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FAOSTAT ANALYTICAL BRIEF 40

# Food balances 2010–2019

Global, regional and country trends

## HIGHLIGHTS

- In the last decade, global food availability increased by 17 percent, from 4.6 billion tonnes in 2010 to 5.4 billion tonnes in 2019. This translates in a global dietary energy supply of 2 963 kcal/cap/day in 2019.
- The five countries with the lowest dietary energy supply are all in Africa: Zimbabwe (1 707 kcal/cap/day), Burundi (1 754 kcal/cap/day), the Central African Republic (1 870 kcal/cap/day), Madagascar (1 912 kcal/cap/day) and the Democratic Republic of the Congo (1 913 kcal/cap/day).
- As the International Year of Fruits and Vegetables is celebrated, the average global availability of fruits and vegetables reached 594 g per capita per day in 2019, which is above the recommended consumption amount (400g per capita per day). However, the actual consumption of fruits and vegetables can vary and be lower than the availability, especially for certain population groups.

## FAOSTAT FOOD BALANCES

### BACKGROUND

The Statistics Division of the Food and Agriculture Organization of the United Nations (FAO) compiles Food Balance Sheet (FBS) statistics for 181 countries, which present a comprehensive picture of the agrifood situation of a country in a specified reference period, showing the pattern of a country's food supply and utilizations.<sup>1</sup>

With the release of FBS data for 2019, the new methodology that is used for 2014–2019 values has been applied backwards to cover 2010–2013, therefore giving consistent time series from 2010 to 2019. Calculations of per capita figures and other variables for all years have been updated with the latest population figures from the United Nations Population Division (United Nations, 2019).

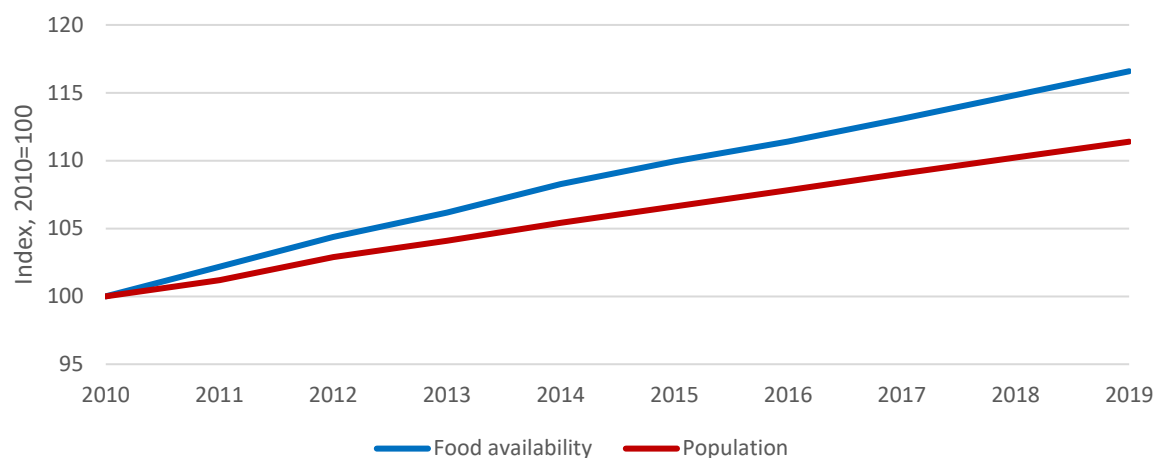
### GLOBAL AND REGIONAL HIGHLIGHTS

Over the last decade, global food availability<sup>2</sup> increased by 17 percent, reaching 5.4 billion tonnes in 2019 (Figure 1). However, as population increased at a slightly slower pace, the nutritional contents of the available food per capita increased marginally (by 4 percent) between 2010 and 2019, and reached 2 963 kcal per capita per day in 2019 (Figure 2).

<sup>1</sup> More information is available at <https://fenixservices.fao.org/faostat/static/documents/FBS/New%20FBS%20methodology.pdf>

<sup>2</sup> Food availability is the quantity of total supply that is allocated for potential human consumption. In the context of the food balances, this food availability is considered as a utilization (other utilizations being animal feed, non-food industrial use, seed and others).

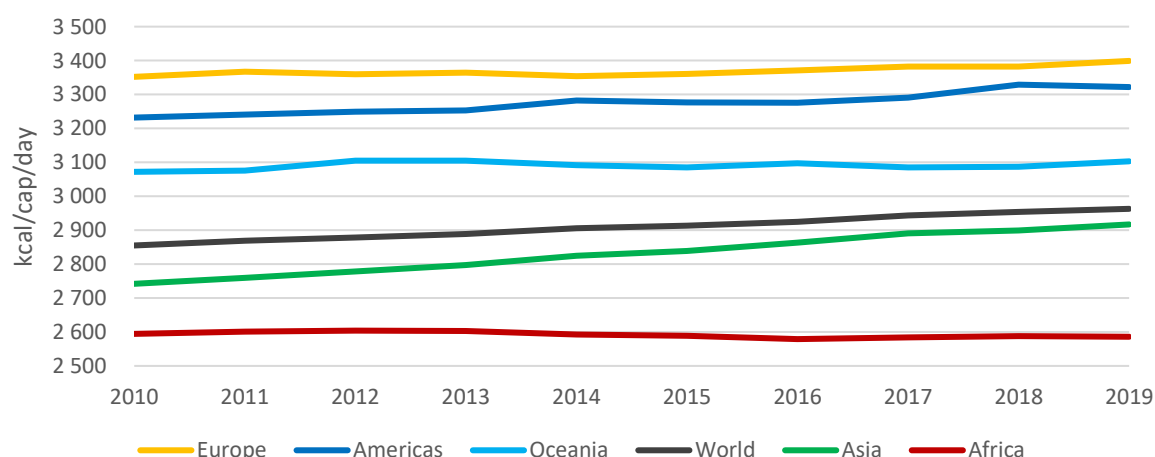
**Figure 1: Global food availability and population growth**



**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022. <https://www.fao.org/faostat/en/#data/FBS> and FAO. 2021. FAOSTAT: Annual population. In: FAO. Rome. Cited February 2022. <https://www.fao.org/faostat/en/#data/MK>

As shown in Figure 2 below, Europe and the Americas present the highest dietary energy supply (DES) per capita in 2019, both above 3 300 kcal/cap: 3 399 kcal/capita in Europe, up 1 percent from 2010, and 3 322 kcal/cap in the Americas, up 3 percent from 2010 and driven by the high levels observed in the United States of America and Canada. The DES in Oceania fluctuated around 3 100 kcal/cap during the past decade. Asia experienced the fastest growth in DES since 2010 (6 percent), from 2 742 kcal/cap in 2010 to 2 917 kcal/cap in 2019. This positive trend is driven by the increasing DES levels in the countries with the largest populations: when weighted by population, China accounts for 37 percent of the total Asian increase, followed by India with 32 percent, and Pakistan and the Philippines with 7 percent each. Africa, on the other hand, shows the lowest historical DES levels and shows a slightly decreasing trend over the decade, but with some progress since 2016.

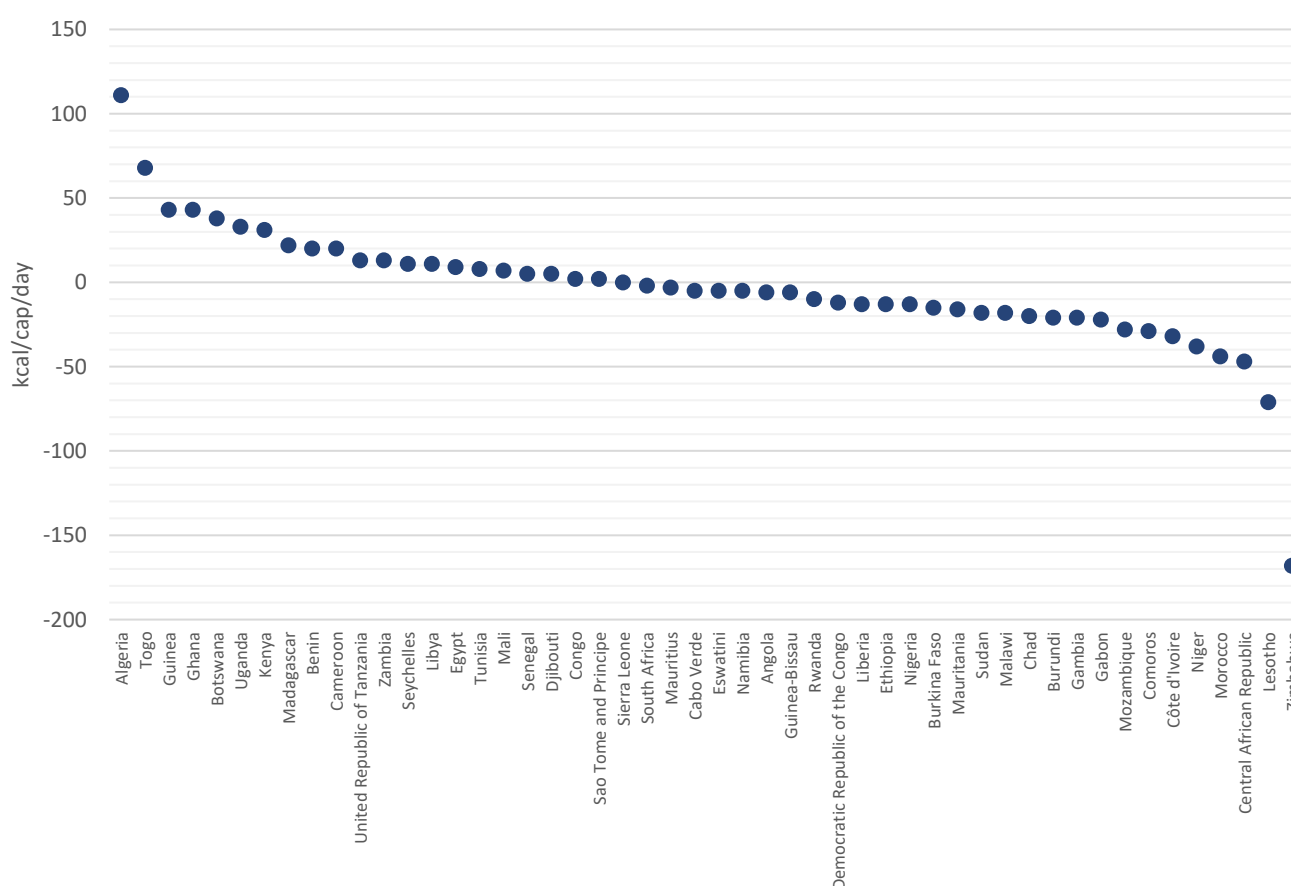
**Figure 2: Dietary energy supply by region**



**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022. <https://www.fao.org/faostat/en/#data/FBS>

While the average DES per capita remained constant in Africa between 2018 and 2019, the country variability is the largest among regions (Figure 3). Countries showing significant increases include Algeria, Togo and Ghana, with increments of 111, 68 and 43 kcal/cap, respectively. The countries with the largest decreases are Zimbabwe, Lesotho and the Central African Republic, with drops of 168, 71 and 47 kcal/cap, respectively, between 2018 and 2019. In the case of Algeria, the increase in the DES is mostly due to a substantial increase in the imports of soybean oil. Zimbabwe, on the other hand, suffered a substantial decrease in the production and imports of two main staple commodities: maize and rice.

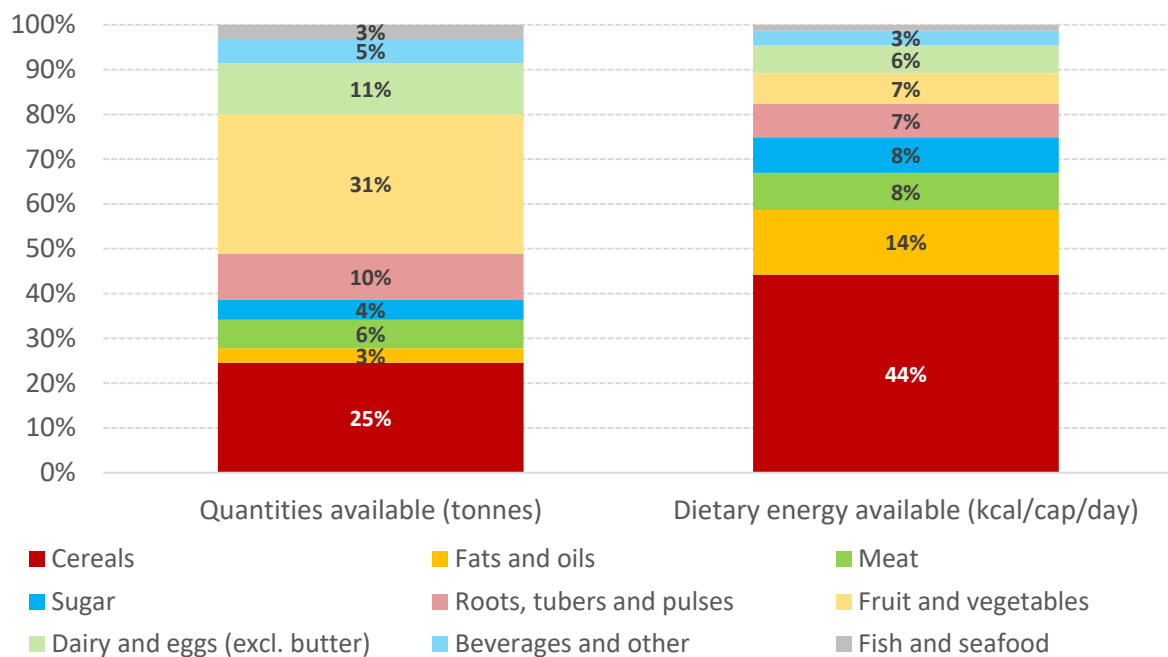
**Figure 3: Change in dietary energy supply between 2018 and 2019 in Africa by country**



**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022.  
<https://www.fao.org/faostat/en/#data/FBS>

At the global level, cereals account for the highest share of total food supply, both in quantities available (25 percent) and dietary energy (44 percent). Fruit and vegetables represent 31 percent of the total quantities available, but only 7 percent of the total DES due to their low caloric content. On the other hand, sugar, and fats and oils represent 4 and 3 percent of the quantities available but 8 and 14 percent respectively of the DES in 2019.

**Figure 4: Global food availability composition (2019)**



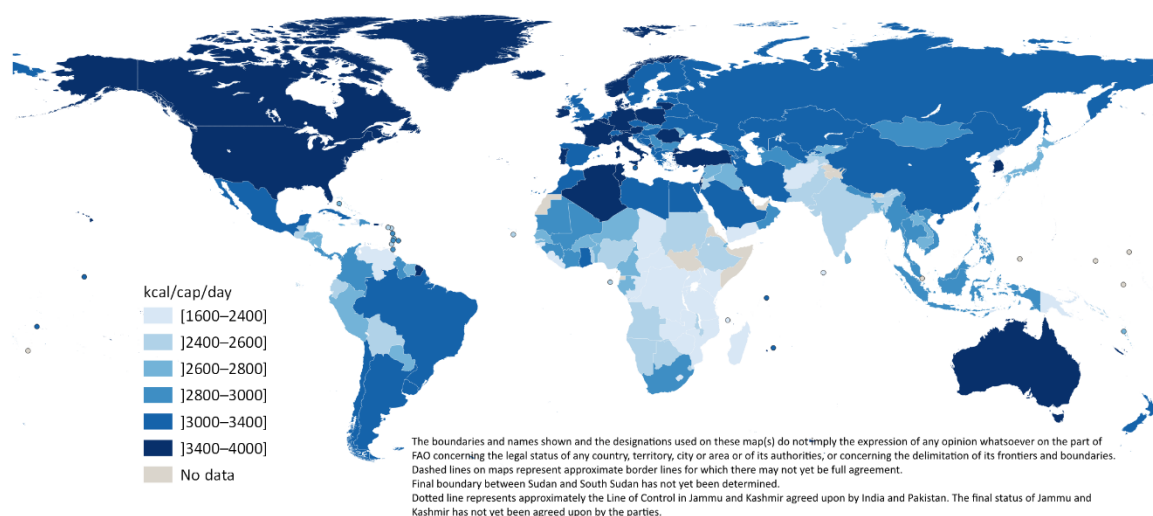
**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022. <https://www.fao.org/faostat/en/#data/FBS>

### COUNTRY-LEVEL HIGHLIGHTS

Figure 5 shows that low-income countries, as may be expected, have the lowest DES values, especially those in sub-Saharan Africa and Southern Asia. In contrast, the highest DES values are observed in high-income countries, with the top three, namely the United States of America, Ireland and Belgium, presenting DES values greater than 3 800 kcal/capita, which is more than twice the average of the bottom three countries (Zimbabwe, Burundi and the Central African Republic).



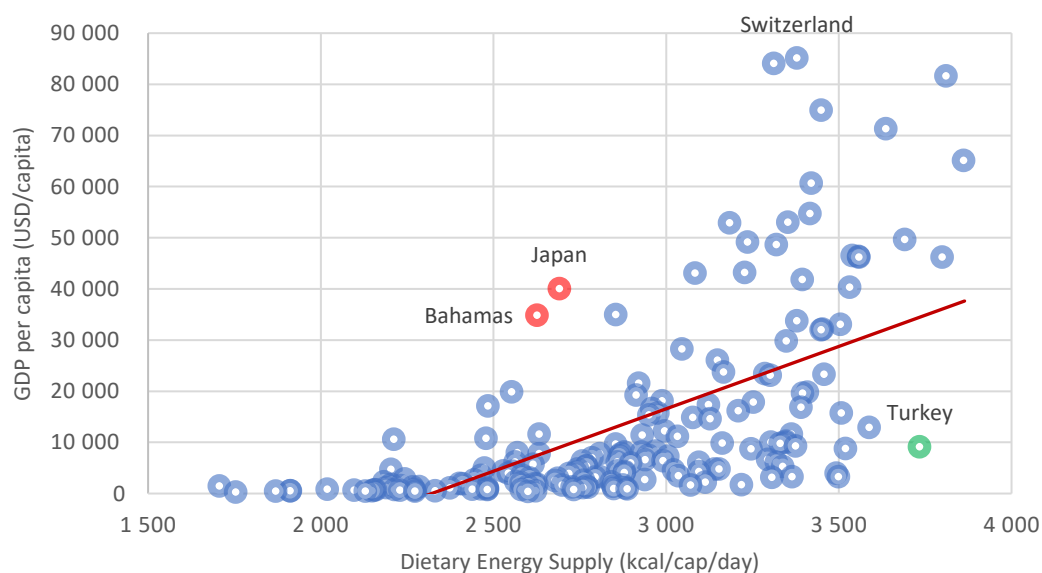
Figure 5: Dietary energy supply (2019)



**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022. <https://www.fao.org/faostat/en/#data/FBS> based on UN Geospatial, 2020.

This geographic distribution is in line with the relationship between the DES and income (using gross domestic product (GDP) per capita as a proxy): in general, higher per capita GDP is associated with higher DES (Figure 6).

Figure 6: Dietary energy supply and GDP per capita (2019)



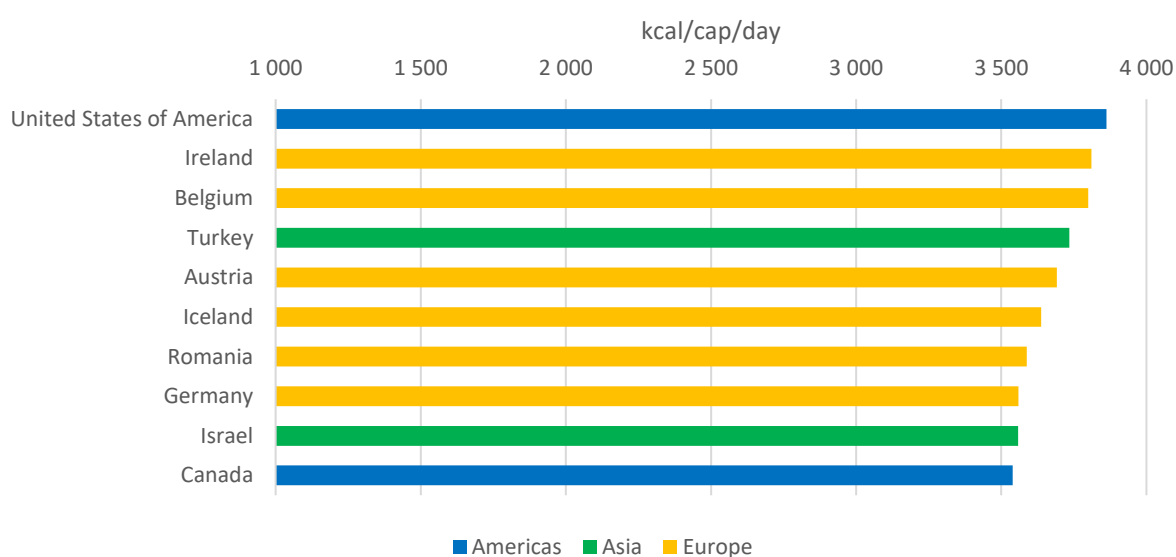
**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022. <https://www.fao.org/faostat/en/#data/FBS> and FAO. 2021. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited February 2022. <https://www.fao.org/faostat/en/#data/MK>

**Note:** Luxembourg (DES: 3 504 kcal/cap/day; GDP per capita: USD 115 481) is not shown on the figure.

Japan shows a comparatively low DES (2 691 kcal/cap) when compared to countries with a similar GDP per capita (such as France, which reports a DES of 3 532 kcal/cap). This is due to the high consumption of fish, an expensive food group with a low caloric content. For the Bahamas, the comparatively low DES is most probably related to the scarce information currently available on the utilization of the main staple products. Turkey appears as a notable case for a middle-income country, as has the fourth highest DES. This could be due, particularly in the more recent years, to an underestimation of the refugee population.

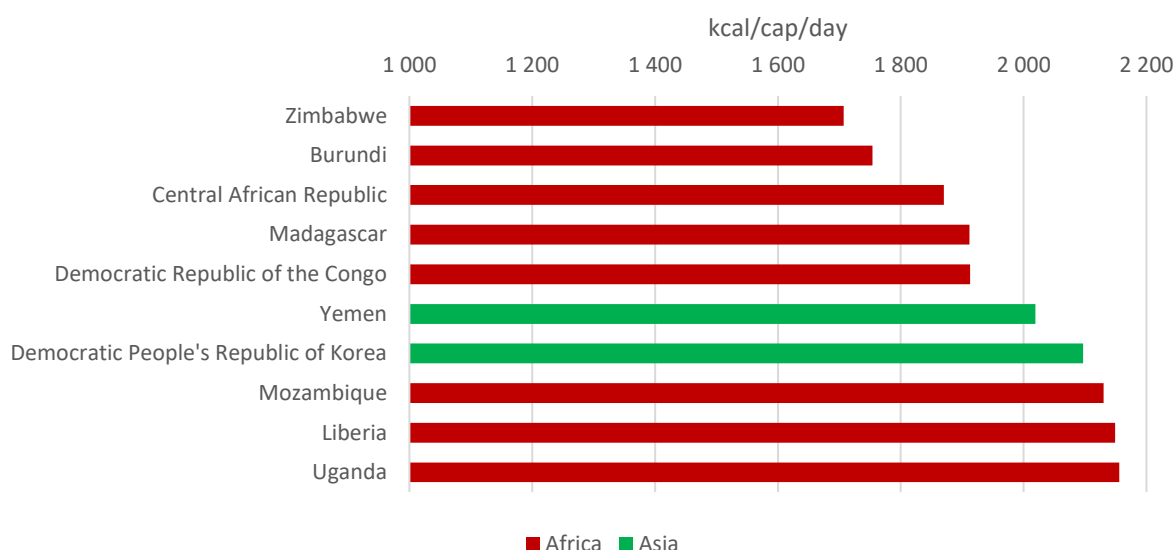
Figures 7 and 8 below rank, respectively, the ten highest and the ten lowest countries according to their DES levels. The countries with the highest DES are mostly in Europe and Northern America, while the countries with the lowest DES are located in Africa and Asia.

**Figure 7: Dietary energy supply, top countries (2019)**



**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022.  
<https://www.fao.org/faostat/en/#data/FBS>

Figure 8: Dietary energy supply, bottom countries (2019)



**Source:** FAO. 2021. FAOSTAT: Food Balances (2010-). In: FAO. Rome. Cited February 2022.  
<https://www.fao.org/faostat/en/#data/FBS>

### FOCUS ON FRUITS AND VEGETABLES

The United Nations General Assembly designated 2021 as the International Year of Fruits and Vegetables (IYFV). According to the World Health Organization (WHO)/FAO recommendations, 400 grams (g) per day of edible fruits and vegetables is the minimum amount needed for a healthy diet, for the prevention of non-communicable diseases, as well as for the prevention and alleviation of several micronutrient deficiencies.

Data from the supply utilization accounts (SUAs) indicate that, on average, the global availability of fruits and vegetables reached 594 g per capita per day in 2019, which is close to 50 percent above the WHO/FAO recommended amount. The global availability of fruits and vegetables went up 11 percent between 2010 and 2019, driven by Asia, where it increased by 16 percent. The availability is above the recommended quantity in all regions except Africa, and is the highest in Asia while Europe, Oceania and the Americas have similar levels in 2019. However, the availability calculated by the supply utilization accounts is a national average that does not consider the income levels of specific population groups, access to markets and distribution patterns within each country. The data also do not account

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