Let's do it! Same time on Mondays?

Here are my remaining plot comments that I started sharing verbally, now written up. Some of these have been said before, but I'm repeating them to have a list of everything in one place. I think most of these apply to both PDF and web versions, but some, like hover, obviously don't.

N: Comments that are new

TrNT: Tried needs time

OR: Older comments that I missed that are resolved quickly

NT: Needs time, can try at a later priority

R: Resolvable

**All/many plots**

* **Same background for all**; I personally like the white better. I've not worked with plotly (other than converting ggplot2 to plotly) so I don't know how it works, but could you make a standard theme that all the plots use? That way you make a change to one plot's theme and it applies to everything. (N)(NT)
* I think I prefer **solid black/dark axis lines** with a white background; as is, feels like it's floating too much? Or maybe I don't need solid black axis lines but I dislike the "open" grid where the break lines run past each other. (N)(R)
* Remove axis titles and legend titles when the title is obvious or meaningless (e.g., "Month" or "Group") or consider renaming something more helpful (e.g. "Percentage" → "Percentage of National Share") (OR)
* **Colors**
  + Let's pick intentional colors for the data colors (like the blue and red in pop distribution) (N) (R)
  + For map-related plots, could be very fresh to use the map colors in the plots (like the solar orange for the seasonal PV map) (N)
* We might need to work together on this but let's figure out **why the plots have different widths** (TrNT)
* Land cover, elevation, slope: I need to finalize the opacity of the map layers, but once I do let's **use the same opacity on the chart colors** so the colors match *perfectly* (N)(NT)
* **Cleaning up hover labels**
  + E.g., "severity\_label=" could be cleaned to "Severity: " for the end user (OR)
  + Only include variables that are actually helpful for viewer (R) (NT)
  + Also, and I need to do this on the map hovers as well, rounding down the values; e.g., in population distribution, the percentage goes to 5+ decimals; don't think we need more than 1 (N)(R)(NT)
* **Fonts**
  + The font stack for the text is system-ui, -apple-system, "Segoe UI", Roboto, "Helvetica Neue", Arial, "Noto Sans", "Liberation Sans", sans-serif, "Apple Color Emoji", "Segoe UI Emoji", "Segoe UI Symbol", "Noto Color Emoji". Could you do the same for the plots? (N)(NT)
  + I believe you change the plotly font with fig.update\_layout(font=dict(...))
* Not about these particular plots, but I think we should actually make **distribution plots for every layer**.(I am not sure what that means?)

**Plot specific**

* **Population density**
  + In the hover label, remove the group entry (N)
* **Population distribution**
  + **Y-axis label** should be more specific: Percentage of sexed population? Percentage of total population? And maybe a % sign for y-axis labels (regardless, let's be consistent) (OR)
  + Also, do we want to also show the non-sexed benchmark version from **Oxford** data? (N)(NT)
  + In the hover label, make the sex entry display “female” or “male”, like in the legend, instead of f or m; add % to the percentage numbers (N) (R)
* **National shares**
  + Putting **focus city on top** or bottom of bar chart (TrNT)
  + **Axis labels:** no "City" axis label and either no "Percentage" label or replacing with "Share of National Total" (OR)
  + In the hover label, the order should be city, indicator, and percentage (N)(NT)
* **GDP, employment and pop growth**
  + Thanks for dropping the legends
  + This one is more of just an idea, but maybe it would be nice to have the lines colored by country? Maybe dashed black for the cities in the same country, and dashed grey for the cities in other countries? I believe, Rui, though, thinks different colors for each city could be helpful. Right now, though, I think I find all of the lines distracting – so maybe instead of dashed lines they are all solid thin lines, and the focus city is thicker black? Choosing the right colors for this could be very helpful (N)(NT)
  + Population goes to 2040 but **should only go to 2021 (OR)**
* **Sector shares**
  + I personally found it helpful with the R version to have the sectors appear in the **same order for share of employment and share of GVA**. This way you can just look at the change in distribution shape and see which sectors have more importance in GVA than in employment (N)(NT)
  + To take that one step farther, what if we combined the plots in a **two-sided bar chart**: employment on the top or left, GVA on the bottom/right? I also played with showing the median benchmark city as a flat line instead of showing it as a second column. Could maybe do this if we went two-sided (N)(NT)
  + On **hover** over the dots, the city name is faded out? (N)(NT)
  + Could we only show the tenths digit in the **x-axis labels** if the highest value is, say, <5? (N) (R)
  + Let's figure out shrinking the **y-axis labels** somehow so the plot isn't so right shifted (TrNT)
* **Urban extent and change**
  + **Y-axis at 0 (There should be an updated version with this, if not let me share it with you)**
  + Y-axis title: can we figure out the **superscript**? If not, maybe "sq. km"? (N)(R)
* **Land cover**
  + Maybe we shorten "Bare / sparse vegetation" to "Bare/sparse" and "Permanent water bodies" to "Water"? Or maybe not and we find a different solution, but these **very long names** will typically be in very small boxes, so they'll usually be impossible to read. Suppose we could also just not show their names and force people to hover (N) (R)
  + Hover has a lot of **duplicate information** (i.e., land cover type is shown three times) (TrNT)
  + Pixel count in the hover is kind of useless. Let's show either **physical area or percentage**. (N) (R)
* **Solar**
  + The grey "condtions" labels are half underlined by the dashed lines, I'm guessing, because they are center aligned. Would look cleaner to have the **text fully over the line**. (N) (R)
  + Don't think we need **"Month"** (N) (R)
  + I especially want the **axis lines** if there are no break lines. I feel very ungrounded looking at this (N) (NT)
* **Flood events timeline**
  + As you're already working on, full year of **January–December** (TrNT)
  + Both axis titles are unnecessary (N) (R)
  + Would also be nice for the **circles** to be small enough to not really run into other months (N) (NT)
  + The hover label is missing casualty numbers (N) (R)
* **Built-up area exposed to flooding**
  + **Missing space** between "sq." and "km"; let's also do the same thing here and with the non-flood built-up area graph (N) (R)
  + Combined doesn't **start at 0** and only shows combined, instead of showing it **alongside fluvial, pluvial and coastal (O)** (TrNT)
  + In the past I've considered showing the **total built-up area** on the same plot, or showing the **percentage of built-up area** on a second y-axis. I still think this would be helpful as a future step (N) (NT)
* **Elevation and slope**
  + I appreciate the move from the pie charts but as I look at this, I realize that tree maps aren't well suited for continuous data. Could we do a **histogram or cumulative distribution plot**? (Is this fitting/too punny for elevation related data?) For slope, we could either do smaller equal size bins (e.g., every 1°) but color them based on the map bins (i.e., 0-2, 2–5, 5–10, 10–20, 20+°). If, instead, we go with the same bins as the map, only showing 5, the bin width should be proportional to the number of degrees: that is, the <2° bin should be 66% as wide as the 2–5° bin. (N) (NT)
* **Earthquakes timeline**
  + Thank you for making the distance switch
  + Could we add **labels** for what the color and size mean? (TrNT)
  + What was the issue we were having with **earthquake count** and why only one is showing up? (TrNT)

I know this is quite the list. I think they would make everything look much cleaner and easier to use for a viewer. Maybe before Monday you could go through these and estimate how much work each would be, tackle a few of them, and then on Monday we could figure out the priority of the rest?