



Food and Agriculture
Organization of the
United Nations

Global nutritional study





Context

- The aim of our organisation is ‘to help to build a world free of hunger’.
- To this end, we carried out a large-scale study
- The study focussed on food and malnutrition worldwide.

Methodology

4 Excel documents:

- Food aid
- Food availability
- Population
- Malnutrition

Jupyter notebooks with Python libraries:

- Pandas
- Matplotlib
- Seaborn

RGPD was not applicable for this study.





Proportion of people in a state of malnutrition in 2017

535.7 million

Worldwide population in a state of malnutrition (2017)

7.1%

Percentage of worldwide population in a state of malnutrition (2017)

Theoretical number of people who could be fed in 2017

2075.97

Average Kcal requirement per person per day¹

10,076,727,808

People who could be fed in 2017

133.6 %

% of world population that could be fed in 2017

¹ Sources:

- Appendix 2. Estimated Calorie Needs per Day, by Age, Sex, and Physical Activity Level - 2015-2020 Dietary Guidelines [health.gov](https://www.health.gov), (Pour les directives caloriques, j'ai décidé d'utiliser les chiffres des personnes "Moderately Active".)
- Population by Single Age - Both Sexes (XLSX, 160.91 MB),





Theoretical number of people who could be fed only with plant products in 2017

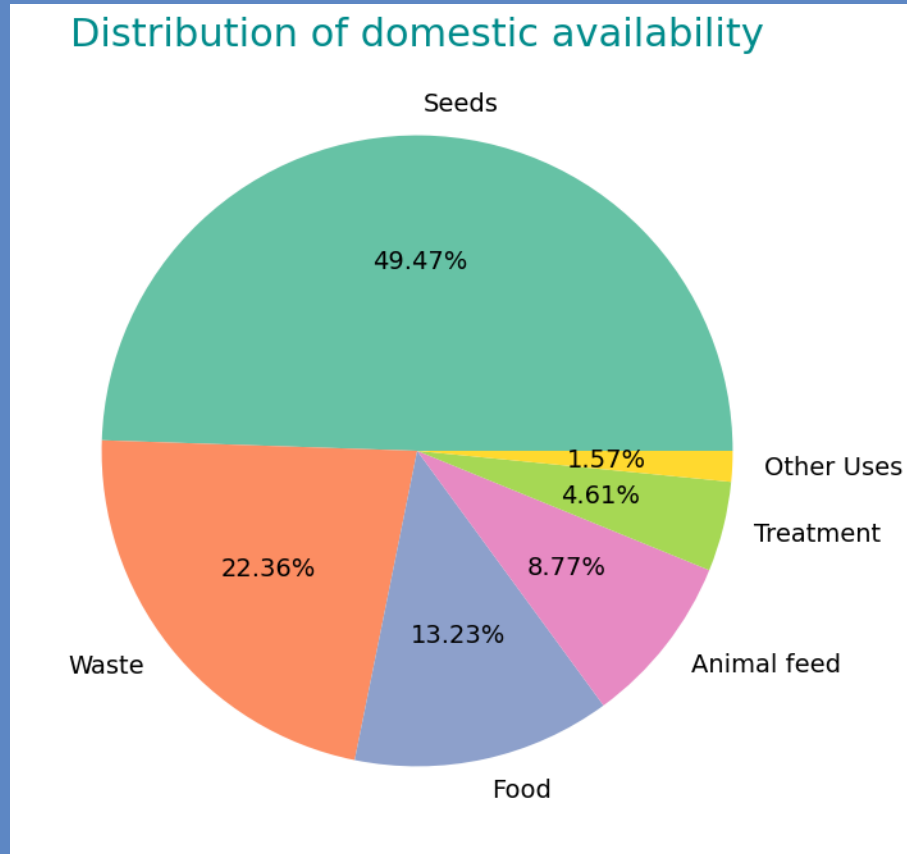
8.31 milliards

People who could be fed only
plant products in 2017

110.2%

% of the world population that could
be fed only with plant products in
2017

Distribution of domestic availability



9,848,994,000,000

Total domestic availability
(kg)

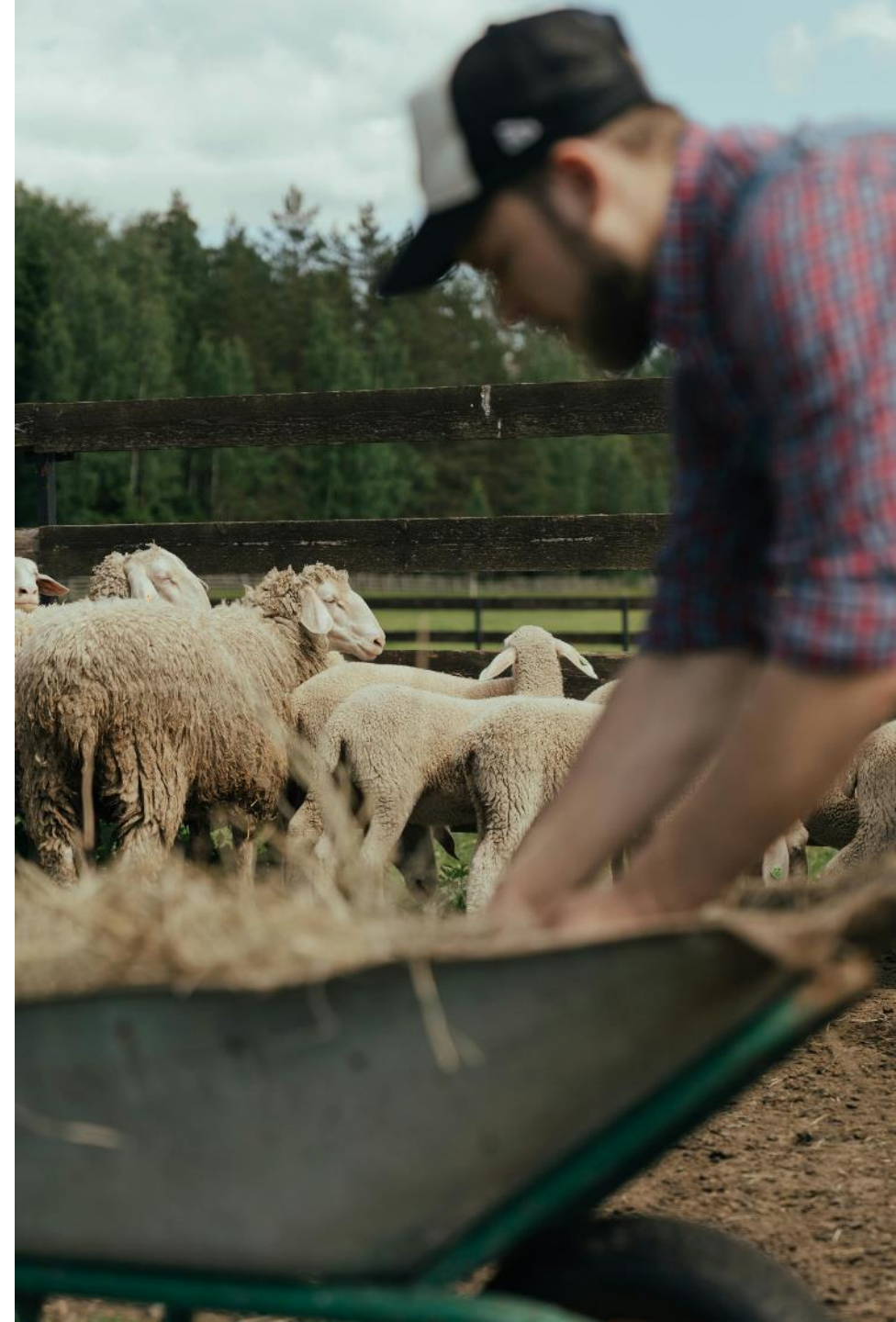
Share of cereal use between human and animal food

36.29%

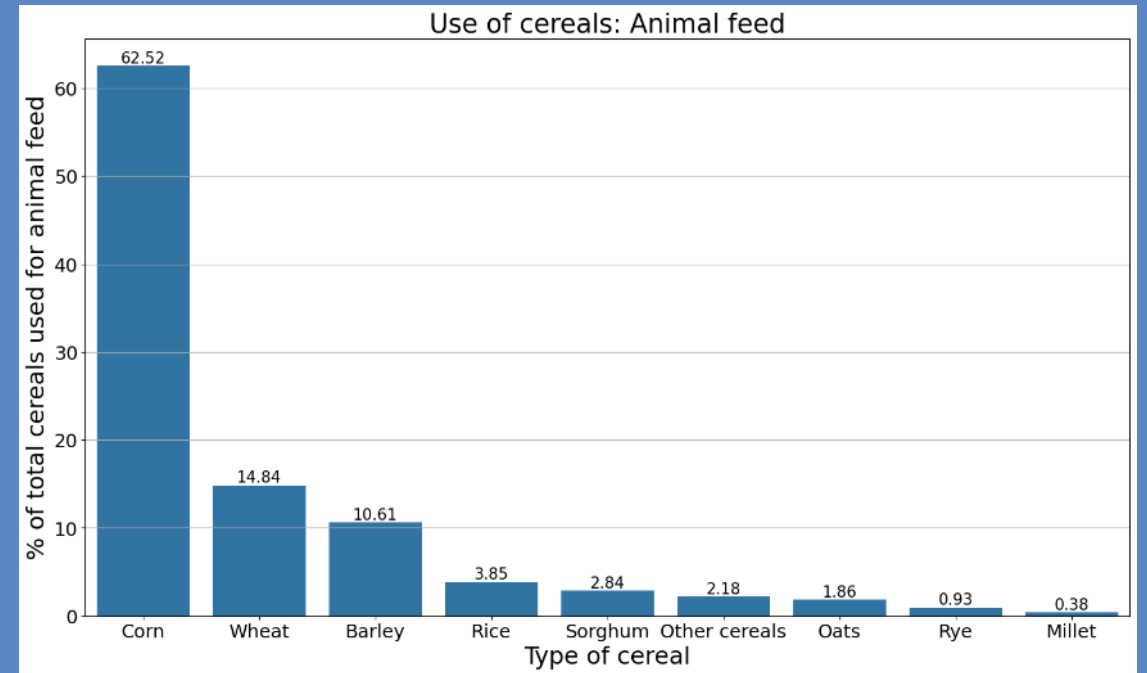
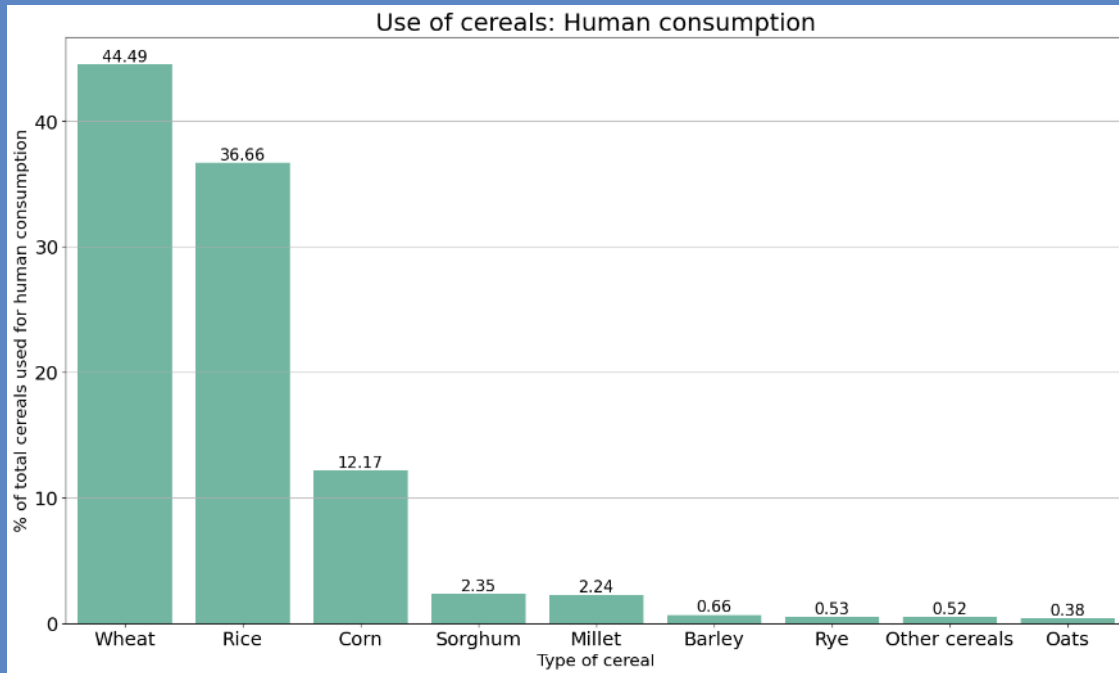
The proportion of cereals used
for animal feed

42.75%

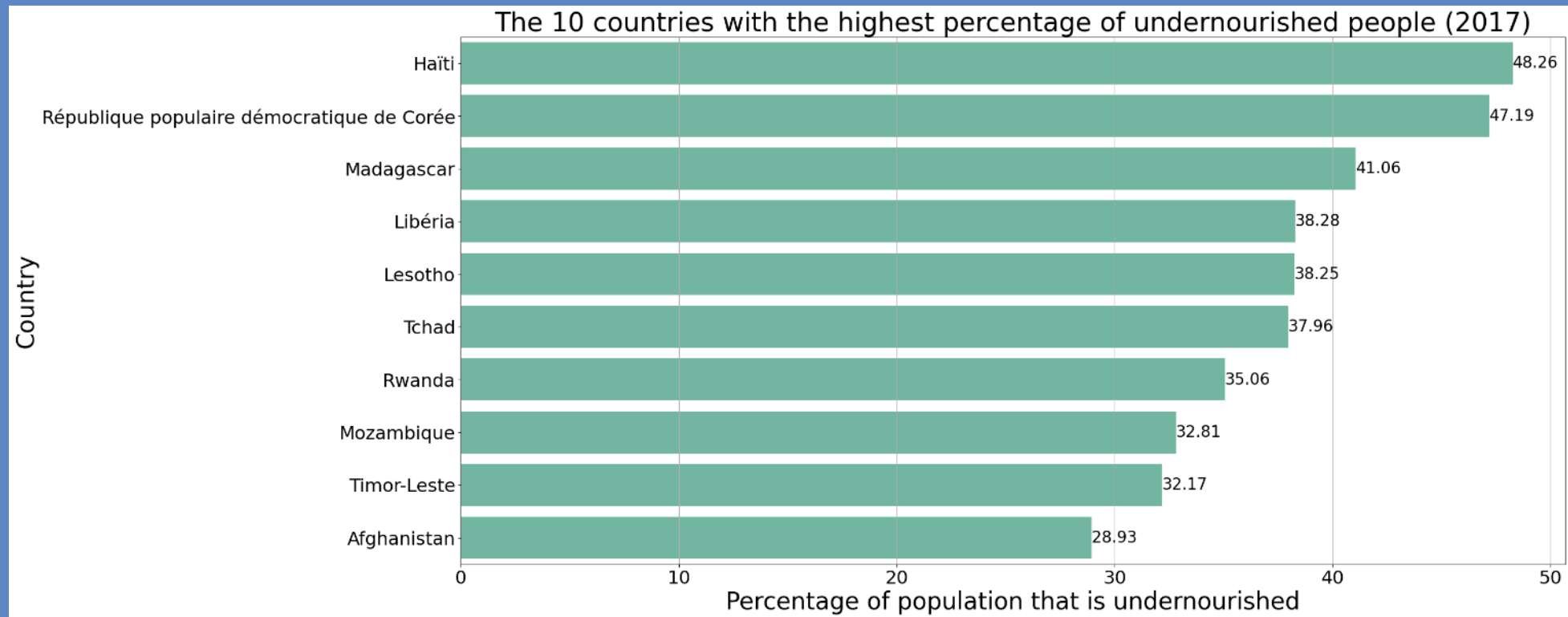
The proportion of cereals used
for human food



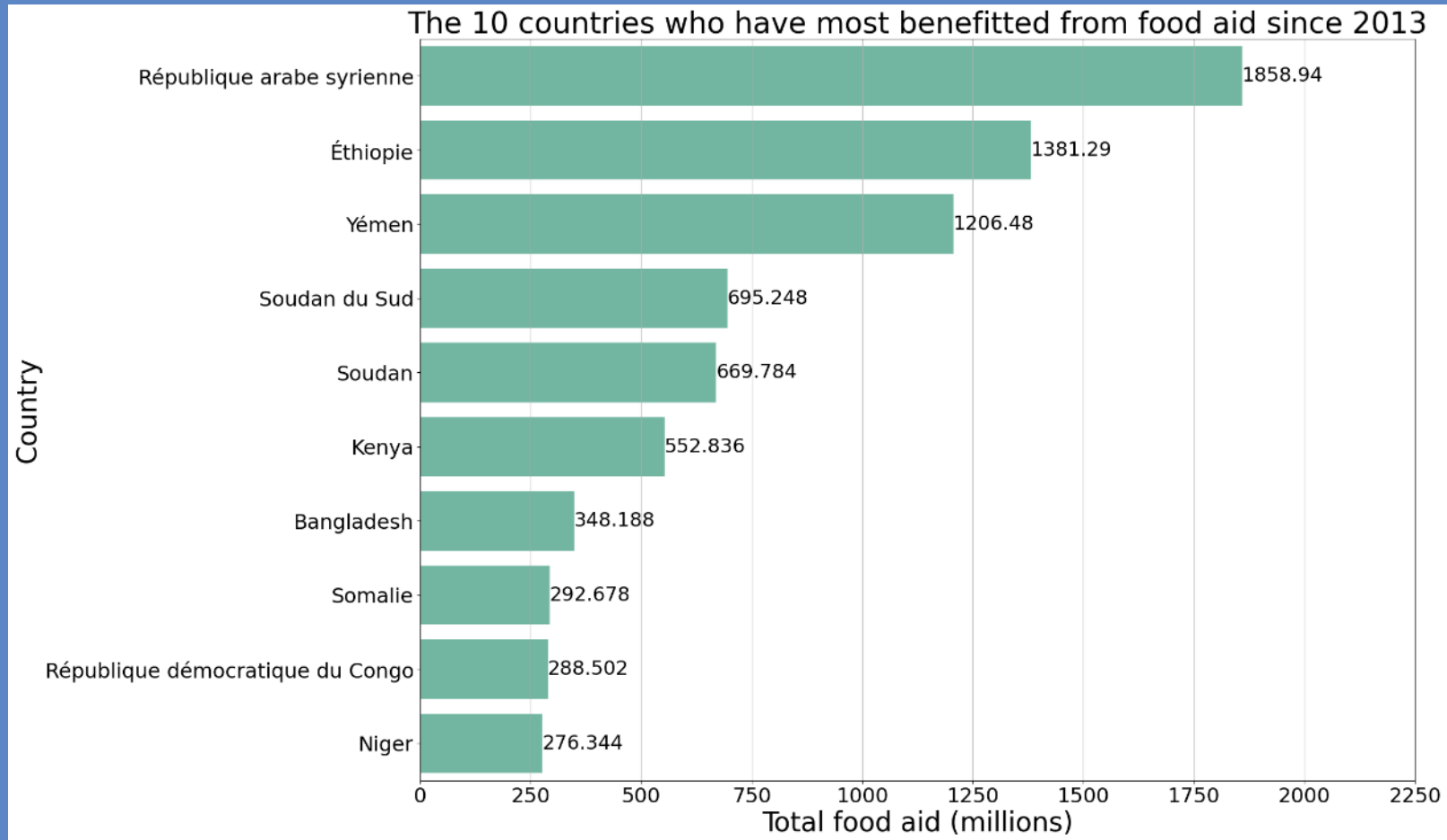
Share of cereal use between human and animal food



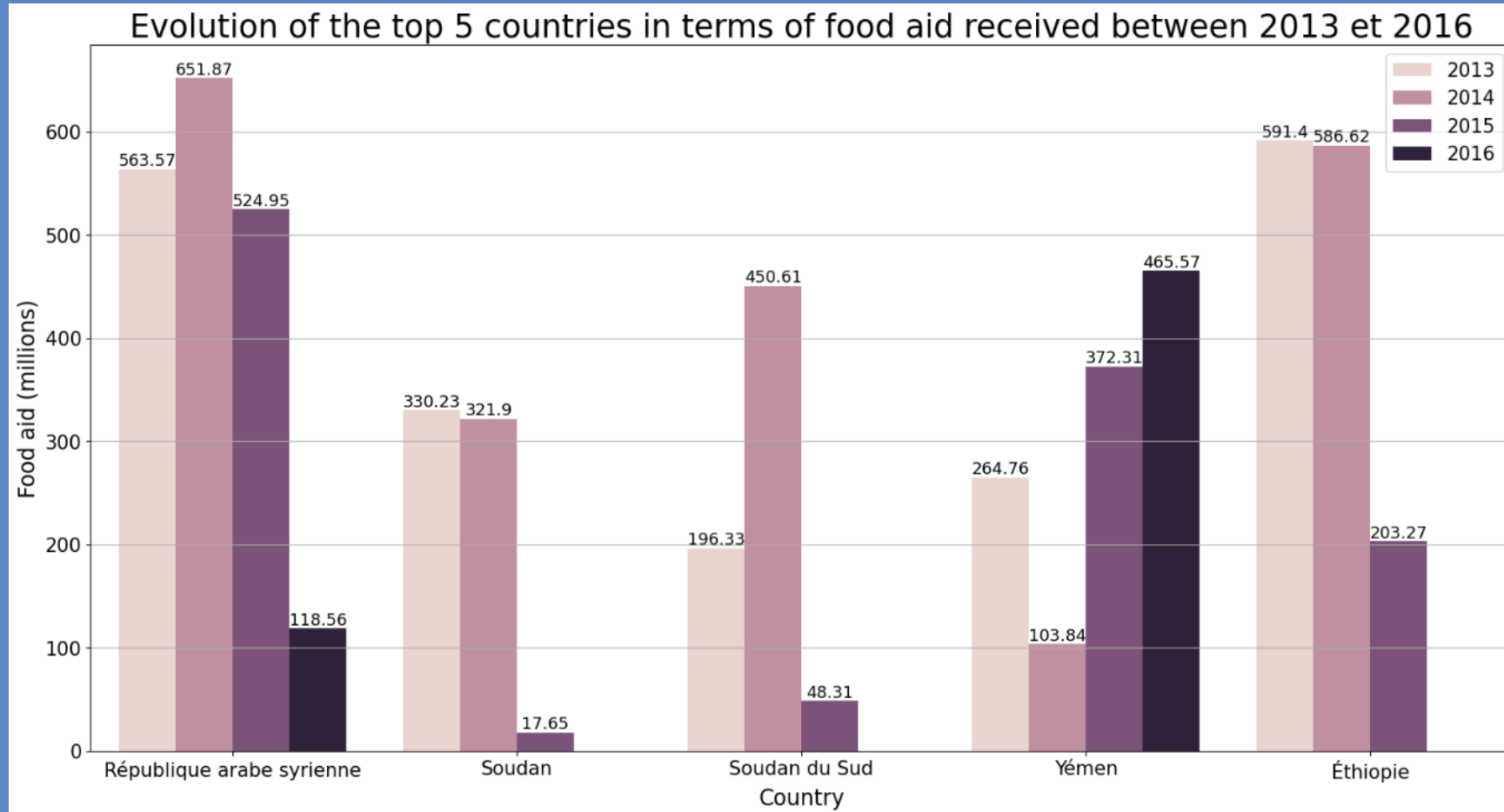
The 10 countries with the highest proportion of undernourished people in 2017



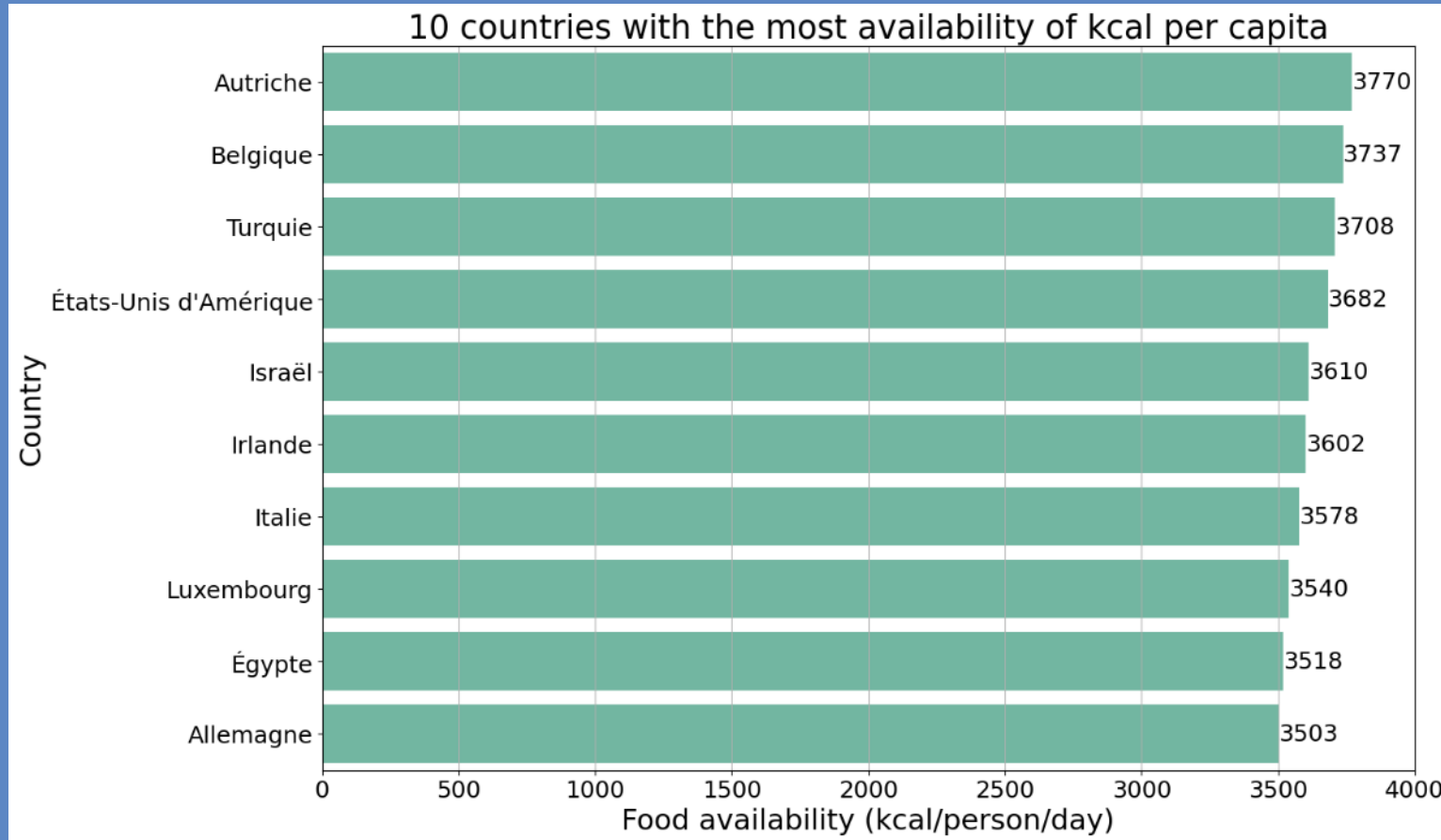
The 10 countries that received the most food aid between 2013 and 2016



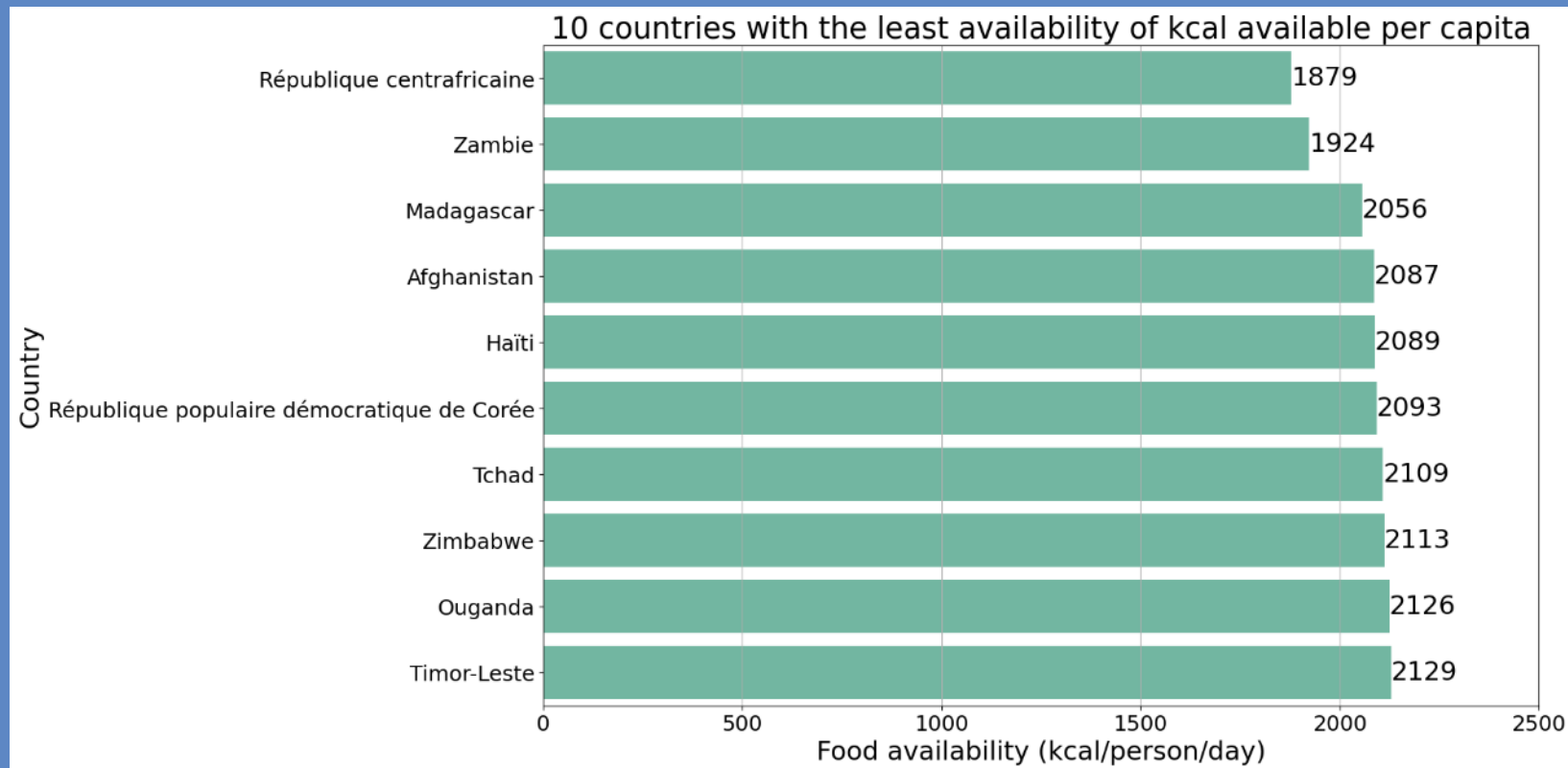
Evolution of food aid for the 5 countries that received the most between 2013 and 2016



The 10 countries with the highest food availability per capita



The 10 countries with the lowest food availability per capita



Cassava in Thailand

30.23

Billions of kilograms of cassava
produced

25.21

Billions of kilograms of cassava
exported

83.41%

Proportion of cassava produced
that is exported

8.96%

Percentage of Thailand's
population in a state of
malnutrition

40

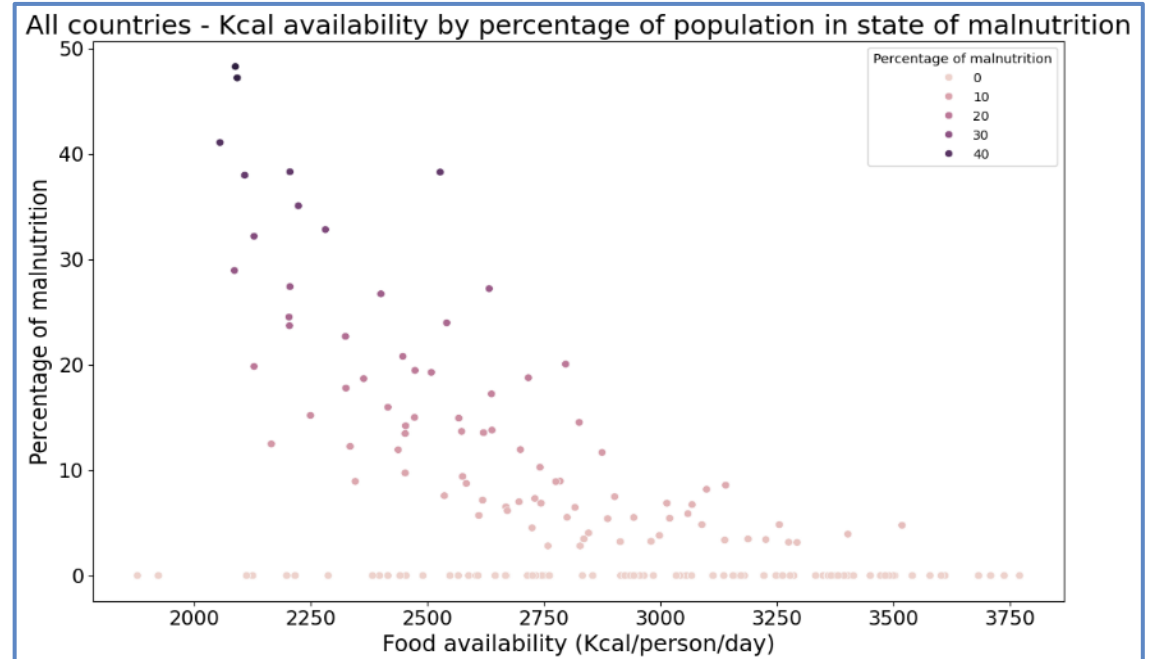
Kcal available per person/per
day from cassava

241

Theoretical kcal available per
person/per day from cassava if
none was exported



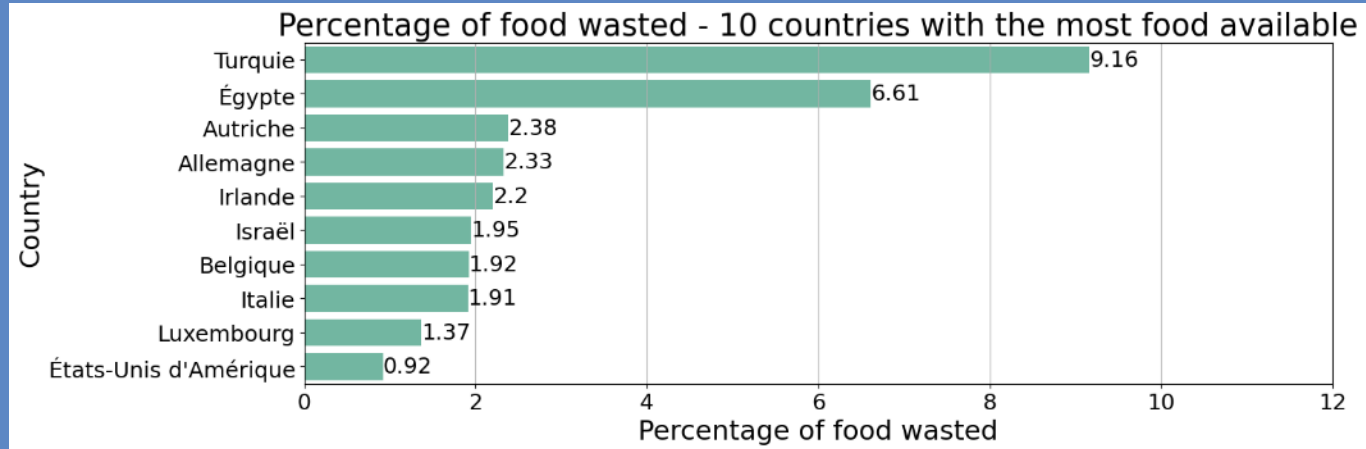
Additional analysis



30%

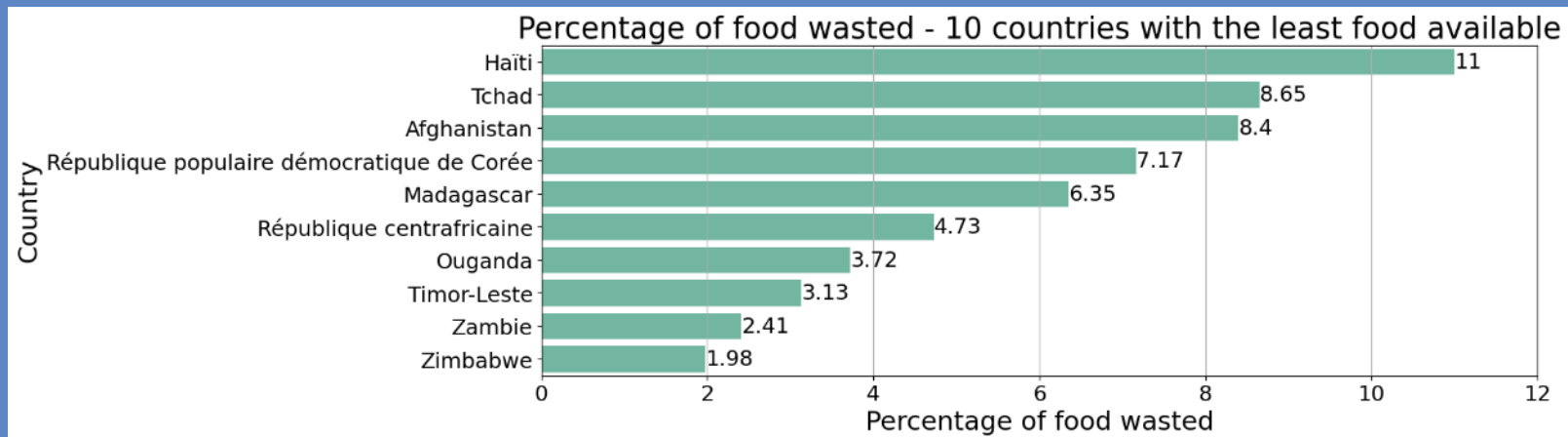
Pourcentage des 50 pays avec les disponibilités alimentaires les plus faibles avec des valeurs nulles pour les niveaux de sous-nutrition.

Additional analysis



3.08%

Average percentage of food wasted by the 10 countries with the most food availability



5.75%

Average percentage of food wasted by the 10 countries with the least food availability



Conclusion

- 1 7.1% of the world's population is in a state of malnutrition. This figure may be higher as we appear to be missing data for some countries.
- 2 BUT there is enough food to feed over 10 billion people. We must therefore find ways to encourage countries to better support each other.
- 3 We need more data on malnutrition. We lack some data on this subject, which would be valuable in identifying how best to help countries most in need.
- 4 Given the high rate of food waste in countries with low food availability, it would be valuable to further investigate the reasons for these losses and see if we can reduce them.