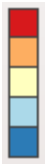
Choosing Colours

In general, use light colours for low values and darker ones for high values.
Also be aware that in some cases certain colours may have 'natural' associations - for example, red and debt.

White is generally used to indicate areas where data is missing or unavailable.

You should also consider how your map will look, printed, to colour blind people and in black and white

Sequential schemes are ordered from light to dark, with light colours for low data values to dark colours for high data values.



Diverging schemes use contrasting colours to show difference from an average, with darker colours at both ends of the scale and lighter colours in the middle.

Qualitative schemes use different colours to create the differences between classes. Qualitative schemes are best suited to representing unrelated data such as names or categories. Eg. Network areas

Further information:
http://colorbrewer2.org/ designed to help people select good colour schemes for maps and other graphics
vischeck.com simulates colourblind vision.

Sources:

- ONS neighbourhood statistics Guidance on Best Practice in Statistical Presentation
- http://colorbrewer2.org/

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CORNWALL COUNCIL

Confidence Intervals and Statistical Significance

A Bitesize Guide

Introduction

Confidence intervals are the way researchers measure the degree of confidence in statistical accuracy.

If confidence levels are high, it means that the results describe the situation for the whole population, and the lower the confidence level the more less confidence.

Where a 95% confidence interval is reported then we can be reasonably confident that the range includes the 'true' value for the population as a whole. Formally we would expect it to contain the 'true' value 95% of the time

Beware!

- Maps are better at displaying information and identifying patterns than providing precise figures.
- Beware of sensitivity and/or anonymity. If the map is being openly shared it should not identify anyone. If it is of a more sensitive nature it must be properly marked with the appropriate marking.
- Maps may exaggerate the difference between areas.
- As geographic areas vary in size, using colour shaded (chloropleth) maps can be misleading for presenting counts and are better for rates and percentages.
- The fact that some rural areas are larger means that they can dominate the map.

Items to include in your map

Start with a clear idea of what you want your map to communicate, and test your final design against what you hoped to achieve.

The story of a map can change completely based on the design so think carefully about where you choose to break the data (classifications) and colour schemes.

Your map should include:

- Clear title.
- Geographic areas used, eg. parish.
- North arrow and scale bar.
- If using OS data, Ordnance Survey Copyright Statement.
- Time period of the data.
- Legend to explain the colours in the map.
- Data source.
- Text summary – draw out the key messages of the map in words either in the map or accompanying text.
- Size should allow you to see everything clearly.
- Any other information which allow you to understand the areas, such as main towns. If this makes your map too cluttered consider publishing a reference map to accompany your map.

Main types of map

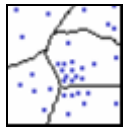
Colour shaded (chloropleth) maps

A different colour is used for each of a number of bands This type of map is better for rates, densities or percentages.

Proportional symbol maps

Symbols that are proportional in size to the values they represent. This type of map is better for count data.

Dot maps



Individual events or groups of events are marked with a dot. This type of map is better for identifying geographic patterns such as clusters.

Choosing where to break the data (classification)

The classification you choose can completely change the way a map looks; make sure that the classification you choose is appropriate to the data.

Too many breaks is bad practice as it makes the map too complicated and colours harder to pick out. Five or six classes is usually ample.

If there are exceptionally large or small extreme values in your data it might be worth considering separating these into their own category.