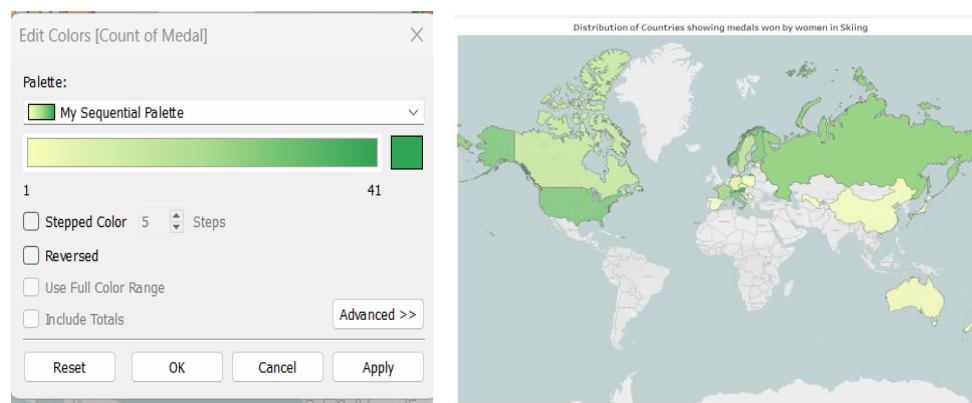


Exercise 2 - Enhancing Visualization Effectiveness: Applying Colorbrewer Colormaps and Addressing Color Deficiencies

Task 1: Applying different colors to visualization from the previous exercise

In the previous exercise, a visualization was created to analyze the trends in women's participation in sports over time, with a focus on skating and skiing. The initial visualization utilized color-coded bar plots to represent different sports and geographical maps with colormap representations to visualize the distribution of wins in skating and skiing across countries. For this task, different colormaps from colorbrewer2.org will be applied to these visualizations to enhance their effectiveness.

Process: To enhance the visual appeal of the Tableau visualizations, a sequential color was selected from the ColorBrewer website. The corresponding JavaScript code for the selected color was copied to the preferences.tps file, which facilitated the addition of the new colors to Tableau. After restarting Tableau, the new colors were applied to the visualizations from the previous exercise, resulting in a more visually engaging and appealing representation of the data. Here's a snapshot of how the colors looked on Tableau after the implementation:

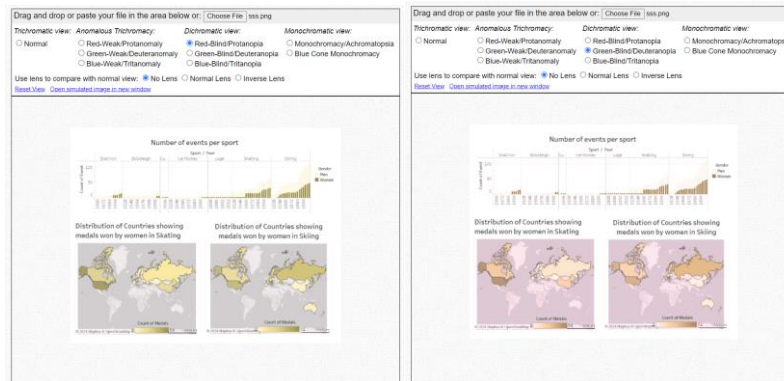


Task 2: Testing for color deficiencies and rectifying the problem

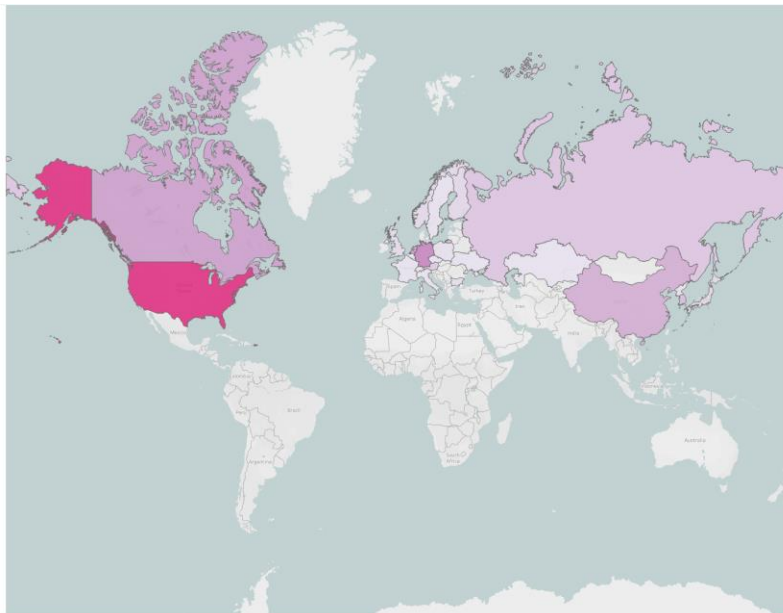
In this task, the initial visualization from Exercise #1 will be tested for three common color deficiencies using one of the available tools. Any issues identified will be rectified by changing the colormap to ensure accessibility for individuals with color vision deficiencies.

Process: The visualization from exercise 1 was tested using <https://www.color-blindness.com/> with respect to all three dichromatic view deficiencies. According to this website, the new colors applied to visualization were not suitable for 2 of the 3 deficiencies. Therefore the color palette was updated accordingly.

Before:



After:



These colormaps assess whether the new colormaps enhance the clarity of the visualizations by making it easier to distinguish between different categories or data points, determine if the colormap changes improve accessibility for individuals with color vision deficiencies, ensuring that the visualizations remain informative for a wider audience and consider the overall aesthetics and visual appeal of the updated visualizations with the new colormaps.

In conclusion, this exercise highlights the importance of not only creating visually appealing visualizations but also ensuring that they are accessible and informative to the widest possible audience. By considering colormaps and addressing color deficiencies, we can make significant strides in improving the clarity and accessibility of data representations, ultimately leading to more effective communication of insights.