

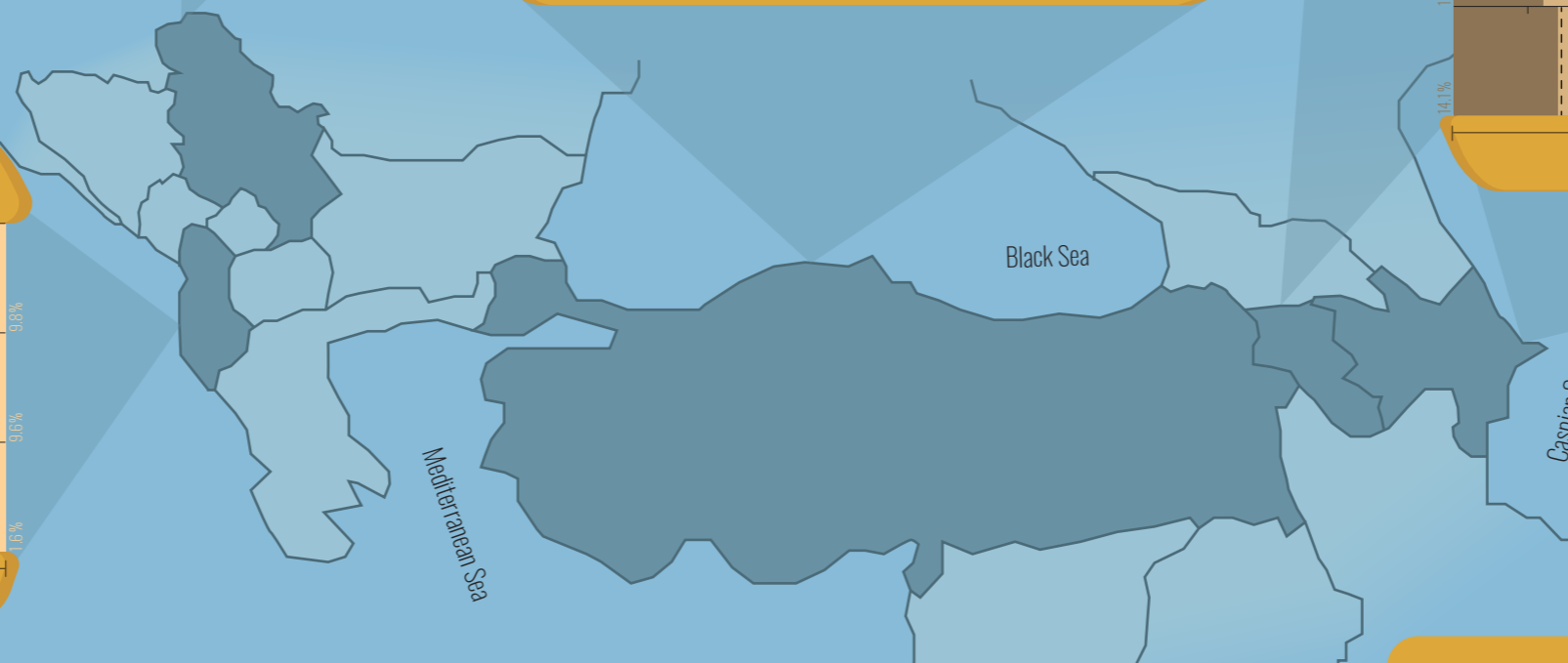
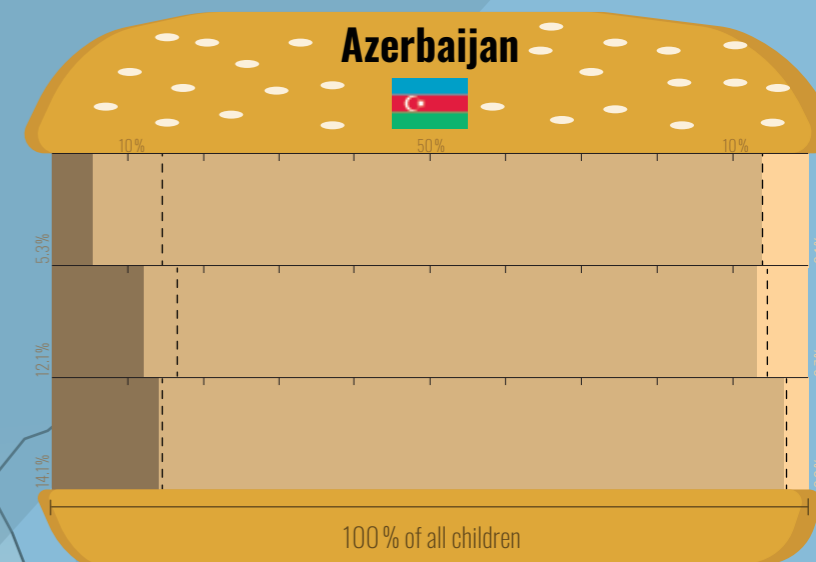
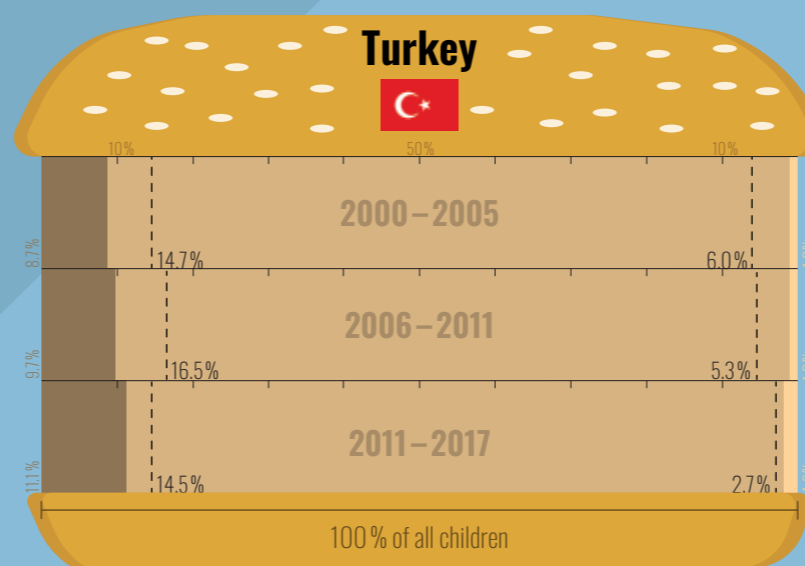
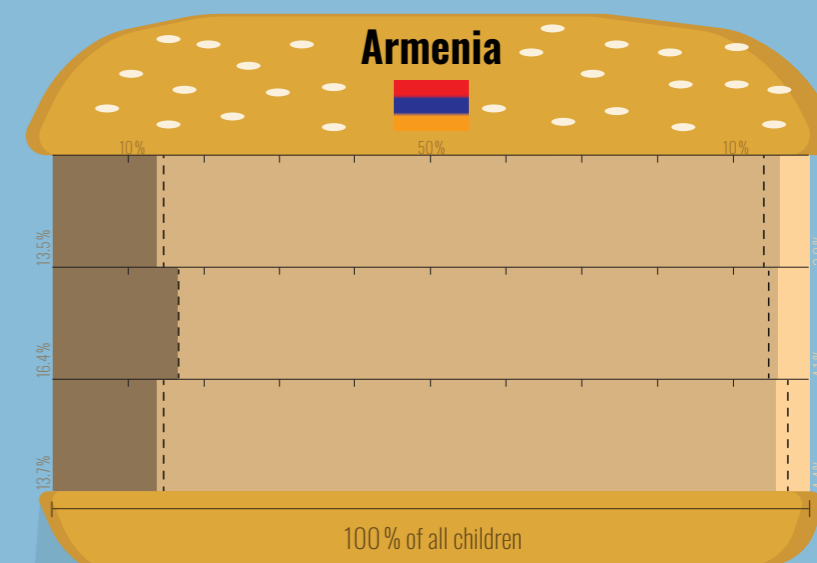
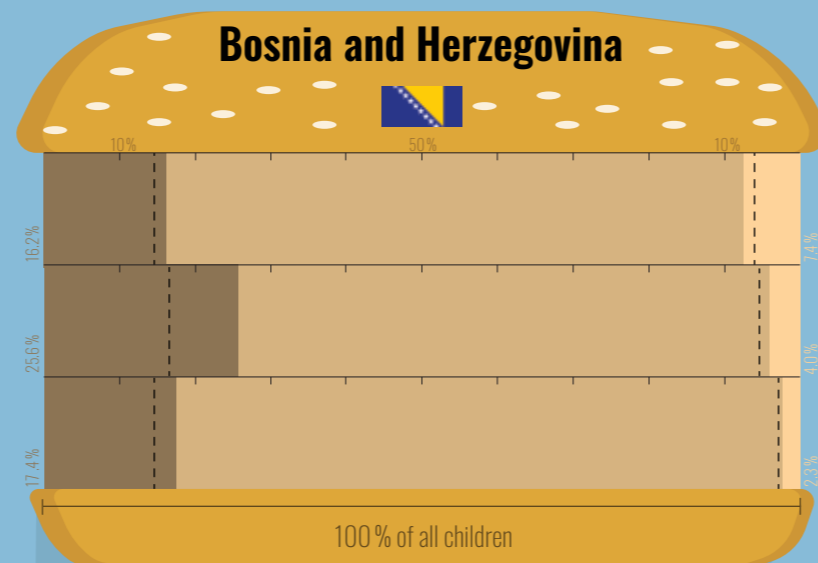
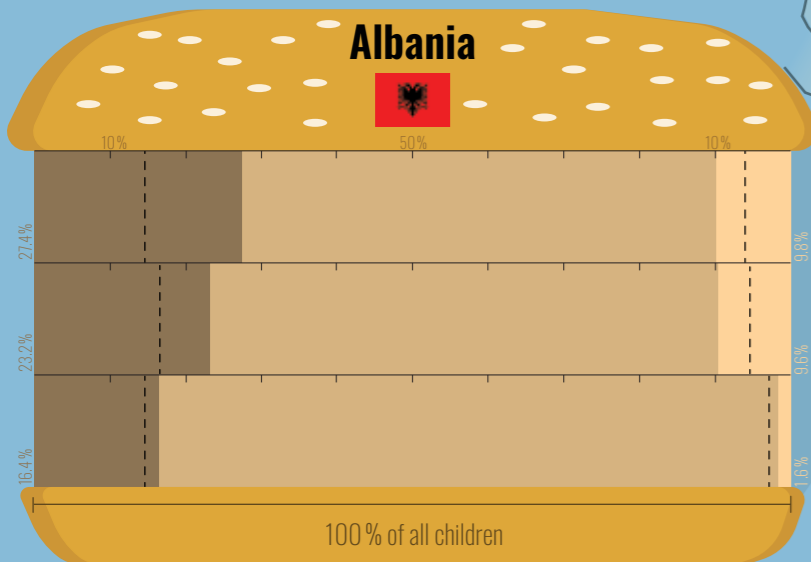
# MALNUTRITION IN CHILDREN

Zero hunger. This is the second Sustainable Development Goal of the United Nations. To examine progress towards this goal, the number of overweight and wasted children under five years of age is surveyed. To prevent confusion: The difference between the terms «underweight» and «wasted» is that underweight is measured in weight for age, whereas wasting and overweight are measured in «weight for height».

A child is considered overweight, if the indicator «weight for height» is above 2 standard deviations from the median of the World Health Organization Child Growth Standards and considered wasted, if the indicator is below -2 standard deviations. For instance, the median for a girl who is 100 cm tall is 15.2kg. The girl would be considered wasted, if she would weigh under 12.8kg and overweight, if she would weigh over 18.4kg. Sexes are combined.

Due to irregular measurements of the different countries, the data sets for this infographic were summarised into the periods 2000–2005, 2006–2011 and 2012–2017. The selection of the countries shown is based on the completeness of the data sets.

From all shown countries, Albania made the biggest leap forward by dividing the number of overweight children in half. Furthermore, the number of wasted children dropped from 12 % in 2000 to under 2 % in 2017.



## Legend

Overweight

Normalweight

Wasted

Average of the shown countries during that period

The average of wasted children of the shown countries decreased over the portrayed period, whilst the average of the overweight children stayed almost the same.

# PREPARING THE DATA SETS

First, I had to organize the raw data sets which we got from the UN. The different dimensions were quickly defined: countries, years, percentage of overweight children and percentage of wasted children. In addition, from the combination of the percentages of overweight and wasted children, conclusions can be drawn about the percentage of the normal weight children. From there on, more deductions could be made upon the size and the location of the country, the number of children that live there or the height of the gross domestic product.

So, I had to choose, from which perspective I wanted to examine the data sets. The most obvious way to go was to show the changes over time of a single country, since it was probable that the measurements there were comparable. Furthermore, I wanted to compare the different countries among each other. This was more delicate, because I didn't know, how the data were collected in the different countries. Besides that, I had to think about, if I wanted to compare all the countries or just a selection of them.

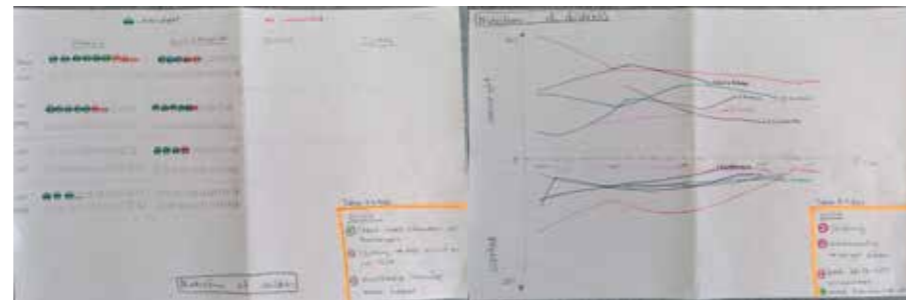
Another challenge was that some of the data sets were incomplete and irregular. Because of that, I decided to summarise the data sets into periods of six years. Like that the comparison between two countries is more balanced. Albania, Armenia, Azerbaijan, Bosnia and Herzegovina and Turkey had the most complete data sets of all. In my opinion, it is reasonable to compare countries that are in the same region. Luckily, these countries lie close together.

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Albania	12.24					7.32													
Armenia	2.53					5.36													
Azerbaijan	8.98	3.2																	
Bosnia and Herzegovina	7.36																		
Turkey						1.05													
Average per period																			

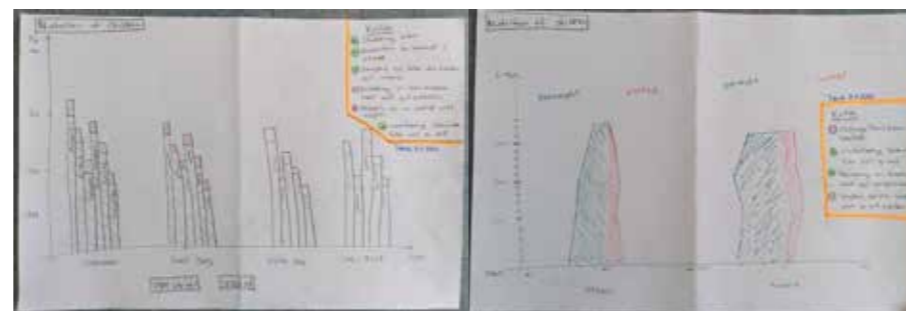
Country	2000	2001	2002	2003	2004	2005	Av Per
Albania	12.24					7.32	9.78
Armenia	2.53					5.36	3.945
Azerbaijan	8.98	3.2					6.09
Bosnia and Herzegovina	7.36						7.36
Turkey						1.05	1.05
Average per period							6.005

# SKETCHING

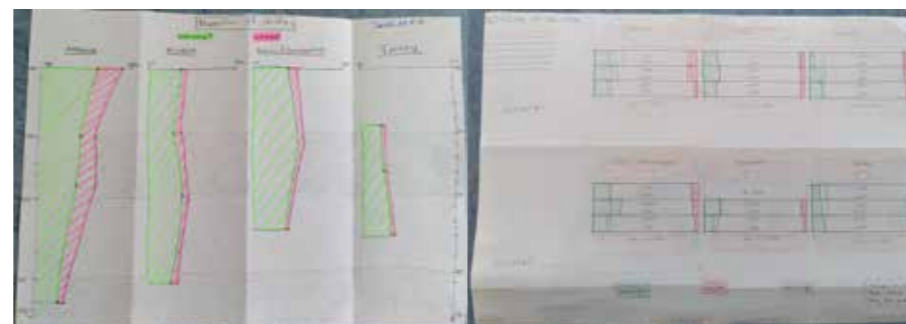
It seems like there's an infinite number of possibilities to visualize data. Whilst sketching, I noticed some difficulties. It was important to me not to enlarge the scale so that the percentages would be seen in relation to the totality of all the children. However, this would make the chart of wasted children very small, as there are low values.



It turned out that a bar chart is suitable for the representation. For the change of overweight and wasted children to be readable, however, the bars must not be stacked on top of each other but scaled up from both sides. To make the graphics comparable, I decided to add the average from all shown countries of each period.



I also wanted the topic to be recognizable by the shape of the graphics. Another challenge was to find a reasonable arrangement of the graphics. I think the solution with the map fits in quite nicely, because it gives further information about the size and the location of the countries.



# VISUALIZING

In Adobe Illustrator, I visualized my idea. I mostly struggled with three things: the colours, the labelling of the scale and the texts. I tried to work with the colour definition of the second sustainable development goal, which is a mustard yellow brown. From there on I had to find suitable colours for the bars of overweight and wasted children. I realized, that the choice of colours and the contrast define to a large part the visual focus of the infographic.

Should the exact value of each bar be written in plain numbers or not? And how can I portray, that the bar is the totality of all children under five years of age in that country? In the end, I decided to write the values beneath each bar.

Lastly, the texts should give the viewer some background information about the topic and how the infographics was made. Most of my friends didn't know the term «wasted», so I had to make clearer what that meant. Furthermore, I wanted to make the information a bit more practical for the viewer. What does it mean, if a child is called «overweight» or «wasted»? Therefore, I had to do some research on the definitions of the terms. With two additional texts I wanted to point out some interesting facts, on which I wanted to lay a focus on.

All in all, I am satisfied with the result of my first infographic :)

