Information Visualization
CHECKPOINT IV: First Prototype

G06 - T

1. Layout

The chosen layout allows the user to choose between two types of visualizations: by continents (fig. 1) and by countries (fig. 2), represented at the top of the page.

In the top left corner below the visualization choice there is a search bar (particularly useful for searching countries we don't know where they are geographically, but works for continents too).

There is also a tab for the biocapacity values (fig. 3) below the continents/countries tabs. This changes the visualization values from ecological footprint to biocapacity and works the same way as previously explained.

For this checkpoint we decided to include the Choropleth Map for continents (fig. 1 - left) and its respective Stacked Bar Chart (fig. 1 - right) as well as a timeline on the bottom of the page to visualize along the years. There's also a Choropleth Map for individual countries (fig. 2), which can be accessed by choosing the different view on the top of the page. This choice removes the possibility for timeline choice, since the data for individual countries only exists for 2014.
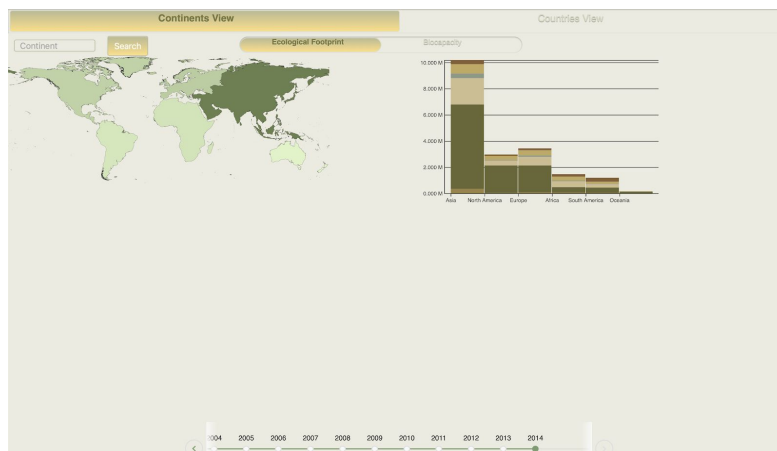

Fig. 1 - Layout with continents' choropleth map (and respective timeline)

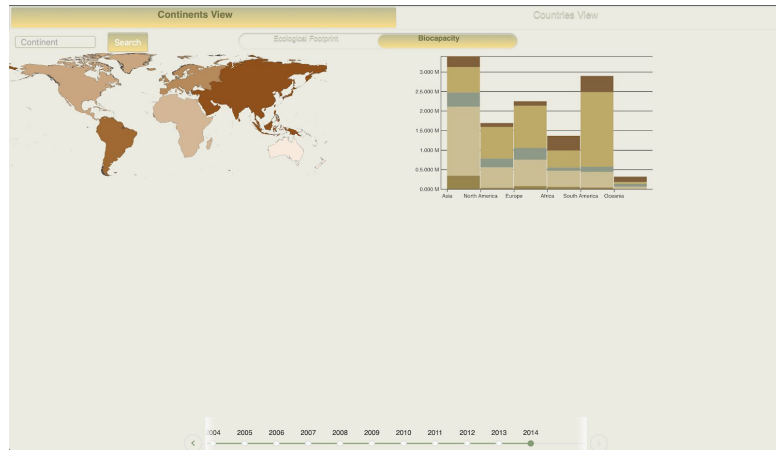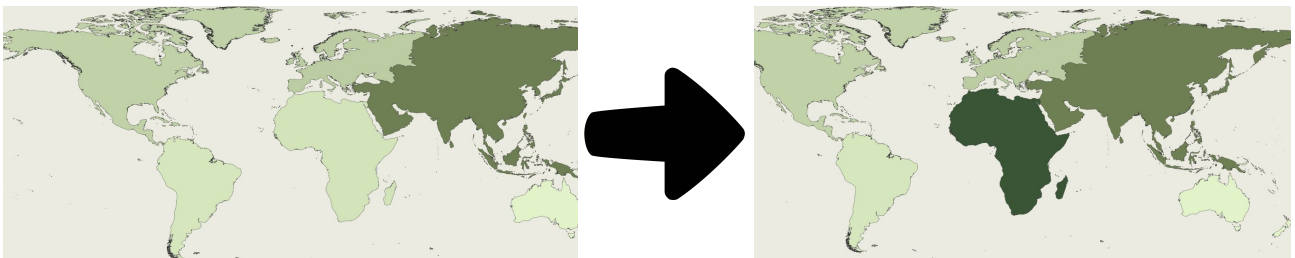Fig. 2 - Layout with countries' choropleth map (2014)

Fig. 3 - Biocapacity Values
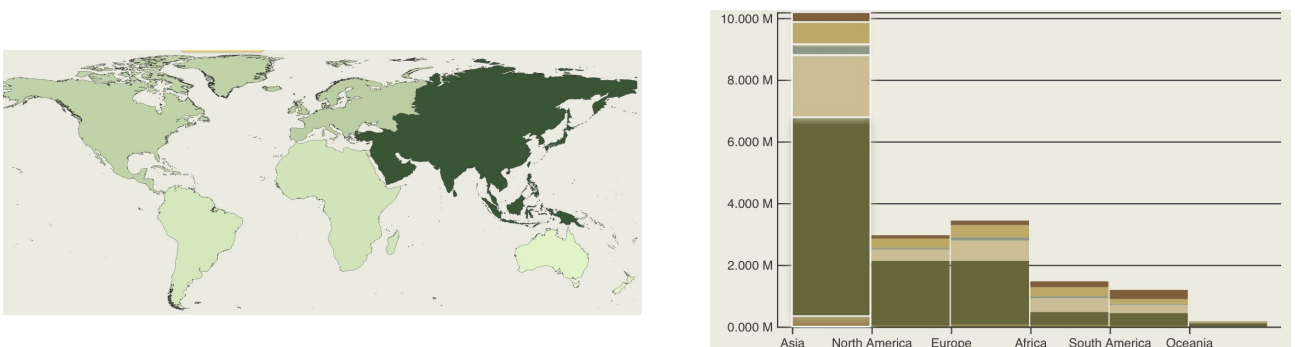
2. Implemented Idioms

The idioms implemented for this checkpoint are the Choropleth Map (for continents and countries), as well as the Stacked Bar Chart for the continents.

The Choropleth Map (fig. 4 & 5) shades the world according to the different values of the ecological footprint or biocapacity. When hovering with the cursor it shades the respective country or continent a different shade, as shown below.

Figs. 4 & 5 -
Region selection in the choropleth map.

When hovering, the selected region / country will highlight the respective column in the bar chart and vice-versa. This works for the search as well, as searching for a region will highlight both the choropleth map and the respective bar in the stacked bar chart.

Figs. 6 & 7 - Region selection and respective interaction with the stacked bar chart.

The Stacked Bar chart shows the values for each landtype by continent, according to the chosen year. On mouseover, the user will be able to see the specific values in the respective landtype.
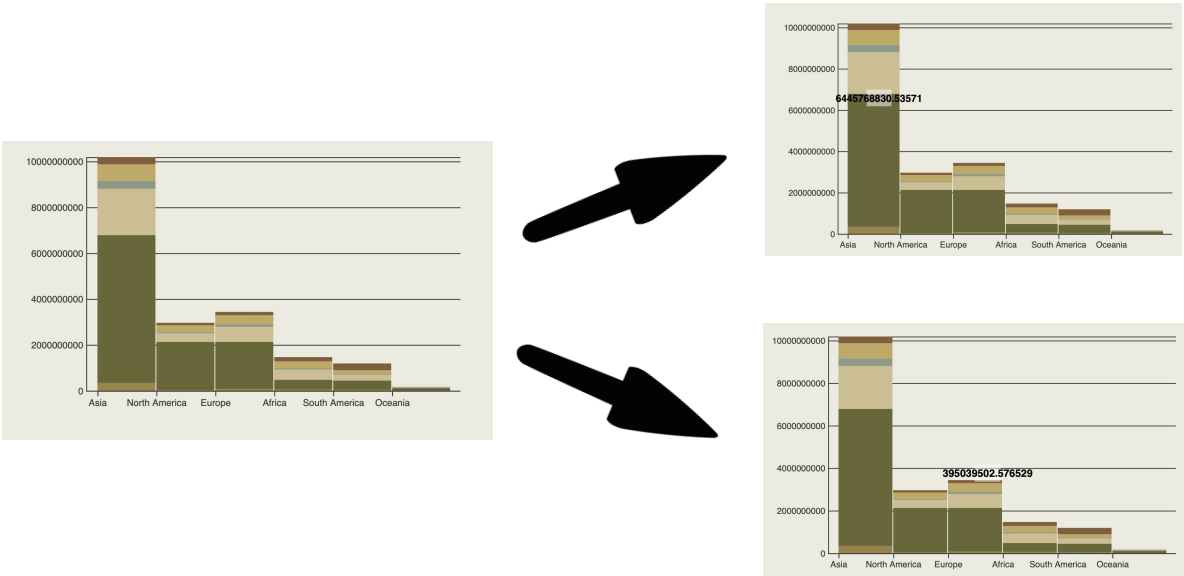

Fig. 8 - Landtype selection on mouseover and respective values.