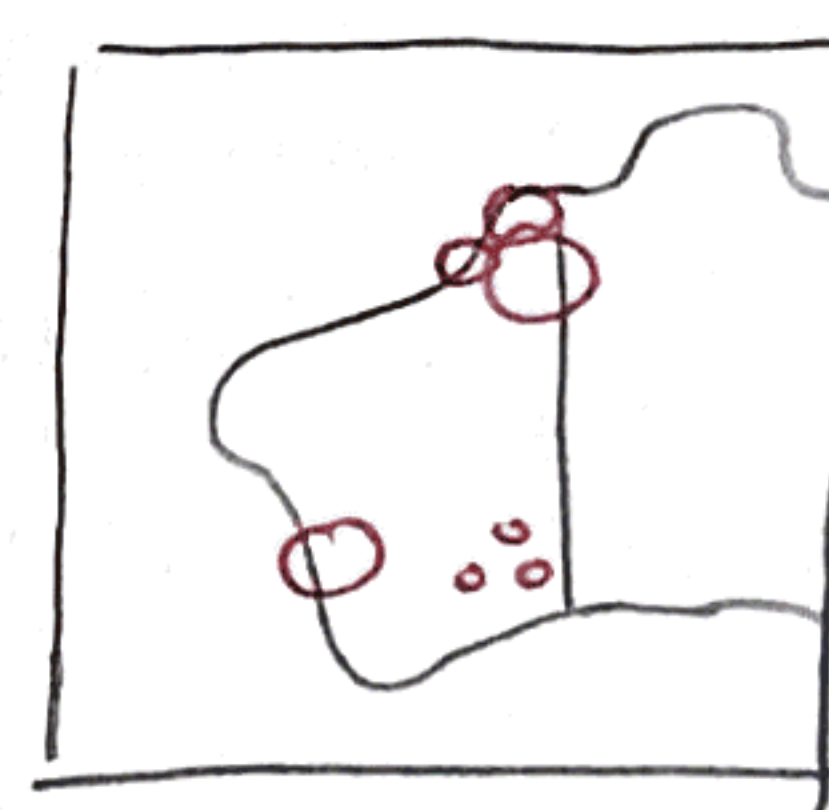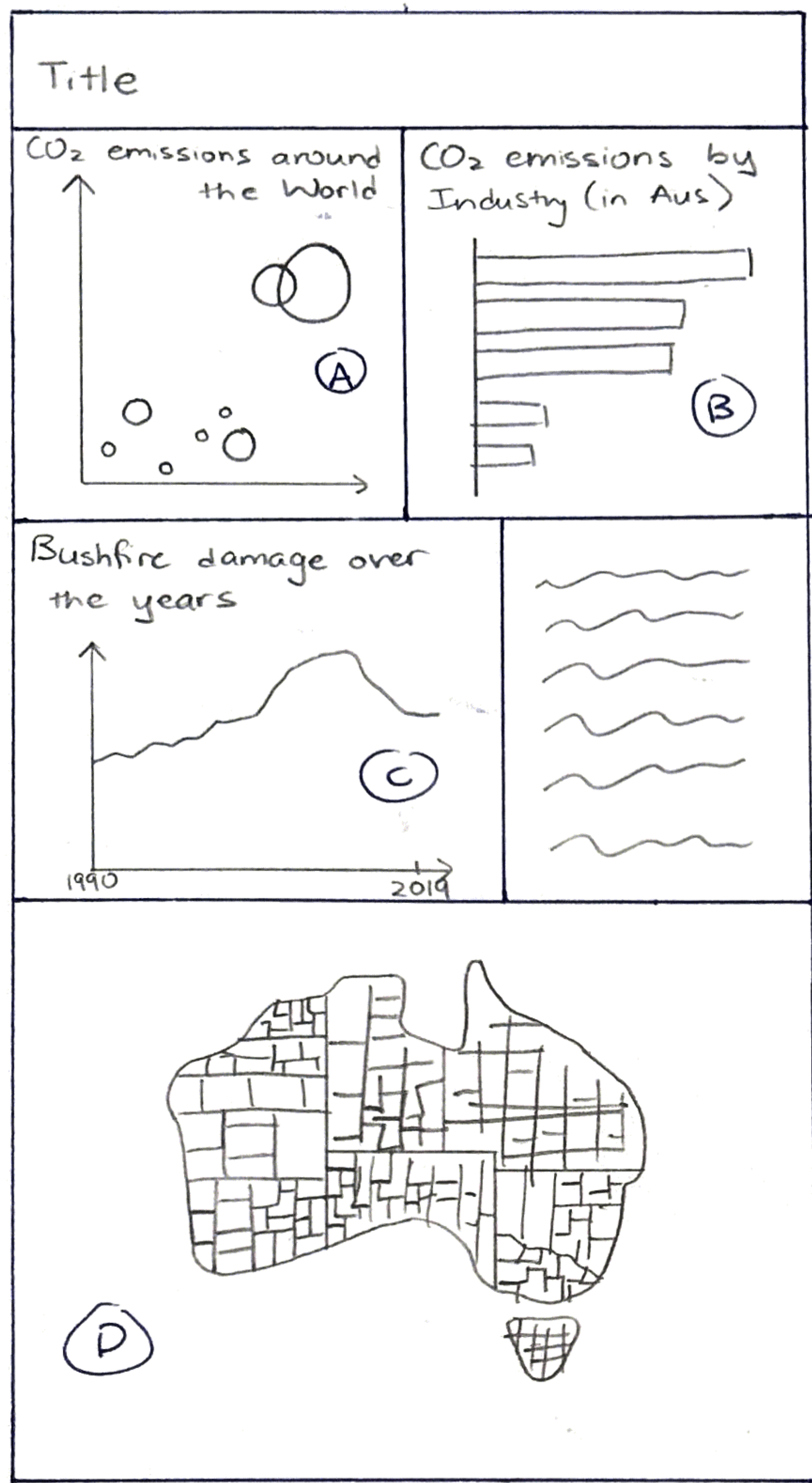
Discussion

- Would like more graphs to blend the entire story together better.

- Happy with interactive operations however, am unsure on implementing them using Vega-Lite.

Layout

Title

CO₂ emissions around the World — (A)

CO₂ emissions by Industry (in Aus) — (B)

Bushfire damage over the years — (C)
1990 — 2019

(D)

Operation

- Add a legend for countries in chart A.

☐ Australia
☐ Canada
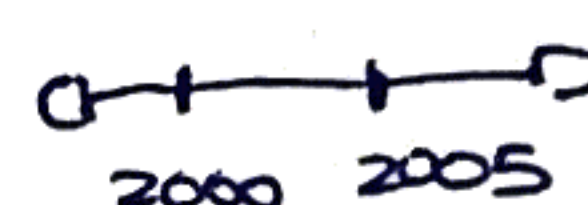☒ Singapore

This helps ensure that small circles can also be observed rather than ignored because of smaller numbers.

- Slider for chart C.

2000   2005

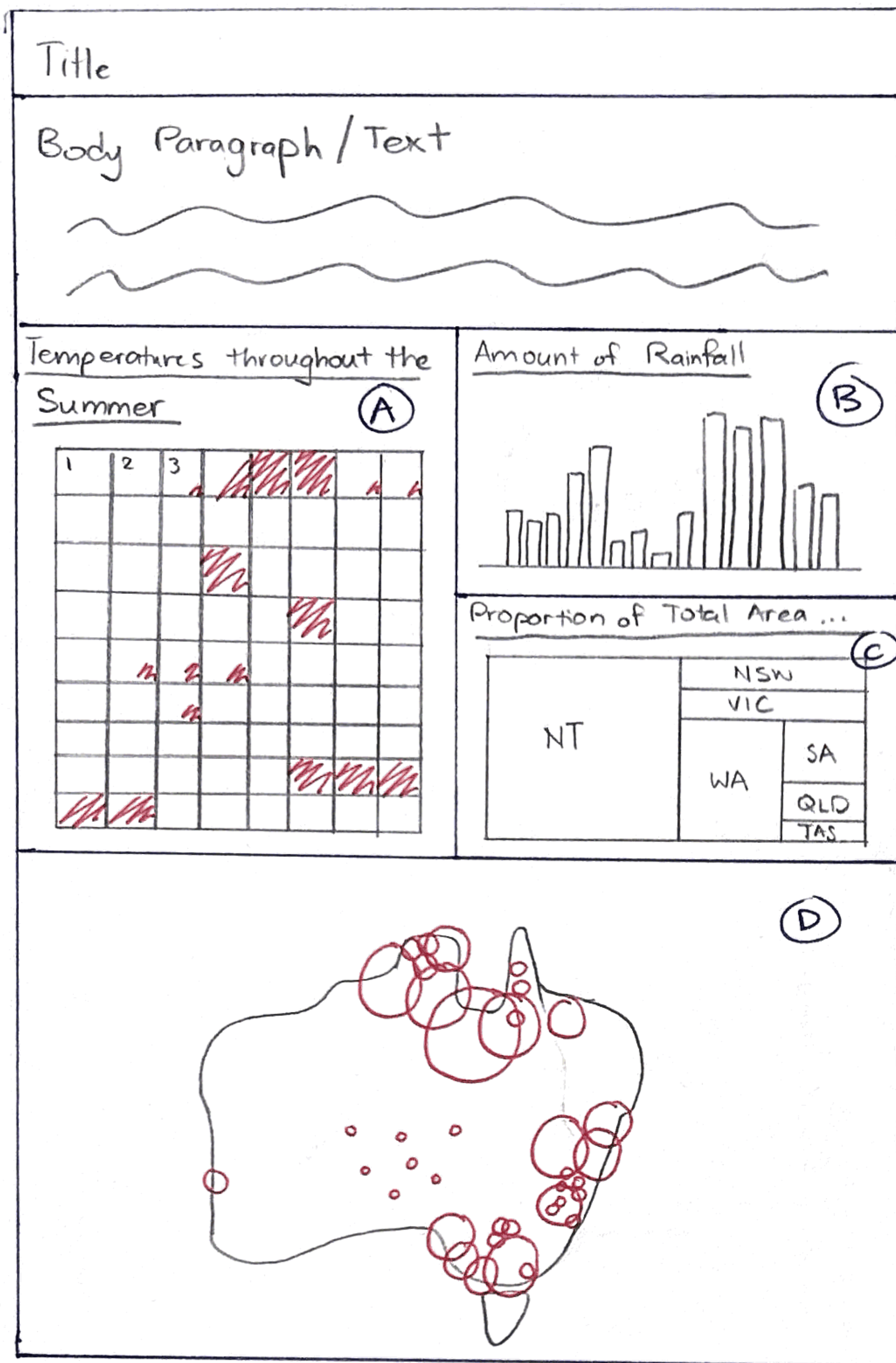- Add in significant climate change policies as annotations

Discussion

- Slightly better than sheet 1 ~~imo~~. in my ~~po~~ opinion. Story is more concrete and links with one another better.

- Taking a quick look at the data and what chart C will actually look like does not really fit with the story. But perhaps helps to build a point that damages to our environment will only be observed many years after.

- Still questioning whether to include ~~the~~ chart A. I like the outside in approach but am still undecided.

Focus

- Main focus is ~~the~~ charts C and D being bigger because the charts before that lead up to the conclusion made in C and D.

- Chloropleth map will have a colour luminance, making areas with high ~~areas~~ burned size brighter and stand out.
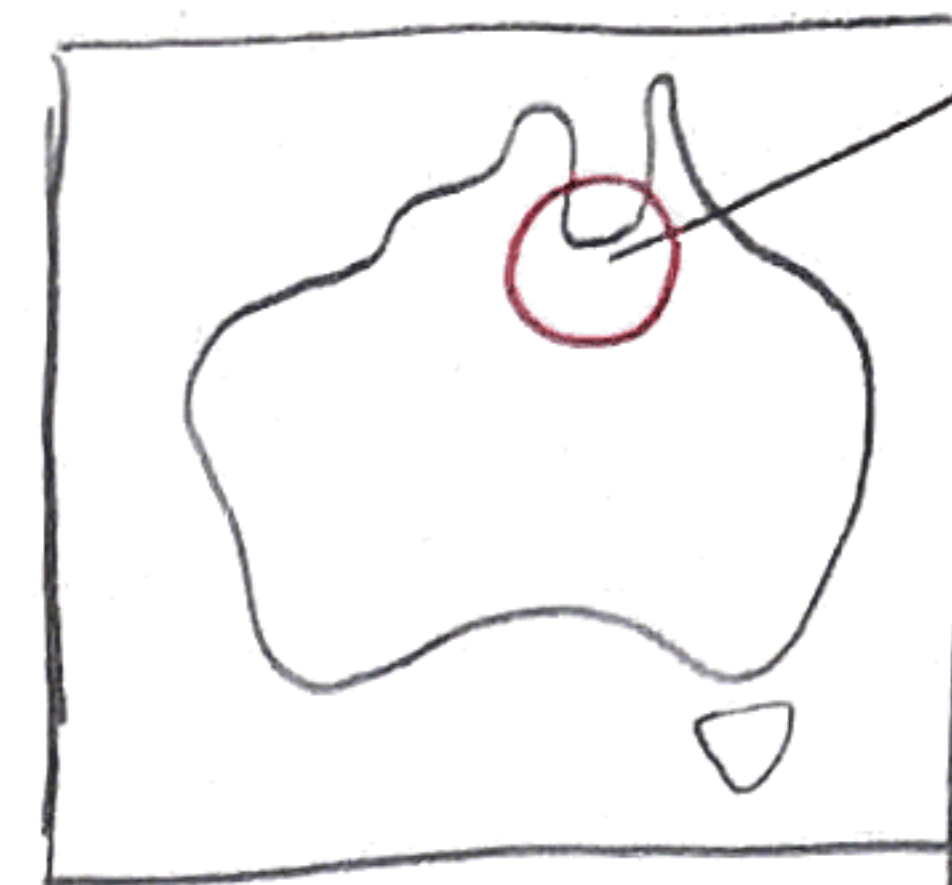
Layout

Title

Body Paragraph / Text

Temperatures throughout the Summer (A)

1	2	3			

Amount of Rainfall (B)

Proportion of Total Area ... (C)

NT	NSW
	VIC
	WA	SA
		QLD
		TAS

(D)

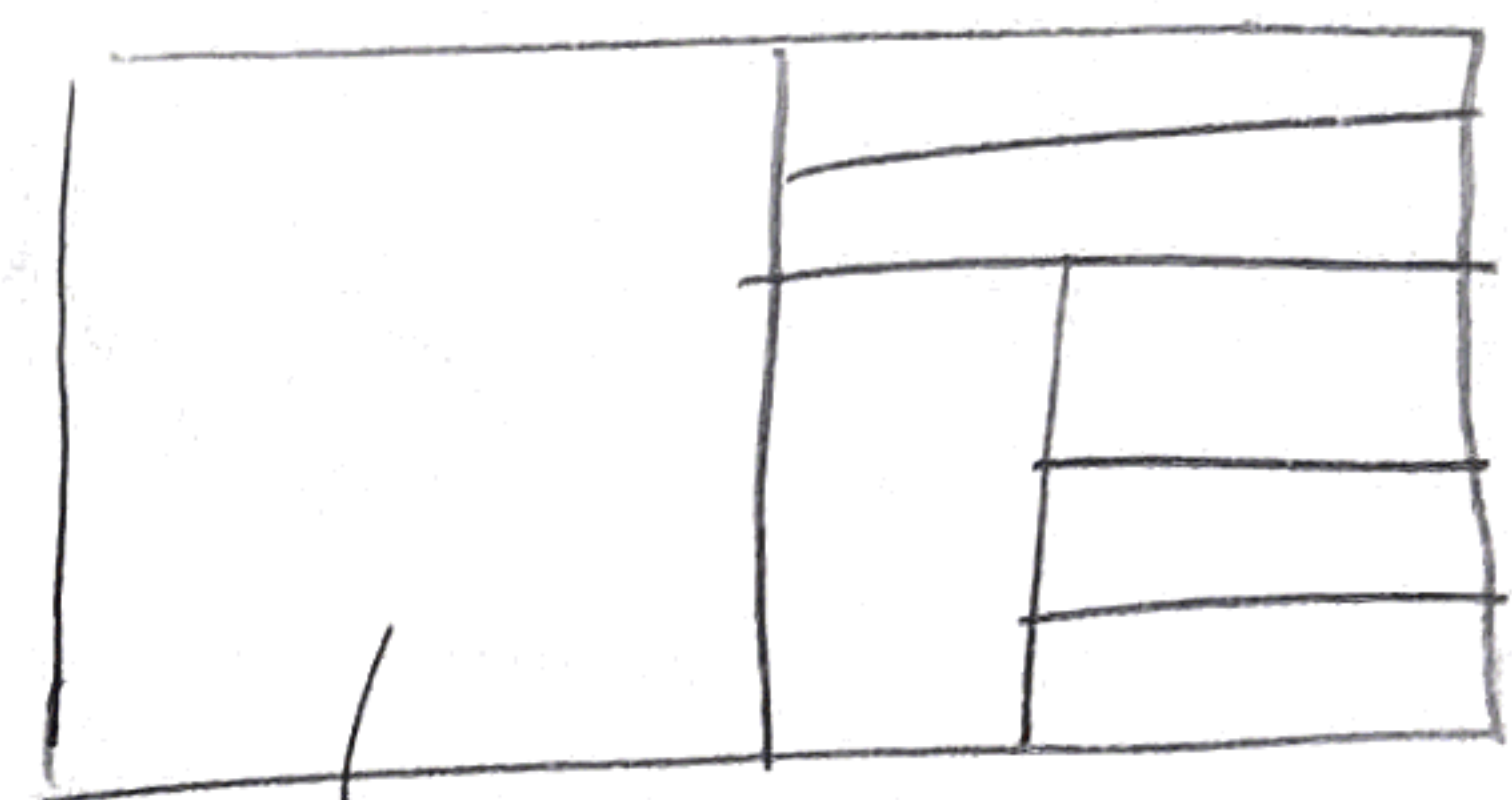Title : High Contrast Viz
Author : KAI WILLIAMS
Date : 23/09/2025
Sheet : 4

Operation

Town/City :
Area Burned :
Brightness index :
Date :

Add % increase/decrease from previous year and add colour hue (green/red) to indicate an increase/decrease.

Focus

- There are two charts that are significantly larger than others, A and D.

- To make chart D stand out even more, make the background of the data viz dark and the red circles signifying the area burned a bright illuminescent red. Along with the colour choices in other charts.
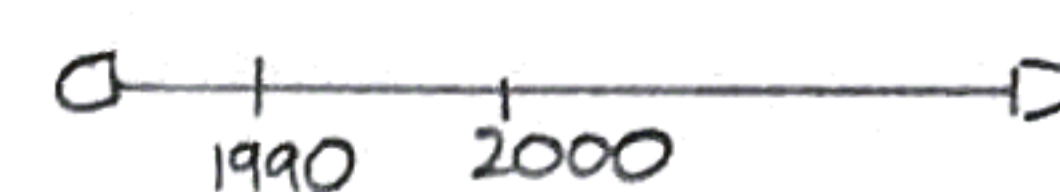
Discussion

- I like placing the proportional symbol map ~~being~~ at the bottom with it also being the largest.

- Requires filler charts to be more descriptive and contain more valuable data.

- Need to decide what charts to use in the middle section of the data viz.

Layout

Australia in a Warming World: Rain, Fire, and Carbon

Trends in Aus Rainfall Over Time — A
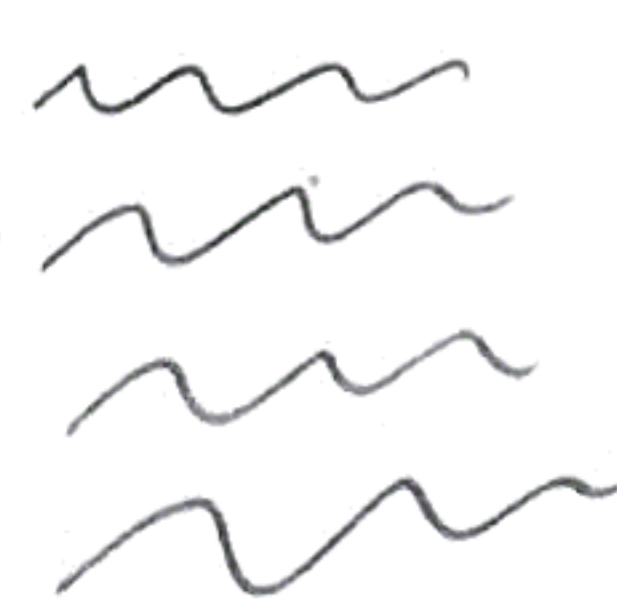
Australia's Temp over Time — B
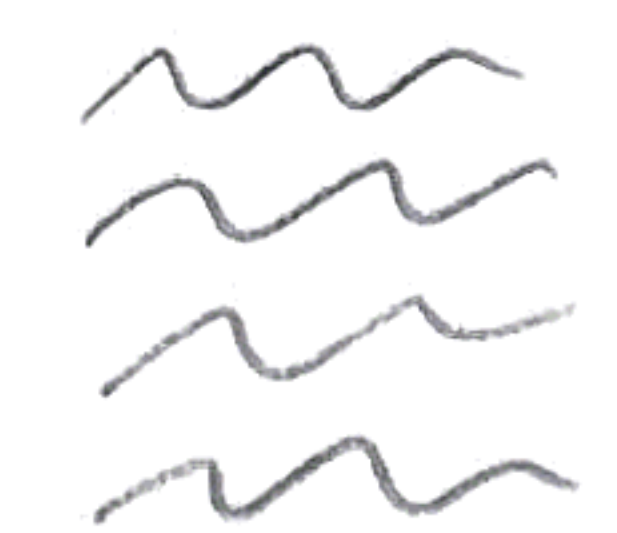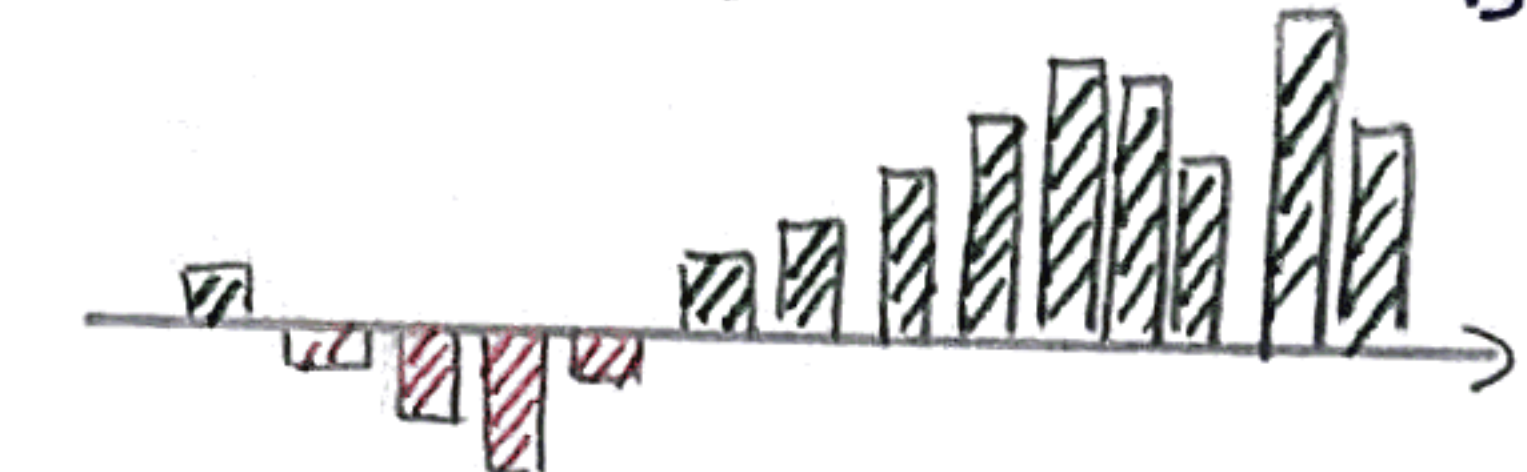
Bushfire Footprint: Area Burred Over the Years — C

D
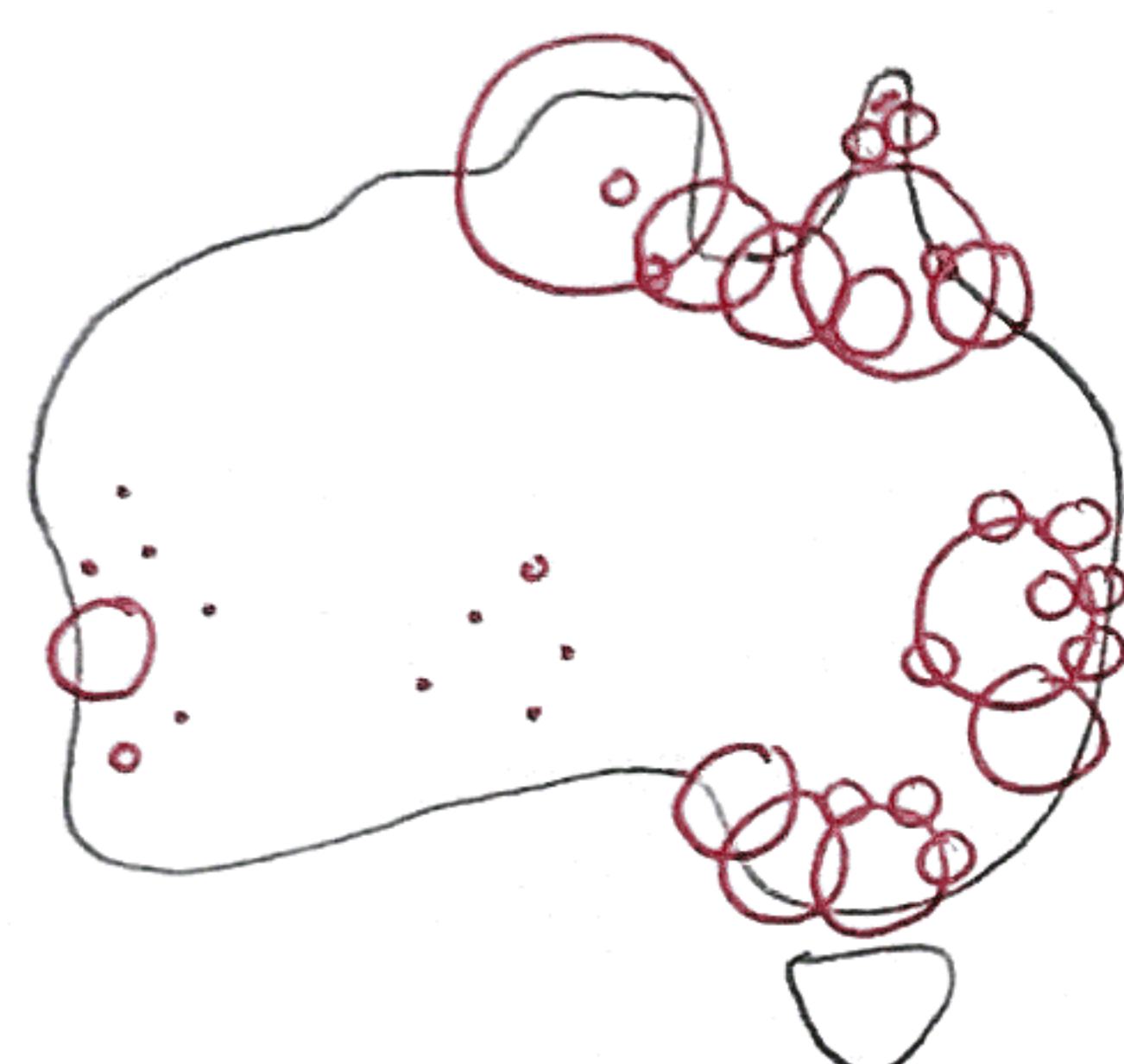
Text about how CO_2 emissions have been something Australia has been trying to reduce.

E

F
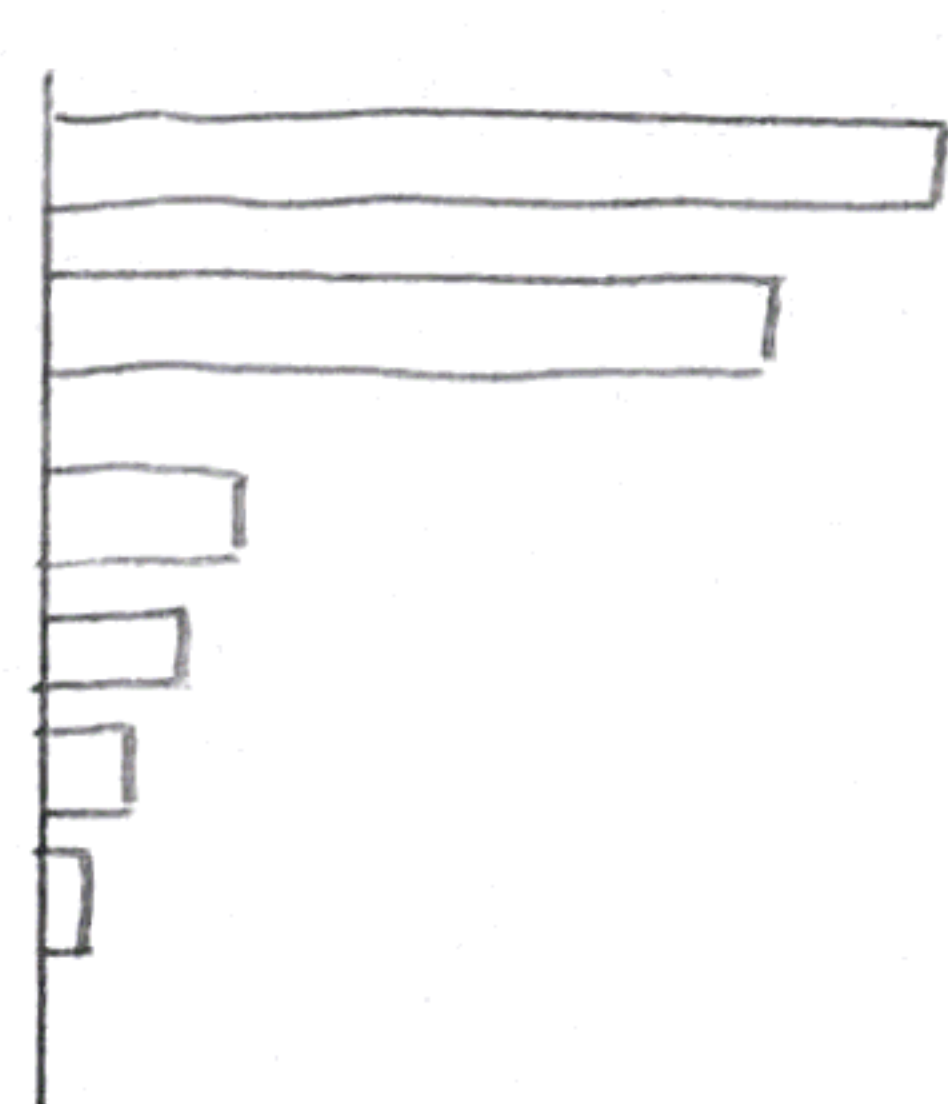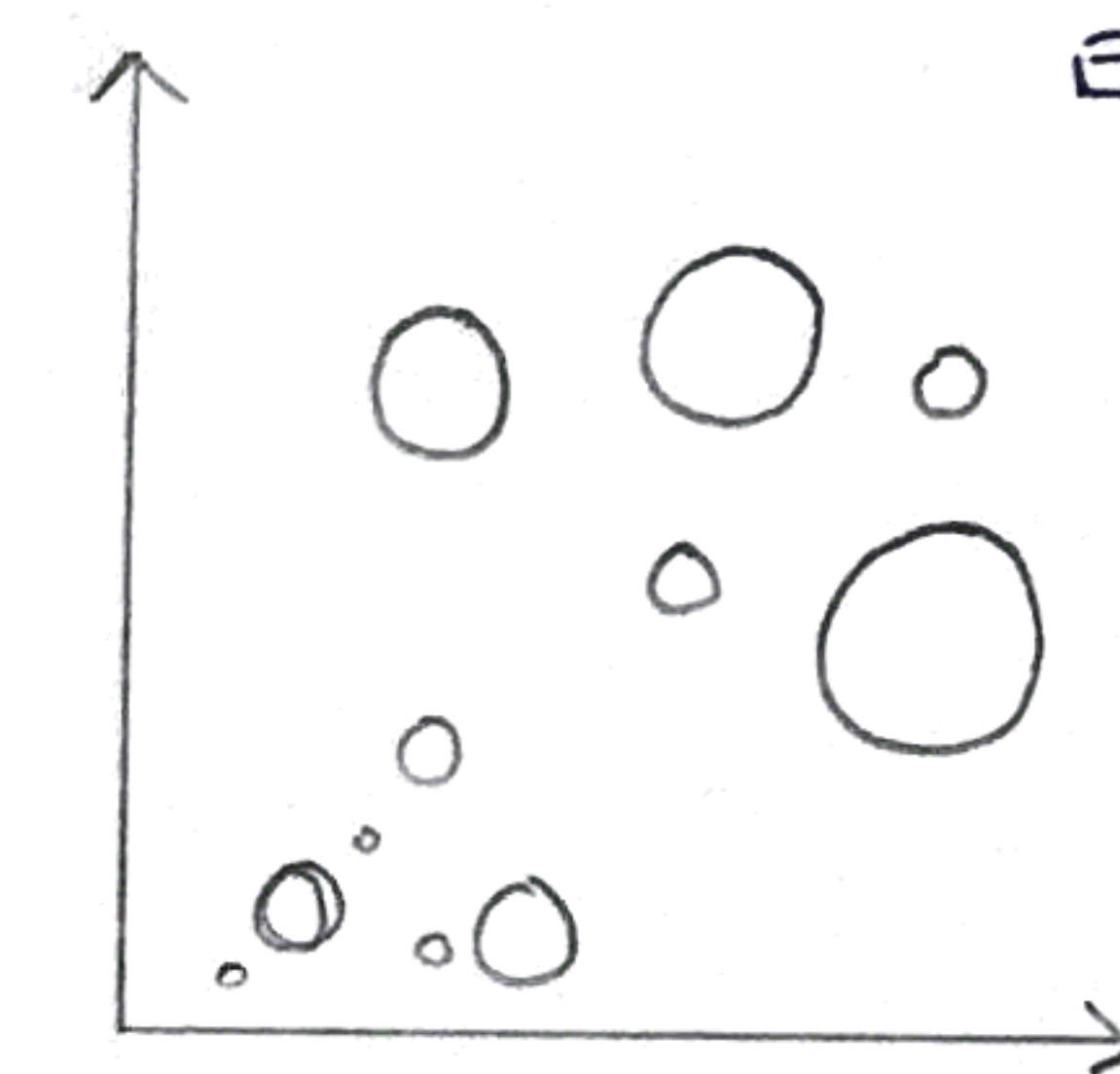
Where Fires Burn Brightest: Satellite – Detected Bushfire Intensity

Combined Title : "CO_2 in Context: Global & Australian Emissions"

Operation

1990   2000

– Allow filtering for all graphs so that we can compare all 3 graphs across the same time period.

Chart Ⓔ

☐ Australia
☐ Canada
☐ Pakistan
☒ Singapore

– Ensure tooltip is sufficiently descriptive.

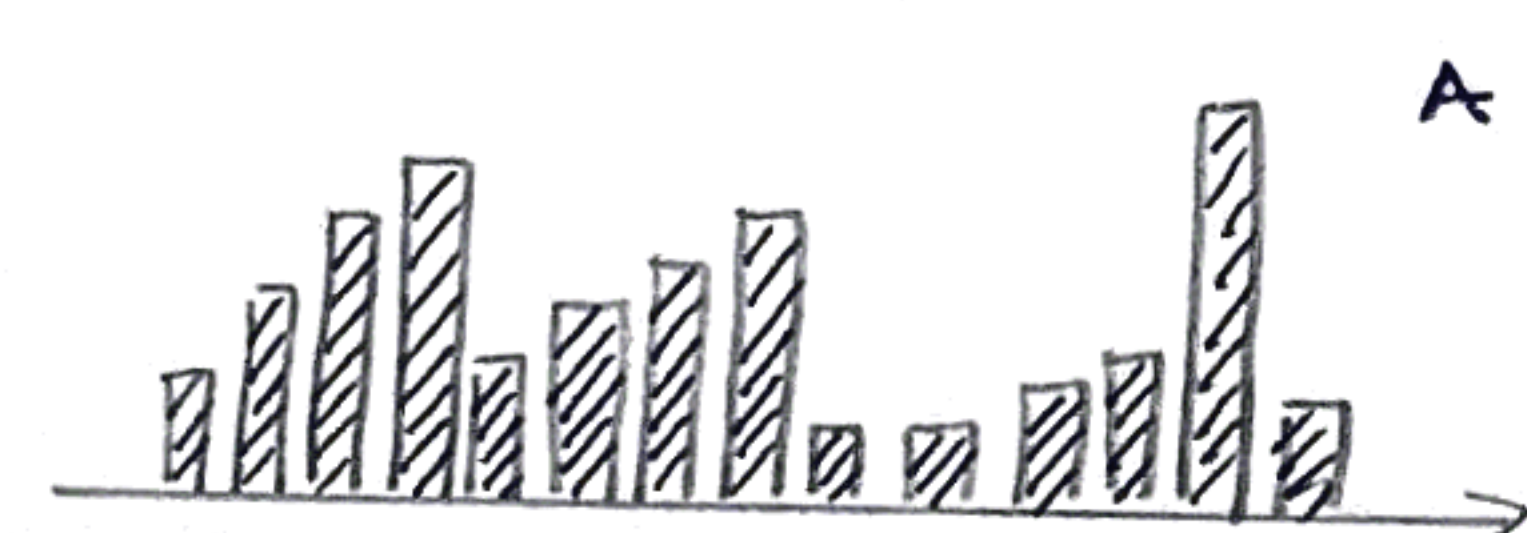– Ensure a table/filter so that smaller data points can be selected.

Details

– Need to familiarse and evaluate whether these graphs and filtering options are doable (by my standards)(and skillset) using VegaLite.

– Am unsure whether the data actually fits the narrative I am trying to paint and do not want to lie with any data viz. May require my last text cell to be an explanation rather than trying to explain links.

Focus

– Charts A,B,C help build context while chart D is the largest. Chart D is the most eye-catching hoping to instill how serious the problem is.

– Charts E and F help round off the entire data viz and how we should move forward to ensure change.