Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Hirvonen K, Bai Y, Headey D, Masters WA. Affordability of the EAT–Lancet reference diet: a global analysis. Lancet Glob Health 2019; published online Nov 7. http://dx.doi.org/10.1016/S2214-109X(19)30447-4.
Affordability of healthy and sustainable diets:
Global analysis of the EAT-Lancet reference diet relative to household income and the cost of nutrient adequacy

Supplemental Material

Contents:

Appendix 1: ICP food price data ................................................................. 2
Appendix 2: Imputation and substitution for missing ICP prices.............................. 6
   Affluent countries with missing starchy staple prices ............................................ 6
   Food groups with few price observations .............................................................. 8
Appendix 3: Food composition tables ............................................................... 9
Appendix 4: Additional details on Povcal data ....................................................... 10
Appendix 5: Affordability estimates based on daily per capita gross national income (GNI). 15
Appendix 6: Cost of Nutrient Adequacy (CoNA) ..................................................... 18
Appendix 7: World Bank's country classifications ............................................... 19
Appendix 8: Cost of the EAT-Lancet reference diet relative to mean daily per capita household income, map ................................................................. 24
Appendix 9: Composition of reference diets for EAT-Lancet and minimum cost of nutrient adequacy ................................................................. 25
References ........................................................................................................ 44
Appendix 1: ICP food price data

The International Comparison Program (ICP) is a global partnership of local and regional statistical offices in 199 countries, led by the World Bank to improve and standardize the collection and reporting of prices for all goods and services in the global economy. The primary purpose of these data is to construct price indexes with which to measure the real size and composition of economic activity, poverty rates and other indicators of well-being (1). Comparisons require collecting prices for the same item in multiple countries, to determine each country's overall price level and permit conversion of its currency to international dollars in purchasing power parity (PPP) terms, meaning that one dollar would buy an equal quantity of good and services in each country. ICP data collection uses a global list of specific items for which prices are sought in all countries of the world, complemented by regional lists of location-specific items. Missing data implies that an item is not typically available for purchase in a given country.

For this study we used the latest available round of ICP data, providing prices observed in 2011. Of the 199 ICP member countries, we excluded Georgia and Iran because they did not take part in ICP's regional comparisons, and excluded 38 other countries -- mostly small island countries in the Pacific and the Caribbean – because of incomplete reporting to the ICP. The final sample used in the analysis is 159 countries, accounting for 95 % of the world's population in 2017. The populations omitted from our analysis due to incomplete reporting to the ICP are listed in Table S1.

Table S1: Countries dropped from the analysis

| Country                      | Population  |
|------------------------------|-------------|
| American Samoa               | 55,640      |
| Anguilla                     | 14,764      |
| Antigua and Barbuda          | 102,010     |
| Aruba                        | 105,260     |
| Bahamas, The                 | 395,360     |
| Barbados                     | 285,720     |
| Belize                       | 374,680     |
| Bermuda                      | 65,440      |
| Bonaire                      | 18,905      |
| Cayman Islands               | 61,560      |
| Cook Islands                 | 161,010     |
| Curaçao                      | 16,459      |
| Dominica                     | 73,920      |
| French Polynesia             | 283,010     |
| Georgia                      | 3,717,100   |
| Grenada                      | 107,830     |
| Guam                         | 164,230     |
| Iran, Islamic Republic       | 81,162,790  |
| Kiribati                     | 116,400     |
| Marshall Islands             | 53,130      |
| Micronesia, Federated States of | 105,540    |
| Country                             | Population |
|------------------------------------|------------|
| Montserrat                         | 5,215      |
| Nauru                              | 13,650     |
| New Caledonia                      | 280,460    |
| Niue                               | 1,624      |
| Northern Mariana Islands           | 55,140     |
| Palau                              | 21,730     |
| Papua New Guinea                   | 8,251,160  |
| Samoa                              | 196,440    |
| Sint Maarten                       | 41,110     |
| Solomon Islands                    | 611,340    |
| St. Lucia                          | 178,840    |
| St. Vincent and the Grenadines     | 109,900    |
| Tokelau                            | 1,499      |
| Tonga                              | 108,020    |
| Turks and Caicos Islands           | 35,450     |
| Tuvalu                             | 11,190     |
| Vanuatu                            | 276,240    |
| Virgin Islands, British            | 31,200     |
| Wallis and Futuna                  | 11,899     |
| **Total**                          | **97,683,865** |

*Note: Population estimates are for 2017 and sourced from UN (2).*

Prices in the ICP dataset are reported using the UN Statistical Agencies system of Classification of Individual Consumption According to Purpose (COICOP), and we retained prices for all items classified in COICOP as foods and beverages. Prices are observed and reported to ICP by national statistical agencies, based on the following guidelines (see 1):

1. Spatial representativeness so that all economic areas (including rural and urban) of the country are represented.
2. Temporary representativeness: prices are collected several times during the year to account for seasonality in prices.
3. Representativeness in terms of outlets, ranging from supermarkets to small kiosks.
4. Selection of products: under each basic heading, countries were asked to select at least one product from the global list and three most important products in the regional list.

---

1 Basic headings are used to group similar (food and beverage) items.
We were able to obtain the price data covering the global product list and the regional lists for Africa, Asia and the Pacific, Latin America, the Caribbean, and Western Asia. However, for 59 countries in the CIS, Eurostat-OECD, and the Pacific Islands regions we have to rely only on the price data collected using the global product list.

To calculate quantities required for EAT-Lancet reference diets, we matched the ICP descriptions of each item to their food composition. Table S2 shows the total number of food items in the ICP's global and regional lists. Out of the 823 items reported to the ICP in the COICOP categories for foods and beverages, we were able to match 744 (90.4 %) with their calorie content in the USDA database (see appendix 3).

Table S2: Number of ICP price observations in our combined global and regional database

| Number of observations | Matched to calorie estimates in USDA |
|------------------------|-------------------------------------|
| Countries | Foods |   |
| Global list | 201 | 199 |
| Africa only | 50 | 203 | 175 |
| Asia only | 23 | 167 | 144 |
| West Asia only | 12 | 177 | 162 |
| LAC only | 16 | 75 | 64 |
| Combined (global and regional) | 180 | 823 | 744 |

We then categorized the 744 ICP items to the EAT-Lancet food groups, see table S3 at the end of this supplement. From the full ICP food and beverage list, 548 items were categorized into the 15 functional food groups (see table 1 in the manuscript). There were 196 items that were not matched with the EAT food groups and are therefore not considered in the analysis, primarily spices, condiments, and confectionery products such as candy.

Table S4 summarizes the number of ICP price observations in each food group. In total, we have 21,121 price observations across 159 countries. We see that the ICP has an extensive coverage of certain food groups such as cereals, legumes, fruits, vegetables and animal source foods with more than 1,000 observations in each food group. In contrast, dark green vegetables, palm oil, and animal fats (lard or tallow) have relatively fewer price observations.

Table S4: Number of price observations by EAT-Lancet food group

| Food group | Serving size (kcal/day) | N | % |
|------------|------------------------|---|---|
| Rice, wheat, corn & other cereals | 811 | 4,198 | 19.88 |
| Potatoes and cassava | 39 | 402 | 1.9 |
| Dark green vegetables | 23 | 350 | 1.66 |
| Red & orange vegetables | 30 | 629 | 2.98 |
| Other vegetables | 25 | 1,620 | 7.67 |
| All fruits | 126 | 2,398 | 11.35 |
| Category                          | Quantity | Percentage | Contribution |
|----------------------------------|----------|------------|--------------|
| Whole milk or derivatives        | 153      | 9.13       | 1,928        |
| Beef, lamb & pork                | 30       | 14.16      | 2,990        |
| Poultry, eggs & fish             | 121      | 18.11      | 3,826        |
| Legumes, nuts & soy foods        | 575      | 5          | 1,057        |
| Palm oil                         | 60       | 0.46       | 97           |
| Unsaturated oils                 | 354      | 3.28       | 693          |
| Dairy fats                        | 0        | 1.75       | 370          |
| Lard or tallow                   | 36       | 0.04       | 8            |
| All sweeteners                   | 120      | 2.63       | 555          |
| **Total**                        | **2,503**| **100**    | **21,121**   |
Appendix 2: Imputation and substitution for missing ICP prices

We identified two limitations of the ICP price data that could be remedied with imputation or substitution. First, in 38 mostly affluent countries there is no price reported for some starchy staples on the global list, such as white potatoes. These could be the least-cost source in that food group but were omitted from that country’s ICP reports, so we imputed their value using prices from a neighboring country as detailed below. Second, 26 countries have no price reported for any food in the dark green leafy vegetable food group, and for those we substituted the price of another vegetable. Palm oil and lard or tallow are even more often missing, so for those we substituted the price of unsaturated oils. These steps are described in detail below.

Affluent countries with missing starchy staple prices

In affluent Western countries, plus Japan and Korea, prices for several kinds of starchy staples were not reported to the ICP. For example, price of wheat flour (typically the cheapest source of calories in Western countries) is missing for Norway, Sweden and the USA. Similarly, the price of Irish potato is missing for Czech Republic and the USA. To improve the accuracy of price data for starchy staples in the higher-income countries listed in Table S5, we imputed values by replacing the missing observations using the mean price for all starchy staples in the same geographical sub-region (see Table S5). These sub-regions contain nearby countries with similar food markets, and in most cases are in a free-trade agreement such as NAFTA or the EU which would equalize price and availability among countries within the region.
Table S5. Countries for which the price of one or more starchy staples was imputed

| Sub-region         | Country            | Number of imputed prices |
|--------------------|--------------------|--------------------------|
| Alpine countries   | Austria            | 3                        |
| Australasia        | Australia          | 1                        |
| Australasia        | New Zealand        | 4                        |
| Balkans            | Albania            | 5                        |
| Balkans            | Bosnia and Herzegovina | 2                      |
| Balkans            | Macedonia, FYR     | 7                        |
| Balkans            | Montenegro         | 6                        |
| Baltic States      | Estonia            | 1                        |
| Benelux countries  | Belgium            | 1                        |
| Benelux countries  | Luxembourg         | 1                        |
| Carpathian states  | Belarus            | 4                        |
| Carpathian states  | Czech Republic     | 7                        |
| Carpathian states  | Hungary            | 7                        |
| Carpathian states  | Poland             | 6                        |
| Carpathian states  | Romania            | 8                        |
| Carpathian states  | Serbia             | 6                        |
| Carpathian states  | Slovakia           | 8                        |
| Carpathian states  | Ukraine            | 4                        |
| Caucasus           | Armenia            | 2                        |
| Caucasus           | Azerbaijan         | 2                        |
| Central Asia       | Kazakhstan         | 1                        |
| Central Asia       | Kyrgyzstan         | 8                        |
| Central Asia       | Moldova            | 3                        |
| Central Asia       | Tajikistan         | 9                        |
| Korea & Japan      | Japan              | 4                        |
| Korea & Japan      | Korea, Rep.        | 1                        |
| Mediterranean countries | Italy       | 2                        |
| Mediterranean countries | Portugal     | 1                        |
| Mediterranean countries | Slovenia     | 1                        |
| Mediterranean countries | Turkey       | 3                        |
| Nordic countries   | Denmark            | 1                        |
| Nordic countries   | Finland            | 2                        |
| Nordic countries   | Iceland            | 2                        |
| Nordic countries   | Norway             | 4                        |
| Nordic countries   | Sweden             | 4                        |
| North-America      | Canada             | 2                        |
| North-America      | Mexico             | 4                        |
| North-America      | United States      | 7                        |
Food groups with few price observations

As described in appendix 1, certain food groups such as the dark green vegetables, palm oil, and animal fats (lard or tallow) have relatively few price observations. In these food groups, we have countries for which not a single price observation was recorded; see table S6. For these countries, we substituted prices from the nearest food group as follows:

- Dark green vegetable with a food from the 'Other vegetables' food group.
- Palm oil, and lard or tallow, with an item from the 'Unsaturated oils' food group.

This substitution can also be described as merging the two food groups, so that the price retained is the lowest-cost source from the group for which at least item is locally available.

| Food group                        | Serving size (kcal/day) | N | % of all countries |
|-----------------------------------|-------------------------|---|--------------------|
| Rice, wheat, corn & other cereals | 811                     | 0 | 0                  |
| Potatoes and cassava              | 39                      | 0 | 0                  |
| Dark green vegetables             | 23                      | 26 | 16.4              |
| Red & orange vegetables           | 30                      | 0 | 0                  |
| Other vegetables                  | 25                      | 0 | 0                  |
| All fruits                        | 126                     | 0 | 0                  |
| Whole milk or derivatives         | 153                     | 0 | 0                  |
| Beef, lamb & pork                 | 30                      | 0 | 0                  |
| Poultry, eggs & fish              | 121                     | 0 | 0                  |
| Legumes, nuts & soy foods         | 575                     | 0 | 0                  |
| Palm oil                          | 60                      | 98 | 61.6              |
| Unsaturated oils                  | 354                     | 0 | 0                  |
| Dairy fats                         | 0                       | n/a | n/a              |
| Lard or tallow                    | 36                      | 151 | 95.0              |
| All sweeteners                    | 120                     | 0 | 0                  |
Appendix 3: Food composition tables

Food composition tables provide estimates of energy and nutrient content of food items. Countries typically develop their own food composition databases that are frequently updated. However, high-quality food composition data are missing in several countries (3). This is particularly the case in poor countries that lack sufficient resources to build and/or maintain them. This has prompted international organizations like the Food and Agriculture Organization of the United Nations (FAO) to develop international food composition tables. However, the FAO's International Network of Food Data Systems (INFOODS) database is still incomplete containing several missing estimates for key food items (3).

In the absence of high-quality international food composition tables, we used the United States Department of Agriculture (USDA) National Nutrient Database for Standard Reference 28 to obtain the edible portion and energy content of all food items in the ICP database. The latest available USDA database version contains more than 8,500 food items that are both in raw and processed form (4). The USDA food composition tables are constructed using standardized methods and are widely used for foods elsewhere in the world. Many regional and national organizations base their food composition tables to the USDA database (5).

The limited available evidence suggest a good agreement with the USDA and other carefully conducted databases, particularly for energy composition estimates (6, 7). Therefore, in the absence of high quality international food composition database, we rely on the USDA food composition tables to estimate the calorie content of the ICP food items. The EAT-Lancet commission (8) also relied on the USDA database to assess the nutritional adequacy of the EAT-Lancet reference diet.

The agreement with the food items in the ICP data and the food items in the USDA database is generally good. However, for certain fish, seafood and meat products the product descriptions in the ICP refer to whole animals (with bones) that do not have a corresponding item in the USDA product list. In these instances we obtained estimates of edible portions from FAO/INFOODS (9). For meat products (e.g. goat mixed cut/with bones or live lamb, mutton, turkey, and chicken this conversion was straightforward. For seafood, the ICP product descriptions were incomplete and the following assumptions were made:

1. We used the FAO uFish1.0, FAO West Africa, and Bangladesh food composition tables.
2. When the ICP did not specify how the fish was prepared (i.e. dried, smoked or fillet), we assumed the price referred to a raw whole fish.
3. We matched edible portions when there was a good match: i.e. catfish to catfish. If the ICP product was Africa or Asia-specific, we matched to West-Africa or Bangladesh FCTs.
4. When the product was a whole fish with no FCT info, we used the average edible portion of all measured fish varieties, which was 0.51 % (i.e. refusal fraction: 0.49).
5. For dried fish in Africa and Asia, we assumed that the edible portion was 1 (i.e. eaten with bones and skin).
6. For smoked fish, we used an edible portion of salmon, which was 0.75 (i.e. refusal fraction of 0.25).
Appendix 4: Additional details on Povcal data

The World Bank's PovcalNet system is based on 850 household surveys covering about 1.2 million randomly sampled households in 127 countries. From these surveys, PovcalNet computes an entire income distribution, not just the mean, allowing users to input any income level and calculate the number of people in the country that fall below this threshold. We used this feature to calculate the number of people whose incomes were below our diet costs in each country. For more information on the methodology used by PovcalNet, please visit http://iresearch.worldbank.org/PovcalNet/methodology.aspx.

Table S7 lists the 18 countries for which the Povcal data are missing (out of the 159 for which we estimate the cost of the EAT-Lancet reference diet), along with the 2017—population estimates. Most of the countries (14 out of 18) are high-income countries.

Table S7: Countries for which the Povcal data is missing

| Country | Region                      | Income group              | Population in 2017 |
|---------|-----------------------------|---------------------------|--------------------|
| Bahrain | Middle East & North Africa  | High income               | 1,492,584          |
| Brunei Darussalam | East Asia & Pacific | High income               | 428,697            |
| Cambodia | East Asia & Pacific        | Lower middle income       | 16,005,373         |
| Cuba    | Latin America & Caribbean  | Upper middle income       | 11,484,636         |
| Equatorial Guinea | Sub-Saharan Africa | Upper middle income       | 1,267,689          |
| Hong Kong SAR, China | East Asia & Pacific | High income               | 7,391,700          |
| Kuwait  | Middle East & North Africa | High income               | 4,136,528          |
| Macao SAR, China | East Asia & Pacific | High income               | 622,567            |
| New Zealand | East Asia & Pacific | High income               | 4,793,900          |
| Oman    | Middle East & North Africa | High income               | 4,636,262          |
| Qatar   | Middle East & North Africa | High income               | 2,639,211          |
| Saudi Arabia | Middle East & North Africa | High income               | 32,938,213         |
| Singapore | East Asia & Pacific | High income               | 5,612,253          |
| St. Kitts and Nevis | Latin America & Caribbean | High income               | 55,345             |
| Suriname | Latin America & Caribbean | Upper middle income       | 563,402            |
| Taiwan, China | East Asia & Pacific | High income               |                   |
| Trinidad and Tobago | Latin America & Caribbean | High income               | 1,369,125          |
| United Arab Emirates | Middle East & North Africa | High income               | 9,400,145          |

Total 104,837,630
The Povcal welfare estimate is based on consumption in 81 countries (57% of the 141 countries in our data) and on income in 60 countries (43%). Table S8 provides the data type for each country.

**Table S8: Povcal data type (consumption or income) for each country**

| Country          | Income group   | Povcal data type |
|------------------|----------------|------------------|
| Australia        | High income    | income           |
| Austria          | High income    | income           |
| Belgium          | High income    | income           |
| Canada           | High income    | income           |
| Chile            | High income    | income           |
| Croatia          | High income    | income           |
| Cyprus           | High income    | income           |
| Czech Republic   | High income    | income           |
| Denmark          | High income    | income           |
| Estonia          | High income    | income           |
| Finland          | High income    | income           |
| France           | High income    | income           |
| Germany          | High income    | income           |
| Greece           | High income    | income           |
| Hungary          | High income    | income           |
| Iceland          | High income    | income           |
| Ireland          | High income    | income           |
| Israel           | High income    | income           |
| Italy            | High income    | income           |
| Japan            | High income    | income           |
| Korea, Rep.      | High income    | income           |
| Latvia           | High income    | income           |
| Lithuania        | High income    | income           |
| Luxembourg       | High income    | income           |
| Malta            | High income    | income           |
| Netherlands      | High income    | income           |
| Norway           | High income    | income           |
| Poland           | High income    | income           |
| Portugal         | High income    | income           |
| Seychelles       | High income    | income           |
| Slovakia         | High income    | income           |
| Slovenia         | High income    | income           |
| Spain            | High income    | income           |
| Sweden           | High income    | income           |
| Switzerland      | High income    | income           |
| United Kingdom   | High income    | income           |
| United States    | High income    | income           |
| Uruguay          | High income    | income           |
| Albania          | Upper middle income | consumption |
| Country                   | Income group      | Povcal data type |
|---------------------------|-------------------|------------------|
| Algeria                   | Upper middle income | consumption     |
| Angola                    | Upper middle income | consumption     |
| Azerbaijan                | Upper middle income | consumption     |
| Belarus                   | Upper middle income | consumption     |
| Bosnia and Herzegovina    | Upper middle income | consumption     |
| Botswana                  | Upper middle income | consumption     |
| Brazil                    | Upper middle income | income          |
| Bulgaria                  | Upper middle income | income          |
| China                     | Upper middle income | consumption     |
| Colombia                  | Upper middle income | income          |
| Costa Rica                | Upper middle income | income          |
| Dominican Republic        | Upper middle income | income          |
| Ecuador                   | Upper middle income | income          |
| Fiji                      | Upper middle income | consumption     |
| Gabon                     | Upper middle income | consumption     |
| Iraq                      | Upper middle income | consumption     |
| Jamaica                   | Upper middle income | consumption     |
| Jordan                    | Upper middle income | consumption     |
| Kazakhstan                | Upper middle income | consumption     |
| Macedonia, FYR            | Upper middle income | income          |
| Malaysia                  | Upper middle income | income          |
| Maldives                  | Upper middle income | consumption     |
| Mauritius                 | Upper middle income | consumption     |
| Mexico                    | Upper middle income | income          |
| Montenegro                | Upper middle income | consumption     |
| Namibia                   | Upper middle income | consumption     |
| Panama                    | Upper middle income | income          |
| Paraguay                  | Upper middle income | income          |
| Peru                      | Upper middle income | income          |
| Romania                   | Upper middle income | income          |
| Russian Federation        | Upper middle income | consumption     |
| Serbia                    | Upper middle income | income          |
| South Africa              | Upper middle income | consumption     |
| Thailand                  | Upper middle income | consumption     |
| Turkey                    | Upper middle income | consumption     |
| Venezuela, RB             | Upper middle income | income          |
| Armenia                   | Lower middle income | consumption     |
| Bangladesh                | Lower middle income | consumption     |
| Bhutan                    | Lower middle income | consumption     |
| Bolivia                   | Lower middle income | income          |
| Cameroon                  | Lower middle income | consumption     |
| Cape Verde                | Lower middle income | consumption     |
| Congo, Rep.               | Lower middle income | consumption     |
| Country                          | Income group       | Povcal data type |
|---------------------------------|--------------------|------------------|
| Côte d'Ivoire                   | Lower middle income| consumption      |
| Djibouti                        | Lower middle income| consumption      |
| Egypt, Arab Rep.                | Lower middle income| consumption      |
| El Salvador                     | Lower middle income| income           |
| Ghana                           | Lower middle income| consumption      |
| Guatemala                       | Lower middle income| income           |
| Honduras                        | Lower middle income| income           |
| India                           | Lower middle income| consumption      |
| Indonesia                       | Lower middle income| consumption      |
| Kenya                           | Lower middle income| consumption      |
| Kyrgyzstan                      | Lower middle income| consumption      |
| Lao PDR                         | Lower middle income| consumption      |
| Lesotho                         | Lower middle income| consumption      |
| Mauritania                      | Lower middle income| consumption      |
| Moldova                         | Lower middle income| consumption      |
| Mongolia                        | Lower middle income| consumption      |
| Morocco                         | Lower middle income| consumption      |
| Myanmar                         | Lower middle income| consumption      |
| Nicaragua                       | Lower middle income| income           |
| Nigeria                         | Lower middle income| consumption      |
| Pakistan                        | Lower middle income| consumption      |
| Palestinian Territory           | Lower middle income| consumption      |
| Philippines                     | Lower middle income| income           |
| São Tomé and Principe           | Lower middle income| consumption      |
| Sri Lanka                       | Lower middle income| consumption      |
| Sudan                           | Lower middle income| consumption      |
| Swaziland                       | Lower middle income| consumption      |
| Tajikistan                      | Lower middle income| consumption      |
| Tunisia                         | Lower middle income| consumption      |
| Ukraine                         | Lower middle income| consumption      |
| Vietnam                         | Lower middle income| consumption      |
| Yemen                           | Lower middle income| consumption      |
| Zambia                          | Lower middle income| consumption      |
| Benin                           | Low income         | consumption      |
| Burkina Faso                    | Low income         | consumption      |
| Burundi                         | Low income         | consumption      |
| Central African Republic        | Low income         | consumption      |
| Chad                            | Low income         | consumption      |
| Comoros                         | Low income         | consumption      |
| Congo, Dem. Rep.               | Low income         | consumption      |
| Ethiopia                        | Low income         | consumption      |
| Gambia, The                     | Low income         | consumption      |
| Guinea                          | Low income         | consumption      |
| Country         | Income group | Povcal data type |
|-----------------|--------------|------------------|
| Guinea-Bissau   | Low income   | consumption      |
| Haiti           | Low income   | income           |
| Liberia         | Low income   | consumption      |
| Madagascar      | Low income   | consumption      |
| Malawi          | Low income   | consumption      |
| Mali            | Low income   | consumption      |
| Mozambique      | Low income   | consumption      |
| Nepal           | Low income   | consumption      |
| Niger           | Low income   | consumption      |
| Rwanda          | Low income   | consumption      |
| Senegal         | Low income   | consumption      |
| Sierra Leone    | Low income   | consumption      |
| Tanzania        | Low income   | consumption      |
| Togo            | Low income   | consumption      |
| Uganda          | Low income   | consumption      |
| Zimbabwe        | Low income   | consumption      |
Appendix 5: Affordability estimates based on daily per capita gross national income (GNI)

We also estimated affordability of the EAT-Lancet reference diet by comparing the estimated cost to the daily per capita gross national income (GNI) in 2011. GNI is sourced from the country's national accounts and it counts the total value of goods and services produced in the country, plus net income from abroad (10). Of note is that GNI tends to overstate mean income or consumption in the country (see 11, 12). As a result, affordability estimates based on daily per capita GNI are likely to be downward biased.

With this caveat in mind, Figures S1 and S2 below replicate Figures 2 and 3 in the manuscript using daily per capital GNI instead of daily per capita household consumption or income. The GNI-based affordability estimate is available for 156 countries (missing for Cuba, Djibouti and Taiwan).

The affordability of EAT-Lancet reference diets, as a fraction of daily per capita GNI, was an average of 2.7 % (IQR: 2.09–3.99) of daily per capita GNI in high-income countries, 9.8 % (IQR: 6.11–11.84) in upper-middle income countries, 24.1 % (IQR: 18.21–31.79) in lower-middle income countries, and 72.6 % (IQR: 48.73–83.11) in low-income countries (figure S1). Among regions, diet cost as a fraction of daily per capita GNI was lowest in North America (2.1 %; IQR: 1.92–2.35) and highest in sub-Saharan Africa (38.9 %; IQR: 23.39–73.63). There was considerable geographic variation even within regions (figure S2), and the estimated cost of an EAT-Lancet reference diet exceeded the entire daily per capita GNI in the three poorest African countries (Burundi, Democratic Republic of Congo, and Liberia).
Figure S1. Cost of the EAT-Lancet reference diet relative to daily per capita GNI by country income levels and major regions

Note: We used price data from the International Comparison Program (ICP) to estimate the cost of the EAT-Lancet reference diet and compared these estimates to daily Gross National Income per capita. Data are percentages. The size of the box indicates the difference between the 25th percentile (the left-hand side of the box) and the 75th percentile (the right-hand side of the box) of the distribution. The bottom and top rule marks the bottom 5th and top 5th percentiles, respectively. The circle and the vertical bar rule inside the box show the mean and median value for the income group or geographic region, respectively. The vertical bar rule inside the box shows the median value for the income group or geographic region. N=156 countries; GNI estimates were not available for Cuba, Djibouti and Taiwan.
Figure S2. Cost of the EAT-Lancet reference diet relative to daily per capita gross national income (GNI)

Note: We used price data from the International Comparison Program (ICP) to estimate the cost of the EAT-Lancet reference diet in 159 countries and compared these estimates to daily per capita gross national income. Estimates are reported in percentages. Countries are grouped by quintiles of the full cost relative to daily per capita GNI distribution. N=156 countries; GNI estimates were not available for Cuba, Djibouti and Taiwan.
Appendix 6: Cost of Nutrient Adequacy (CoNA)

Cost of Nutrient Adequacy (CoNA) is defined as the lowest cost of foods that meet all known requirements for essential nutrients and dietary energy requirements. Following the EAT-Lancet commission, we used a 60-kg woman who is 30 years of age as a reference. The linear programming approach considered the lower bound of the daily cost meeting both dietary energy needs of 2,503 calories, and DRIs for 20 nutrients, including the Acceptable Macronutrient Distribution Range (AMDR), the lower bounds of estimated average requirement (EAR) for nutrients as well as their upper limits (UL). The mathematical formula used to define CoNA is:

\[
\text{CoNA} = \min \{C = \sum p_i \times q_i\}, \text{ subject to 6 constraints:}
\]

1. \[\sum a_{ij} \times q_i \geq \text{EAR}_j\]
2. \[\sum a_{ij} \times q_i \leq \text{UL}_j\]
3. \[\sum a_{ij} \times q_i \leq \text{AMDR}_{\text{upper}} \times \frac{E}{e_j}\]
4. \[\sum a_{ij} \times q_i \geq \text{AMDR}_{\text{lower}} \times \frac{E}{e_j}\]
5. \[\sum a_{ie} \times q_i = E\]
6. \[q_1 \geq 0, q_2 \geq 0, q_3 \geq 0, \ldots, q_i \geq 0\]

In this notation, the quantity of the jth nutrient in food i is denoted a_{ij}, which multiplied by its quantity consumed (q_i) must meet the population’s estimated average requirement (EAR) meeting 50% of healthy people’s needs, while remaining below upper limits (UL) for micronutrients and within a range for macronutrients determined by acceptable macronutrient distribution ranges (AMDR_{lower} and AMDR_{upper}) as percentages of daily energy needs (E), at lowest total cost given all prices (p_i) within the further constraint of overall energy needs (E). The reference number e_j is the energy density of macronutrients, which is 4 kcal per gram of protein and carbohydrate and 9 kcal per gram of lipid. We included 20 nutrients for the CoNA calculation, including 3 macronutrients of protein, fat, carbohydrate, 7 minerals of calcium, iron, magnesium, phosphorous, zinc, copper and selenium, and 10 vitamins of vitamin C, thiamin, riboflavin, niacin, vitamin B6, folate, vitamin B12, vitamin A, retinol and vitamin E. We used the USDA National Nutrient Database (see appendix 3) to estimate the nutrient content of each ICP item. Finally, we used lpSolve package in R (13) for the linear programming calculations.
Appendix 7: World Bank’s country classifications

The World Bank categorizes countries by geographic region and into four income groupings (high, upper-middle, lower-middle and low) according to their income level. The income levels are based on per capita gross national income (GNI). The income thresholds (as of July, 2018) used by the World Bank are (current US$):

- High-income > $12,055;
- Upper-middle income: $3,896–$12,055;
- Lower-middle income: $996–$3,895; and
- Low-income < $995.

Table S9 shows the World Bank country classifications for the 159 countries used in analysis.

Table S9: World Bank country classifications (N=159)

| Country            | Region                   | World Bank Income Classification |
|--------------------|--------------------------|----------------------------------|
| Albania            | Europe & Central Asia    | Upper middle income              |
| Algeria            | Middle East & North Africa | Upper middle income              |
| Angola             | Sub-Saharan Africa       | Upper middle income              |
| Armenia            | Europe & Central Asia    | Lower middle income              |
| Australia          | East Asia & Pacific      | High income                      |
| Austria            | Europe & Central Asia    | High income                      |
| Azerbaijan         | Europe & Central Asia    | Upper middle income              |
| Bahrain            | Middle East & North Africa | High income                      |
| Bangladesh         | South Asia               | Lower middle income              |
| Belarus            | Europe & Central Asia    | Upper middle income              |
| Belgium            | Europe & Central Asia    | High income                      |
| Benin              | Sub-Saharan Africa       | Low income                       |
| Bhutan             | South Asia               | Lower middle income              |
| Bolivia            | Latin America & Caribbean | Lower middle income              |
| Bosnia and Herzegovina | Europe & Central Asia | Upper middle income              |
| Botswana           | Sub-Saharan Africa       | Upper middle income              |
| Brazil             | Latin America & Caribbean | Upper middle income              |
| Brunei Darussalam  | East Asia & Pacific      | High income                      |
| Bulgaria           | Europe & Central Asia    | Upper middle income              |
| Burkina Faso       | Sub-Saharan Africa       | Low income                       |
| Burundi            | Sub-Saharan Africa       | Low income                       |
| Cambodia           | East Asia & Pacific      | Lower middle income              |
| Cameroon           | Sub-Saharan Africa       | Lower middle income              |
| Canada             | North America            | High income                      |
| Cape Verde         | Sub-Saharan Africa       | Lower middle income              |
| Central African Republic | Sub-Saharan Africa | Low income                      |
| Chad               | Sub-Saharan Africa       | Low income                       |
| Chile              | Latin America & Caribbean | High income                      |
| China              | East Asia & Pacific      | Upper middle income              |
| Country               | Region                          | World Bank Income Classification |
|-----------------------|---------------------------------|----------------------------------|
| Colombia              | Latin America & Caribbean       | Upper middle income              |
| Comoros               | Sub-Saharan Africa              | Low income                       |
| Congo, Dem. Rep.      | Sub-Saharan Africa              | Low income                       |
| Congo, Rep.           | Sub-Saharan Africa              | Lower middle income              |
| Costa Rica            | Latin America & Caribbean       | Upper middle income              |
| Côte d'Ivoire         | Sub-Saharan Africa              | Lower middle income              |
| Croatia               | Europe & Central Asia           | High income                      |
| Cuba                  | Latin America & Caribbean       | Upper middle income              |
| Cyprus                | Europe & Central Asia           | High income                      |
| Czech Republic        | Europe & Central Asia           | High income                      |
| Denmark               | Europe & Central Asia           | High income                      |
| Djibouti              | Middle East & North Africa      | Lower middle income              |
| Dominican Republic    | Latin America & Caribbean       | Upper middle income              |
| Ecuador               | Latin America & Caribbean       | Upper middle income              |
| Egypt, Arab Rep.      | Middle East & North Africa      | Lower middle income              |
| El Salvador           | Latin America & Caribbean       | Lower middle income              |
| Equatorial Guinea     | Sub-Saharan Africa              | Upper middle income              |
| Estonia               | Europe & Central Asia           | High income                      |
| Ethiopia              | Sub-Saharan Africa              | Low income                       |
| Fiji                  | East Asia & Pacific             | Upper middle income              |
| Finland               | Europe & Central Asia           | High income                      |
| France                | Europe & Central Asia           | High income                      |
| Gabon                 | Sub-Saharan Africa              | Upper middle income              |
| Gambia, The           | Sub-Saharan Africa              | Low income                       |
| Germany               | Europe & Central Asia           | High income                      |
| Ghana                 | Sub-Saharan Africa              | Lower middle income              |
| Greece                | Europe & Central Asia           | High income                      |
| Guatemala             | Latin America & Caribbean       | Lower middle income              |
| Guinea                | Sub-Saharan Africa              | Low income                       |
| Guinea-Bissau         | Sub-Saharan Africa              | Low income                       |
| Haiti                 | Latin America & Caribbean       | Low income                       |
| Honduras              | Latin America & Caribbean       | Lower middle income              |
| Hong Kong SAR, China  | East Asia & Pacific             | High income                      |
| Hungary               | Europe & Central Asia           | High income                      |
| Iceland               | Europe & Central Asia           | High income                      |
| India                 | South Asia                      | Lower middle income              |
| Indonesia             | East Asia & Pacific             | Lower middle income              |
| Iraq                  | Middle East & North Africa      | Upper middle income              |
| Ireland               | Europe & Central Asia           | High income                      |
| Israel                | Middle East & North Africa      | High income                      |
| Italy                 | Europe & Central Asia           | High income                      |
| Jamaica               | Latin America & Caribbean       | Upper middle income              |
| Japan                 | East Asia & Pacific             | High income                      |
| Country               | Region                        | World Bank Income Classification |
|-----------------------|-------------------------------|----------------------------------|
| Jordan                | Middle East & North Africa    | Upper middle income              |
| Kazakhstan            | Europe & Central Asia         | Upper middle income              |
| Kenya                 | Sub-Saharan Africa            | Lower middle income              |
| Korea, Rep.           | East Asia & Pacific           | High income                      |
| Kuwait                | Middle East & North Africa    | High income                      |
| Kyrgyzstan            | Europe & Central Asia         | Lower middle income              |
| Lao PDR               | East Asia & Pacific           | Lower middle income              |
| Latvia                | Europe & Central Asia         | High income                      |
| Lesotho               | Sub-Saharan Africa            | Lower middle income              |
| Liberia               | Sub-Saharan Africa            | Low income                       |
| Lithuania             | Europe & Central Asia         | High income                      |
| Luxembourg            | Europe & Central Asia         | High income                      |
| Macao SAR, China      | East Asia & Pacific           | High income                      |
| Macedonia, FYR        | Europe & Central Asia         | Upper middle income              |
| Madagascar            | Sub-Saharan Africa            | Low income                       |
| Malawi                | Sub-Saharan Africa            | Low income                       |
| Malaysia              | East Asia & Pacific           | Upper middle income              |
| Maldives              | South Asia                    | Upper middle income              |
| Mali                  | Sub-Saharan Africa            | Low income                       |
| Malta                 | Middle East & North Africa    | High income                      |
| Mauritania            | Sub-Saharan Africa            | Lower middle income              |
| Mauritius             | Sub-Saharan Africa            | Upper middle income              |
| Mexico                | Latin America & Caribbean     | Upper middle income              |
| Moldova               | Europe & Central Asia         | Lower middle income              |
| Mongolia              | East Asia & Pacific           | Lower middle income              |
| Montenegro            | Europe & Central Asia         | Upper middle income              |
| Morocco               | Middle East & North Africa    | Lower middle income              |
| Mozambique            | Sub-Saharan Africa            | Low income                       |
| Myanmar               | East Asia & Pacific           | Lower middle income              |
| Namibia               | Sub-Saharan Africa            | Upper middle income              |
| Nepal                 | South Asia                    | Low income                       |
| Netherlands           | Europe & Central Asia         | High income                      |
| New Zealand           | East Asia & Pacific           | High income                      |
| Nicaragua             | Latin America & Caribbean     | Lower middle income              |
| Niger                 | Sub-Saharan Africa            | Low income                       |
| Nigeria               | Sub-Saharan Africa            | Lower middle income              |
| Norway                | Europe & Central Asia         | High income                      |
| Oman                  | Middle East & North Africa    | High income                      |
| Palestinian Territory | Middle East & North Africa    | Lower middle income              |
| Pakistan              | South Asia                    | Lower middle income              |
| Panama                | Latin America & Caribbean     | Upper middle income              |
| Paraguay              | Latin America & Caribbean     | Upper middle income              |
| Peru                  | Latin America & Caribbean     | Upper middle income              |
| Country                  | Region                  | World Bank Income Classification |
|--------------------------|-------------------------|----------------------------------|
| Philippines              | East Asia & Pacific     | Lower middle income              |
| Poland                   | Europe & Central Asia   | High income                      |
| Portugal                 | Europe & Central Asia   | High income                      |
| Qatar                    | Middle East & North Africa | High income                      |
| Romania                  | Europe & Central Asia   | Upper middle income              |
| Russian Federation       | Europe & Central Asia   | Upper middle income              |
| Rwanda                   | Sub-Saharan Africa      | Low income                       |
| São Tomé and Principe    | Sub-Saharan Africa      | Lower middle income              |
| Saudi Arabia             | Middle East & North Africa | High income                      |
| Senegal                  | Sub-Saharan Africa      | Low income                       |
| Serbia                   | Europe & Central Asia   | Upper middle income              |
| Seychelles               | Sub-Saharan Africa      | High income                      |
| Sierra Leone             | Sub-Saharan Africa      | Low income                       |
| Singapore                | East Asia & Pacific     | High income                      |
| Slovakia                 | Europe & Central Asia   | High income                      |
| Slovenia                 | Europe & Central Asia   | High income                      |
| South Africa             | Sub-Saharan Africa      | Upper middle income              |
| Spain                    | Europe & Central Asia   | High income                      |
| Sri Lanka                | South Asia              | Lower middle income              |
| St. Kitts and Nevis      | Latin America & Caribbean | High income                      |
| Sudan                    | Sub-Saharan Africa      | Lower middle income              |
| Suriname                 | Latin America & Caribbean | Upper middle income              |
| Swaziland                | Sub-Saharan Africa      | Lower middle income              |
| Sweden                   | Europe & Central Asia   | High income                      |
| Switzerland              | Europe & Central Asia   | High income                      |
| Taiwan, China            | East Asia & Pacific     | High income                      |
| Tajikistan               | Europe & Central Asia   | Lower middle income              |
| Tanzania                 | Sub-Saharan Africa      | Low income                       |
| Thailand                 | East Asia & Pacific     | Upper middle income              |
| Togo                     | Sub-Saharan Africa      | Low income                       |
| Trinidad and Tobago      | Latin America & Caribbean | High income                      |
| Tunisia                  | Middle East & North Africa | Lower middle income              |
| Turkey                   | Europe & Central Asia   | Upper middle income              |
| Uganda                   | Sub-Saharan Africa      | Low income                       |
| Ukraine                  | Europe & Central Asia   | Lower middle income              |
| United Arab Emirates     | Middle East & North Africa | High income                      |
| United Kingdom           | Europe & Central Asia   | High income                      |
| United States            | North America           | High income                      |
| Uruguay                  | Latin America & Caribbean | High income                      |
| Venezuela, RB            | Latin America & Caribbean | Upper middle income              |
| Vietnam                  | East Asia & Pacific     | Lower middle income              |
| Yemen                    | Middle East & North Africa | Lower middle income              |
| Zambia                   | Sub-Saharan Africa      | Lower middle income              |
| Country     | Region            | World Bank Income Classification |
|-------------|-------------------|---------------------------------|
| Zimbabwe    | Sub-Saharan Africa| Low income                      |
Appendix 8: Cost of the EAT-Lancet reference diet relative to mean daily per capita household income, map

Figure S3. Cost of the EAT-Lancet reference diet relative to mean daily per capita household income

We used price data from the International Comparison Program (ICP) to estimate the cost of the EAT-Lancet diet in 141 countries and compared these estimates to mean daily per capita household consumption or income. Estimates are reported in percentages. Countries are grouped by quintiles of the full cost relative to mean daily per capita household consumption or income. N=141 countries.
Appendix 9: Composition of reference diets for EAT-Lancet and minimum cost of nutrient adequacy

Table S10. Composition of reference diets for EAT-Lancet and minimum cost of nutrient adequacy, by national income and geographic regions

| Broad food group                | Starchy staples | Legumes & nuts | Fruits & vegetables | Dairy | Meat, eggs & fish | Oils & fats | Sweeteners | Total  |
|--------------------------------|-----------------|----------------|---------------------|-------|------------------|------------|------------|--------|
| **EAT-Lancet diet**            | 850             | 204            | 153                 | 151   | 575              | 450        | 120        | 2,503  |
| **Minimum cost of nutrient adequacy (CoNA)** |                  |                |                     |       |                  |            |            |        |
| Global                         | 1,498           | 348            | 113                 | 149   | 37               | 332        | 25         | 2,503  |
| **By country income level**    |                 |                |                     |       |                  |            |            |        |
| High income                    | 1,631           | 227            | 35                  | 206   | 10               | 387        | 6          | 2,503  |
| Upper middle income            | 1,515           | 259            | 67                  | 203   | 32               | 358        | 69         | 2,503  |
| Lower middle income            | 1,422           | 497            | 144                 | 92    | 26               | 299        | 23         | 2,503  |
| Low income                     | 1,324           | 498            | 290                 | 42    | 113              | 236        | 0          | 2,503  |
| **By geographic region**       |                 |                |                     |       |                  |            |            |        |
| East Asia & Pacific            | 1,550           | 410            | 75                  | 72    | 23               | 363        | 10         | 2,503  |
| Europe & Central Asia          | 1,580           | 310            | 48                  | 210   | 10               | 345        | 0          | 2,503  |
| Latin America & Caribbean      | 1,312           | 210            | 72                  | 303   | 48               | 406        | 152        | 2,503  |
| Middle East & North Africa     | 1,730           | 214            | 66                  | 121   | 11               | 361        | 0          | 2,503  |
| North America                  | 1,155           | 719            | 30                  | 135   | 23               | 441        | 0          | 2,503  |
| South Asia                     | 1,771           | 205            | 74                  | 146   | 6                | 262        | 39         | 2,503  |
| Sub-Saharan Africa             | 1,380           | 482            | 241                 | 56    | 79               | 265        | 0          | 2,503  |

Data show total dietary energy (kcal/day), by food group as specified for EAT-Lancet reference diets in the first row. Intake levels required to reach minimum cost of nutrient adequacy meet the same energy balance of 2,503 calories, and meet essential nutrient needs for a typical healthy woman specified as estimated average requirements, upper limits and average macronutrient distribution ranges for 20 essential nutrients. The nutrient-based diet may not meet requirements for other attributes specified in the EAT-Lancet food groups such as the phytochemicals in fruits & vegetables, or the bioavailability of nutrients in flesh foods. N=159 countries.
| ICP product list | EAT-Lancet food group | ICP item name               |
|------------------|------------------------|-----------------------------|
| Global           | Rice, wheat, corn & other cereals | All-butter croissant       |
| Global           | Rice, wheat, corn & other cereals | Baguette                   |
| Global           | Rice, wheat, corn & other cereals | Basmati Rice               |
| Global           | Rice, wheat, corn & other cereals | Brown rice - Family Pack   |
| Global           | Rice, wheat, corn & other cereals | Couscous                   |
| Global           | Rice, wheat, corn & other cereals | Dried Noodles              |
| Global           | Rice, wheat, corn & other cereals | Instant Noodles            |
| Global           | Rice, wheat, corn & other cereals | Jasmine Rice               |
| Global           | Rice, wheat, corn & other cereals | Long grain rice - Family Pack |
| Global           | Rice, wheat, corn & other cereals | Long grain rice - Non-Parboiled |
| Global           | Rice, wheat, corn & other cereals | Long grain rice - Parboiled |
| Global           | Rice, wheat, corn & other cereals | Macaroni                   |
| Global           | Rice, wheat, corn & other cereals | Maize                      |
| Global           | Rice, wheat, corn & other cereals | Maize Flour White          |
| Global           | Rice, wheat, corn & other cereals | Oats, rolled               |
| Global           | Rice, wheat, corn & other cereals | Pita bread                 |
| Global           | Rice, wheat, corn & other cereals | Roll                       |
| Global           | Rice, wheat, corn & other cereals | Salted crackers            |
| Global           | Rice, wheat, corn & other cereals | Short pasta                |
| Global           | Rice, wheat, corn & other cereals | Short-grained rice         |
| Global           | Rice, wheat, corn & other cereals | Sliced White bread         |
| Global           | Rice, wheat, corn & other cereals | Spaghetti                  |
| Global           | Rice, wheat, corn & other cereals | Tinned sweet corn/Maize     |
| Global           | Rice, wheat, corn & other cereals | Vermicelli (Angel Hair)    |
| Global           | Rice, wheat, corn & other cereals | Wheat Semolina (Suji)      |
| Global           | Rice, wheat, corn & other cereals | Wheat flour, not self-rising |
| Global           | Rice, wheat, corn & other cereals | White bread                |
| Global           | Rice, wheat, corn & other cereals | White rice, 25% broken     |
| Global           | Rice, wheat, corn & other cereals | White rice, Medium Grain   |
| Global           | Rice, wheat, corn & other cereals | Whole wheat bread          |
| Asia             | Rice, wheat, corn & other cereals | Bajra Flour                |
| Asia             | Rice, wheat, corn & other cereals | Beaten rice, Chira         |
| Asia             | Rice, wheat, corn & other cereals | Coarse #2                  |
| Asia             | Rice, wheat, corn & other cereals | Coarse #3                  |
| Asia             | Rice, wheat, corn & other cereals | Coarse #5                  |
| Asia             | Rice, wheat, corn & other cereals | Coarse #6                  |
| Asia             | Rice, wheat, corn & other cereals | Corn/Maize Flour, loose    |
| Asia             | Rice, wheat, corn & other cereals | Cream crackers             |
| Asia             | Rice, wheat, corn & other cereals | Egg noodles                |
| Asia             | Rice, wheat, corn & other cereals | Fresh rice noodles         |
| Asia             | Rice, wheat, corn & other cereals | Glutinous Rice             |
| Asia             | Rice, wheat, corn & other cereals | Instant noodles            |
| ICP product list | EAT-Lancet food group | ICP item name             |
|-----------------|-----------------------|---------------------------|
| Asia            | Rice, wheat, corn & other cereals | Maize                   |
| Asia            | Rice, wheat, corn & other cereals | Millet, Sorghum          |
| Asia            | Rice, wheat, corn & other cereals | Premium rice #1          |
| Asia            | Rice, wheat, corn & other cereals | Premium rice #2          |
| Asia            | Rice, wheat, corn & other cereals | Premium rice #3          |
| Asia            | Rice, wheat, corn & other cereals | Rice flour               |
| Asia            | Rice, wheat, corn & other cereals | Roll or bun, loose       |
| Asia            | Rice, wheat, corn & other cereals | Roll or bun, prepacked   |
| Asia            | Rice, wheat, corn & other cereals | Sattu                    |
| Asia            | Rice, wheat, corn & other cereals | Semolina, Suji           |
| Asia            | Rice, wheat, corn & other cereals | Snack crackers           |
| Asia            | Rice, wheat, corn & other cereals | Wheat flour, loose       |
| Asia            | Rice, wheat, corn & other cereals | White bread, unsliced loaf|
| Asia            | Rice, wheat, corn & other cereals | White rice #1            |
| Asia            | Rice, wheat, corn & other cereals | White rice #10           |
| Asia            | Rice, wheat, corn & other cereals | White rice #3            |
| Asia            | Rice, wheat, corn & other cereals | White rice #4            |
| Asia            | Rice, wheat, corn & other cereals | White rice #5            |
| Asia            | Rice, wheat, corn & other cereals | White rice #6            |
| Asia            | Rice, wheat, corn & other cereals | White rice #7            |
| Asia            | Rice, wheat, corn & other cereals | White rice #9            |
| Asia            | Rice, wheat, corn & other cereals | White wheat              |
| Asia            | Rice, wheat, corn & other cereals | Wholemeal flour, Atta     |
| Africa          | Rice, wheat, corn & other cereals | Couscous (millet)        |
| Africa          | Rice, wheat, corn & other cereals | Flatbread                |
| Africa          | Rice, wheat, corn & other cereals | Lasagna (sheets)         |
| Africa          | Rice, wheat, corn & other cereals | Long-grained rice         |
| Africa          | Rice, wheat, corn & other cereals | Maize Flour Yellow       |
| Africa          | Rice, wheat, corn & other cereals | Maizena                  |
| Africa          | Rice, wheat, corn & other cereals | Millet Flour             |
| Africa          | Rice, wheat, corn & other cereals | Millet Whole Grain        |
| Africa          | Rice, wheat, corn & other cereals | Round bread              |
| Africa          | Rice, wheat, corn & other cereals | Sliced brown bread        |
| Africa          | Rice, wheat, corn & other cereals | Sorghum Red Grains       |
| Africa          | Rice, wheat, corn & other cereals | Sorghum White Grains     |
| Africa          | Rice, wheat, corn & other cereals | Sweet Bread              |
| Africa          | Rice, wheat, corn & other cereals | White Maize grains       |
| Africa          | Rice, wheat, corn & other cereals | Yellow Broken Maize Grains|
| Africa          | Rice, wheat, corn & other cereals | Yellow Maize Grains      |
| Africa          | Rice, wheat, corn & other cereals | Yellow Maize Grains, Branless|
| LAC             | Rice, wheat, corn & other cereals | Brown rice - small pack  |
| LAC             | Rice, wheat, corn & other cereals | Corn tortilla            |
| LAC             | Rice, wheat, corn & other cereals | Long grain rice - loose  |
| ICP product list | EAT-Lancet food group | ICP item name |
|------------------|-----------------------|---------------|
| LAC              | Rice, wheat, corn & other cereals | Maize Flour White |
| LAC              | Rice, wheat, corn & other cereals | Maize semolina |
| LAC              | Rice, wheat, corn & other cereals | Pita bread |
| LAC              | Rice, wheat, corn & other cereals | Roll |
| LAC              | Rice, wheat, corn & other cereals | Short past with eggs |
| LAC              | Rice, wheat, corn & other cereals | Short-grained rice - prepacked |
| LAC              | Rice, wheat, corn & other cereals | Spaghetti, with eggs |
| LAC              | Rice, wheat, corn & other cereals | Vermicelli (angel hair), with eggs |
| LAC              | Rice, wheat, corn & other cereals | White rice, 20% broken |
| LAC              | Rice, wheat, corn & other cereals | White rice, medium grain - prepacked |
| LAC              | Rice, wheat, corn & other cereals | Yellow maize flour |
| West-Asia        | Rice, wheat, corn & other cereals | Corn |
| West-Asia        | Rice, wheat, corn & other cereals | Flat (Iranian) Bread |
| West-Asia        | Rice, wheat, corn & other cereals | Hard Loose Bulgur |
| West-Asia        | Rice, wheat, corn & other cereals | Kiln Bread |
| West-Asia        | Rice, wheat, corn & other cereals | Lasagna |
| West-Asia        | Rice, wheat, corn & other cereals | Rice [Specified brand] |
| West-Asia        | Rice, wheat, corn & other cereals | Soft/ Loose Bulgur |
| West-Asia        | Rice, wheat, corn & other cereals | Thailand Rice |
| West-Asia        | Rice, wheat, corn & other cereals | Toast petit beurre brown crunchy |
| Global           | Potatoes and cassava | Brown Potatoes |
| Global           | Potatoes and cassava | Cassava - Manioc - Yuka |
| Global           | Potatoes and cassava | Sweet Potatoes |
| Asia             | Potatoes and cassava | Taro |
| Asia             | Potatoes and cassava | White potato |
| Africa           | Potatoes and cassava | Green Plantain |
| Africa           | Potatoes and cassava | Whole Cassava |
| LAC              | Potatoes and cassava | Malanga / yautia / tannia / tannier / macabo |
| Global           | Dark green vegetables | Spinach |
| Asia             | Dark green vegetables | Spinach Chinese |
| Asia             | Dark green vegetables | Water Spinach |
| Africa           | Dark green vegetables | Cassava Leaves |
| Africa           | Dark green vegetables | Chives |
| Africa           | Dark green vegetables | Pumpkin leaves |
| Africa           | Dark green vegetables | Rape Leaves |
| Africa           | Dark green vegetables | Sorrel Leaves |
| Africa           | Dark green vegetables | Spinach |
| Africa           | Dark green vegetables | Sweet Potato Leaves |
| Africa           | Dark green vegetables | Taro Leaves |
| Global           | Red & orange vegetables | Bell pepper |
| Global           | Red & orange vegetables | Carrots |
| Global           | Red & orange vegetables | Round tomato, loose |
| Asia             | Red & orange vegetables | Pumpkin |
| ICP product list | EAT-Lancet food group       | ICP item name        |
|------------------|-----------------------------|----------------------|
| Africa           | Red & orange vegetables     | Beetroots            |
| Africa           | Red & orange vegetables     | Peeled Tomatoes      |
| LAC             | Red & orange vegetables     | Beetroot             |
| LAC             | Red & orange vegetables     | Buttercup squash     |
| LAC             | Red & orange vegetables     | Plum tomatoes        |
| West-Asia        | Red & orange vegetables     | Domestic Beetroot    |
| West-Asia        | Red & orange vegetables     | Domestic Carrots     |
| West-Asia        | Red & orange vegetables     | Domestic Tomatoes    |
| West-Asia        | Red & orange vegetables     | Imported Beetroot    |
| West-Asia        | Red & orange vegetables     | Imported Tomatoes    |
| Global           | Other vegetables            | Cauliflower          |
| Global           | Other vegetables            | Cucumber             |
| Global           | Other vegetables            | Eggplant (aubergine) |
| Global           | Other vegetables            | Green cabbage        |
| Global           | Other vegetables            | Lettuce              |
| Global           | Other vegetables            | Onion                |
| Global           | Other vegetables            | Tinned Button Mushrooms |
| Global           | Other vegetables            | Tinned green peas    |
| Asia             | Other vegetables            | Mushrooms, dried     |
| Asia             | Other vegetables            | Radish, white        |
| Africa           | Other vegetables            | Broccoli             |
| Africa           | Other vegetables            | Celery               |
| Africa           | Other vegetables            | Dried Okra           |
| Africa           | Other vegetables            | Fresh Okra           |
| Africa           | Other vegetables            | Gherkins             |
| Africa           | Other vegetables            | Green Asparagus      |
| Africa           | Other vegetables            | Green Beans          |
| Africa           | Other vegetables            | Mushrooms            |
| Africa           | Other vegetables            | Radish               |
| Africa           | Other vegetables            | Round Onions, red    |
| Africa           | Other vegetables            | Spring Onions        |
| Africa           | Other vegetables            | Turnips              |
| LAC             | Other vegetables            | Celery               |
| LAC             | Other vegetables            | Zucchini             |
| West-Asia        | Other vegetables            | Cucumber Pickles     |
| West-Asia        | Other vegetables            | Domestic Green beans (Pulses) |
| West-Asia        | Other vegetables            | Domestic Green bell peppers |
| West-Asia        | Other vegetables            | Domestic Okra        |
| West-Asia        | Other vegetables            | Domestic Red bell peppers |
| West-Asia        | Other vegetables            | Domestic Round red radish |
| West-Asia        | Other vegetables            | Domestic White onion |
| West-Asia        | Other vegetables            | Domestic Zucchini    |
| West-Asia        | Other vegetables            | Green beans          |
| ICP product list | EAT-Lancet food group | ICP item name                      |
|------------------|-----------------------|-----------------------------------|
| West-Asia        | Other vegetables      | Imported Green beans (Pulses)     |
| West-Asia        | Other vegetables      | Imported Okra                     |
| West-Asia        | Other vegetables      | Imported Red bell peppers         |
| West-Asia        | Other vegetables      | Imported White onion              |
| West-Asia        | Other vegetables      | Imported Zucchini                 |
| West-Asia        | Other vegetables      | Okra                              |
| West-Asia        | Other vegetables      | Vegetarian vegetable soup         |
| Global           | All fruits            | Apple, Red Delicious              |
| Global           | All fruits            | Apple, Typical Local Variety      |
| Global           | All fruits            | Avocado                           |
| Global           | All fruits            | Banana, Standard                  |
| Global           | All fruits            | Dried dates                       |
| Global           | All fruits            | Grapefruit                        |
| Global           | All fruits            | Grapes, green                     |
| Global           | All fruits            | Lemon                             |
| Global           | All fruits            | Mango                             |
| Global           | All fruits            | Melon                             |
| Global           | All fruits            | Orange                            |
| Global           | All fruits            | Papaya                            |
| Global           | All fruits            | Peach                             |
| Global           | All fruits            | Pineapple                         |
| Global           | All fruits            | Tinned pineapple                  |
| Global           | All fruits            | Watermelon                        |
| Asia             | All fruits            | Grapes, violet, with seed         |
| Asia             | All fruits            | Lime                              |
| Africa           | All fruits            | Banana, short finger length       |
| Africa           | All fruits            | Clementine                        |
| Africa           | All fruits            | Dried apricots                    |
| Africa           | All fruits            | Dried plums                       |
| Africa           | All fruits            | Grapes, red                       |
| Africa           | All fruits            | Large Mango (Grafted)             |
| Africa           | All fruits            | Passion fruit                     |
| Africa           | All fruits            | Tinned peaches                    |
| LAC              | All fruits            | Canned peach halves               |
| LAC              | All fruits            | Dark raisins                      |
| LAC              | All fruits            | Melon, Honeydew                   |
| LAC              | All fruits            | Passion fruit                     |
| West-Asia        | All fruits            | Apple                             |
| West-Asia        | All fruits            | Apricots                          |
| West-Asia        | All fruits            | Domestic Apricots                 |
| West-Asia        | All fruits            | Domestic Cherries                 |
| West-Asia        | All fruits            | Domestic Figs                     |
| West-Asia        | All fruits            | Domestic Grapes                   |
| ICP product list | EAT-Lancet food group | ICP item name          |
|-----------------|------------------------|------------------------|
| West-Asia       | All fruits             | Domestic Guava         |
| West-Asia       | All fruits             | Domestic Mango         |
| West-Asia       | All fruits             | Domestic Pears         |
| West-Asia       | All fruits             | Domestic Plums         |
| West-Asia       | All fruits             | Domestic Pomegranate   |
| West-Asia       | All fruits             | Domestic Red Dates     |
| West-Asia       | All fruits             | Domestic Strawberries  |
| West-Asia       | All fruits             | Domestic Dates         |
| West-Asia       | All fruits             | Figs                   |
| West-Asia       | All fruits             | Fruit cocktail, Canned |
| West-Asia       | All fruits             | Imported Apricots      |
| West-Asia       | All fruits             | Imported Cherries      |
| West-Asia       | All fruits             | Imported Coconut       |
| West-Asia       | All fruits             | Imported Dates         |
| West-Asia       | All fruits             | Imported Figs          |
| West-Asia       | All fruits             | Imported Grapes        |
| West-Asia       | All fruits             | Imported Guava         |
| West-Asia       | All fruits             | Imported Kiwi          |
| West-Asia       | All fruits             | Imported Melon         |
| West-Asia       | All fruits             | Imported Pears, Premium|
| West-Asia       | All fruits             | Imported Plums         |
| West-Asia       | All fruits             | Imported Pomegranate   |
| West-Asia       | All fruits             | Imported Red Dates     |
| West-Asia       | All fruits             | Orange                 |
| West-Asia       | All fruits             | Orange                 |
| Global          | Whole milk or derivatives | Cheese, Camembert Type |
| Global          | Whole milk or derivatives | Cheese, Cheddar       |
| Global          | Whole milk or derivatives | Cheese, Gouda Type    |
| Global          | Whole milk or derivatives | Cheese, processed     |
| Global          | Whole milk or derivatives | Cream cheese          |
| Global          | Whole milk or derivatives | Milk, low-fat, Pasteurized |
| Global          | Whole milk or derivatives | Milk, powdered        |
| Global          | Whole milk or derivatives | Milk, un-skimmed Pasteurized |
| Global          | Whole milk or derivatives | Milk, un-skimmed UHT  |
| Global          | Whole milk or derivatives | Sour cream            |
| Global          | Whole milk or derivatives | Yoghurt, plain        |
| Asia            | Whole milk or derivatives | Buffalo milk, not pasteurized |
| Asia            | Whole milk or derivatives | Buffalo milk, pasteurized |
| Asia            | Whole milk or derivatives | Cheese spread         |
| Asia            | Whole milk or derivatives | Local cheese          |
| Asia            | Whole milk or derivatives | Local curd            |
| Asia            | Whole milk or derivatives | Milk, not pasteurized |
| Asia            | Whole milk or derivatives | Powdered milk, box    |
| ICP product list | EAT-Lancet food group | ICP item name                      |
|------------------|-----------------------|-----------------------------------|
| Asia             | Whole milk or derivatives | Yoghurt drink                     |
| Asia             | Whole milk or derivatives | Yoghurt, fruit                    |
| Africa           | Whole milk or derivatives | Crème fraîche                     |
| Africa           | Whole milk or derivatives | Fresh cheese edam                 |
| Africa           | Whole milk or derivatives | Fresh cheese Emmental             |
| Africa           | Whole milk or derivatives | Liquid Yoghurt                    |
| Africa           | Whole milk or derivatives | Powdered milk                     |
| Africa           | Whole milk or derivatives | Sour (clotted) milk               |
| Africa           | Whole milk or derivatives | Yoghurt with natural fruits       |
| LAC              | Whole milk or derivatives | Cheese, mozzarella type           |
| LAC              | Whole milk or derivatives | Fresh cheese                      |
| LAC              | Whole milk or derivatives | Milk, low - fat , pasteurized in plastic bag |
| LAC              | Whole milk or derivatives | Milk, low-fat, UHT                |
| LAC              | Whole milk or derivatives | Powdered milk, in bag or box      |
| LAC              | Whole milk or derivatives | Yoghurt, with flavor              |
| LAC              | Whole milk or derivatives | Yogurt drink                      |
| West-Asia        | Whole milk or derivatives | Cheese, Cottage (halloumi)        |
| West-Asia        | Whole milk or derivatives | Cheese, Feta                      |
| West-Asia        | Whole milk or derivatives | Cheese, Kashkaval                 |
| West-Asia        | Whole milk or derivatives | Cheese, Mozzarella                |
| West-Asia        | Whole milk or derivatives | Fresh Milk, 0% (import)           |
| West-Asia        | Whole milk or derivatives | Fresh Milk, 1,5-2.5%              |
| West-Asia        | Whole milk or derivatives | Fresh Milk, 3-4%                  |
| West-Asia        | Whole milk or derivatives | Fresh Milk, 3-4%                  |
| West-Asia        | Whole milk or derivatives | Fresh wet cheese                  |
| West-Asia        | Whole milk or derivatives | Labneh                            |
| West-Asia        | Whole milk or derivatives | Light whipping or whipping        |
| West-Asia        | Whole milk or derivatives | Local hard, dry cheese            |
| Global           | Beef, lamb & pork        | 100% Beef, minced                 |
| Global           | Beef, lamb & pork        | Bacon, smoked                      |
| Global           | Beef, lamb & pork        | Beef liver                         |
| Global           | Beef, lamb & pork        | Beef with bones                    |
| Global           | Beef, lamb & pork        | Beef, Center brisket               |
| Global           | Beef, lamb & pork        | Beef, Fillet                       |
| Global           | Beef, lamb & pork        | Beef, Rump steak                   |
| Global           | Beef, lamb & pork        | Beef, for stew or curry            |
| Global           | Beef, lamb & pork        | Corned beef                        |
| Global           | Beef, lamb & pork        | Goat mixed cut/with bones (non-refrigerated) |
| Global           | Beef, lamb & pork        | Lamb chops                         |
| Global           | Beef, lamb & pork        | Lamb whole leg                     |
| Global           | Beef, lamb & pork        | Mutton mixed cut                   |
| Global           | Beef, lamb & pork        | Pork ham, pressed                  |
| ICP product list | EAT-Lancet food group          | ICP item name                              |
|-----------------|--------------------------------|--------------------------------------------|
| Global          | Beef, lamb & pork               | Pork, fillet                               |
| Global          | Beef, lamb & pork               | Pork, loin chop                            |
| Global          | Beef, lamb & pork               | Pork, ribs                                 |
| Global          | Beef, lamb & pork               | Pork, shoulder                              |
| Global          | Beef, lamb & pork               | Veal breast (non-refrigerated), with bones |
| Global          | Beef, lamb & pork               | Veal chops                                 |
| Asia            | Beef, lamb & pork               | Bacon, pork                                |
| Asia            | Beef, lamb & pork               | Beef, Fillet, frozen                       |
| Asia            | Beef, lamb & pork               | Beef, with bones, non-specific cut         |
| Asia            | Beef, lamb & pork               | Beef, without bones, non-specific cut      |
| Asia            | Beef, lamb & pork               | Canned beef, chunks                        |
| Asia            | Beef, lamb & pork               | Goat leg                                   |
| Asia            | Beef, lamb & pork               | Mutton chops                               |
| Asia            | Beef, lamb & pork               | Mutton/goat liver                          |
| Asia            | Beef, lamb & pork               | Pork liver                                 |
| Asia            | Beef, lamb & pork               | Pork loin, without bones                   |
| Asia            | Beef, lamb & pork               | Pork thigh, with bones                     |
| Asia            | Beef, lamb & pork               | Pork, with bones, non-specific cut         |
| Asia            | Beef, lamb & pork               | Pork, without bones, non-specific cut      |
| Asia            | Beef, lamb & pork               | Round steak                                |
| Asia            | Beef, lamb & pork               | Sirloin steak                              |
| Asia            | Beef, lamb & pork               | Sliced ham, pork                           |
| Asia            | Beef, lamb & pork               | Veal, with bones                           |
| Africa          | Beef, lamb & pork               | Beef Feet/Trotters (Uncleaned)            |
| Africa          | Beef, lamb & pork               | Beef Merguez (spiced)                      |
| Africa          | Beef, lamb & pork               | Beef ham                                   |
| Africa          | Beef, lamb & pork               | Beef prepacked                             |
| Africa          | Beef, lamb & pork               | Beef without bones                         |
| Africa          | Beef, lamb & pork               | Lamb                                       |
| Africa          | Beef, lamb & pork               | Live Goat                                  |
| Africa          | Beef, lamb & pork               | Live Sheep                                 |
| Africa          | Beef, lamb & pork               | Mutton Tripes                              |
| Africa          | Beef, lamb & pork               | Mutton chop                                |
| Africa          | Beef, lamb & pork               | Oxtail                                     |
| Africa          | Beef, lamb & pork               | Pork meat                                  |
| Africa          | Beef, lamb & pork               | Sirloin Steak                              |
| Africa          | Beef, lamb & pork               | Veal without offal                         |
| LAC             | Beef, lamb & pork               | Flank or skirt beef, for shredding         |
| LAC             | Beef, lamb & pork               | Mortadella, loose                          |
| LAC             | Beef, lamb & pork               | Mortadella, prepacked                      |
| LAC             | Beef, lamb & pork               | Pork and beef sausages                     |
| LAC             | Beef, lamb & pork               | Pork ham, pressed, bulk or loose           |
| West-Asia       | Beef, lamb & pork               | Domestic Fillet Steak(excluding round &sirloin) |
| ICP product list | EAT-Lancet food group | ICP item name |
|------------------|-----------------------|---------------|
| West-Asia        | Beef, lamb & pork     | Domestic Ground mutton (Fresh) |
| West-Asia        | Beef, lamb & pork     | Fillet (Round or sirloin) |
| West-Asia        | Beef, lamb & pork     | Goat, boneless. Non-specific cut |
| West-Asia        | Beef, lamb & pork     | Ground beef (Frozen) |
| West-Asia        | Beef, lamb & pork     | Imported Fillet Steak(excluding round & sirloin) |
| West-Asia        | Beef, lamb & pork     | Imported Ground Mutton (Fresh) |
| West-Asia        | Beef, lamb & pork     | Lamb (Fresh) with bones, Non-specific cut |
| West-Asia        | Beef, lamb & pork     | Lamb (Fresh), boneless, Non-specific cut |
| West-Asia        | Beef, lamb & pork     | Live lamb |
| West-Asia        | Beef, lamb & pork     | Live mutton |
| West-Asia        | Beef, lamb & pork     | Mutton Liver (Chilled) |
| West-Asia        | Beef, lamb & pork     | Mutton Liver (Fresh) |
| West-Asia        | Beef, lamb & pork     | Mutton with bones (Refrigerated), Non-specific cut |
| West-Asia        | Beef, lamb & pork     | Veal with bones (Refrigerated) |
| West-Asia        | Beef, lamb & pork     | Veal, Boneless (Fresh unchilled) |
| West-Asia        | Beef, lamb & pork     | Veal, Boneless (Refrigerated) |
| Global           | Poultry, eggs & fish  | Black Pomfret |
| Global           | Poultry, eggs & fish  | Canned chicken |
| Global           | Poultry, eggs & fish  | Canned mackerel fillet in vegetable oil |
| Global           | Poultry, eggs & fish  | Canned sardine with skin |
| Global           | Poultry, eggs & fish  | Canned tuna without skin |
| Global           | Poultry, eggs & fish  | Carp |
| Global           | Poultry, eggs & fish  | Chicken breast with skin and bones |
| Global           | Poultry, eggs & fish  | Chicken breast without skin |
| Global           | Poultry, eggs & fish  | Chicken legs |
| Global           | Poultry, eggs & fish  | Cod (Gadus morhua) |
| Global           | Poultry, eggs & fish  | Dried Shrimp |
| Global           | Poultry, eggs & fish  | Large size chicken eggs |
| Global           | Poultry, eggs & fish  | Live chicken |
| Global           | Poultry, eggs & fish  | Mackerel, un-cleaned |
| Global           | Poultry, eggs & fish  | Medium size chicken eggs |
| Global           | Poultry, eggs & fish  | Mullet |
| Global           | Poultry, eggs & fish  | Red snapper |
| Global           | Poultry, eggs & fish  | Sea Bass |
| Global           | Poultry, eggs & fish  | Sea Crab |
| Global           | Poultry, eggs & fish  | Shrimps |
| Global           | Poultry, eggs & fish  | Smoked salmon |
| Global           | Poultry, eggs & fish  | Squid |
| Global           | Poultry, eggs & fish  | Tilapia |
| Global           | Poultry, eggs & fish  | Tuna steaks |
| Global           | Poultry, eggs & fish  | Whole Shrimps |
| Global           | Poultry, eggs & fish  | Whole chicken |
| Global           | Poultry, eggs & fish  | Whole chicken - Broiler |
| ICP product list | EAT-\textit{Lancet} food group | ICP item name                        |
|------------------|-------------------------------|-------------------------------------|
| Asia             | Poultry, eggs & fish          | Breakfast sausage, chicken          |
| Asia             | Poultry, eggs & fish          | Catfish                             |
| Asia             | Poultry, eggs & fish          | Chicken drumsticks                  |
| Asia             | Poultry, eggs & fish          | Chicken egg, 1                      |
| Asia             | Poultry, eggs & fish          | Chicken eggs, 10, loose              |
| Asia             | Poultry, eggs & fish          | Chicken wings                        |
| Asia             | Poultry, eggs & fish          | Chicken, non-specific cuts, frozen   |
| Asia             | Poultry, eggs & fish          | Chicken, non-specific cuts, not frozen |
| Asia             | Poultry, eggs & fish          | Duck, whole                          |
| Asia             | Poultry, eggs & fish          | Fish ball                            |
| Asia             | Poultry, eggs & fish          | Fresh whole chicken                  |
| Asia             | Poultry, eggs & fish          | Mud Crab                             |
| Asia             | Poultry, eggs & fish          | Native house chicken                 |
| Asia             | Poultry, eggs & fish          | Prawn/Shrimp, medium                 |
| Asia             | Poultry, eggs & fish          | Prawn/Shrimp, small                  |
| Asia             | Poultry, eggs & fish          | Salted & semi-dried fish             |
| Asia             | Poultry, eggs & fish          | Salted duck egg                      |
| Asia             | Poultry, eggs & fish          | Sea Lobster                          |
| Asia             | Poultry, eggs & fish          | Small fresh fish                     |
| Asia             | Poultry, eggs & fish          | Smoked fish                          |
| Asia             | Poultry, eggs & fish          | Sole                                 |
| Asia             | Poultry, eggs & fish          | Spanish Mackerel                     |
| Asia             | Poultry, eggs & fish          | Squid, small                         |
| Asia             | Poultry, eggs & fish          | Tuna                                 |
| Asia             | Poultry, eggs & fish          | Tuna Steak                           |
| Asia             | Poultry, eggs & fish          | White Pomfret                        |
| Africa           | Poultry, eggs & fish          | Anchovy                              |
| Africa           | Poultry, eggs & fish          | Bream                                |
| Africa           | Poultry, eggs & fish          | Capitaine                            |
| Africa           | Poultry, eggs & fish          | Catfish                              |
| Africa           | Poultry, eggs & fish          | Chicken wings                        |
| Africa           | Poultry, eggs & fish          | Dried Machoiron                     |
| Africa           | Poultry, eggs & fish          | Dried bonga                          |
| Africa           | Poultry, eggs & fish          | Dried sardines                       |
| Africa           | Poultry, eggs & fish          | Dried small fish                     |
| Africa           | Poultry, eggs & fish          | Duck - Dressed                       |
| Africa           | Poultry, eggs & fish          | Eggs, traditional production         |
| Africa           | Poultry, eggs & fish          | Fresh Small Sardines                 |
| Africa           | Poultry, eggs & fish          | Frozen Capitaine in Sea Water        |
| Africa           | Poultry, eggs & fish          | Frozen Nile Perch                    |
| Africa           | Poultry, eggs & fish          | Frozen Sea-bream                     |
| Africa           | Poultry, eggs & fish          | Frozen Shrimps                       |
| Africa           | Poultry, eggs & fish          | Frozen Whiting                       |
| ICP product list | EAT-Lancet food group | ICP item name |
|------------------|-----------------------|---------------|
| Africa           | Poultry, eggs & fish  | Giant shrimps |
| Africa           | Poultry, eggs & fish  | Grouper       |
| Africa           | Poultry, eggs & fish  | Live Turkey   |
| Africa           | Poultry, eggs & fish  | Lobster, chilled |
| Africa           | Poultry, eggs & fish  | Mackerel in vegetable oil |
| Africa           | Poultry, eggs & fish  | Mix Frozen Chicken Parts |
| Africa           | Poultry, eggs & fish  | Nile Perch    |
| Africa           | Poultry, eggs & fish  | Red Snapper   |
| Africa           | Poultry, eggs & fish  | Red mullet    |
| Africa           | Poultry, eggs & fish  | Sardines in tomato sauce |
| Africa           | Poultry, eggs & fish  | Smoked carp   |
| Africa           | Poultry, eggs & fish  | Smoked kapenta |
| Africa           | Poultry, eggs & fish  | Smoked kingfish |
| Africa           | Poultry, eggs & fish  | Smoked mboto  |
| Africa           | Poultry, eggs & fish  | Smoked shrimps/prawns |
| Africa           | Poultry, eggs & fish  | Sole fish     |
| Africa           | Poultry, eggs & fish  | Traditionally bred live chicken |
| Africa           | Poultry, eggs & fish  | Tuna          |
| Africa           | Poultry, eggs & fish  | Tuna in vegetable oil |
| Africa           | Poultry, eggs & fish  | Turkey breast |
| LAC              | Poultry, eggs & fish  | Canned sardines with skin, in tomato sauce |
| LAC              | Poultry, eggs & fish  | Hake fillet   |
| LAC              | Poultry, eggs & fish  | Maigre        |
| LAC              | Poultry, eggs & fish  | Maigre fillet |
| LAC              | Poultry, eggs & fish  | Poultry sausages (chicken or turkey) |
| LAC              | Poultry, eggs & fish  | Red porgy     |
| LAC              | Poultry, eggs & fish  | Red porgy fillet |
| LAC              | Poultry, eggs & fish  | Salted dry cod |
| LAC              | Poultry, eggs & fish  | Sardines      |
| LAC              | Poultry, eggs & fish  | Surubi fillet |
| LAC              | Poultry, eggs & fish  | Tilapia fillet |
| West-Asia        | Poultry, eggs & fish  | Canned Tuna/Water |
| West-Asia        | Poultry, eggs & fish  | Caviar        |
| West-Asia        | Poultry, eggs & fish  | Chicken soup  |
| West-Asia        | Poultry, eggs & fish  | Chicken wings |
| West-Asia        | Poultry, eggs & fish  | Emperor fish  |
| West-Asia        | Poultry, eggs & fish  | Giant Shrimp  |
| West-Asia        | Poultry, eggs & fish  | Grouper (Hamour) fish |
| West-Asia        | Poultry, eggs & fish  | Processed shrimp |
| West-Asia        | Poultry, eggs & fish  | Tuna fish fresh |
| West-Asia        | Poultry, eggs & fish  | White or brown chicken eggs, Small size [domestic] |
| West-Asia        | Poultry, eggs & fish  | Whole chicken (Frozen) |
| West-Asia        | Poultry, eggs & fish  | Zubaida Fish  |
| ICP product list | EAT-Lancet food group | ICP item name                          |
|-----------------|-----------------------|----------------------------------------|
| Global          | Legumes, nuts & soy foods | Bean Curd - Tofu                        |
| Global          | Legumes, nuts & soy foods | Dried almonds                           |
| Global          | Legumes, nuts & soy foods | Dried white beans                       |
| Global          | Legumes, nuts & soy foods | Green/Mung Beans, dried                 |
| Global          | Legumes, nuts & soy foods | Lentils, Dry                            |
| Global          | Legumes, nuts & soy foods | Roasted groundnuts/peanuts              |
| Global          | Legumes, nuts & soy foods | Tinned white beans in tomato sauce      |
| Asia            | Legumes, nuts & soy foods | Dhal, Khesari                           |
| Asia            | Legumes, nuts & soy foods | Dhal, Musur                             |
| Asia            | Legumes, nuts & soy foods | Dhal, Split Peas                        |
| Asia            | Legumes, nuts & soy foods | Moong dahl, loose                       |
| Asia            | Legumes, nuts & soy foods | Peanuts in shell                        |
| Africa          | Legumes, nuts & soy foods | Broad Beans                             |
| Africa          | Legumes, nuts & soy foods | Caramel groundnuts                      |
| Africa          | Legumes, nuts & soy foods | Cashew nuts                             |
| Africa          | Legumes, nuts & soy foods | Macadamia nuts                          |
| Africa          | Legumes, nuts & soy foods | Natural Groundnuts                      |
| Africa          | Legumes, nuts & soy foods | Packed Peas                             |
| Africa          | Legumes, nuts & soy foods | Peas                                    |
| Africa          | Legumes, nuts & soy foods | Peas                                    |
| Africa          | Legumes, nuts & soy foods | Pigeon peas                             |
| Africa          | Legumes, nuts & soy foods | Roasted groundnuts                      |
| Africa          | Legumes, nuts & soy foods | Spotted beans                           |
| LAC             | Legumes, nuts & soy foods | Cashew                                 |
| LAC             | Legumes, nuts & soy foods | Dried black beans                       |
| LAC             | Legumes, nuts & soy foods | Dried red beans                        |
| West-Asia       | Legumes, nuts & soy foods | Almonds, Unhusked                       |
| West-Asia       | Legumes, nuts & soy foods | Domestic Broad beans (Pulses)           |
| West-Asia       | Legumes, nuts & soy foods | Domestic Peanuts                        |
| West-Asia       | Legumes, nuts & soy foods | Domestic Peas                           |
| West-Asia       | Legumes, nuts & soy foods | Hazelnuts                               |
| West-Asia       | Legumes, nuts & soy foods | Imported Broad beans (Pulses)           |
| West-Asia       | Legumes, nuts & soy foods | Imported Peanuts                        |
| West-Asia       | Legumes, nuts & soy foods | Imported Peas                           |
| West-Asia       | Legumes, nuts & soy foods | Peas, Tinned                            |
| West-Asia       | Legumes, nuts & soy foods | Walnuts                                 |
| Global          | Palm oil                | Palm oil                                |
| Africa          | Palm oil                | Palm oil unrefined                      |
| West-Asia       | Palm oil                | Palm oil                                |
| Global          | Unsaturated oils        | Olive oil                               |
| Global          | Unsaturated oils        | Peanut oil                              |
| Global          | Unsaturated oils        | Soybean oil                             |
| ICP product list | EAT-Lancet food group | ICP item name                  |
|------------------|-----------------------|-------------------------------|
| Global           | Unsaturated oils      | Sunflower oil                 |
| Global           | Unsaturated oils      | Vegetable oil                 |
| Asia             | Unsaturated oils      | Coconut oil                   |
| Asia             | Unsaturated oils      | Corn oil                      |
| Asia             | Unsaturated oils      | Mustard oil                   |
| Asia             | Unsaturated oils      | Olive oil, standard           |
| Africa           | Unsaturated oils      | Maize oil                     |
| Africa           | Unsaturated oils      | Sesame oil                    |
| West-Asia        | Unsaturated oils      | Maize oil                     |
| West-Asia        | Unsaturated oils      | Olive Oil                     |
| West-Asia        | Unsaturated oils      | Pure Sesame Oil               |
| West-Asia        | Unsaturated oils      | Sesame oil or oil Alserg      |
| Global           | Dairy fats            | Butter, unsalted              |
| Global           | Dairy fats            | Salted Butter                 |
| Asia             | Dairy fats            | Ghee                          |
| Asia             | Dairy fats            | Ghee, cow/buffalo              |
| Africa           | Dairy fats            | Butter, sold loose            |
| Africa           | Dairy fats            | Ghee                          |
| Africa           | Dairy fats            | Ghee                          |
| West-Asia        | Dairy fats            | Ghee                          |
| West-Asia        | Lard or tallow        | Animal Fats                   |
| Global           | All sweeteners        | Brown sugar                   |
| Global           | All sweeteners        | Natural honey, Mixed blossoms |
| Global           | All sweeteners        | White sugar                   |
| Asia             | All sweeteners        | White sugar, loose            |
| Africa           | All sweeteners        | Brown sugar cubes             |
| Africa           | All sweeteners        | Packed Brown sugar            |
| Africa           | All sweeteners        | Packed White sugar            |
| Africa           | All sweeteners        | Powdered Glucose              |
| LAC              | All sweeteners        | White sugar, bulk             |
| LAC              | All sweeteners        | White sugar, family size pack |
| West-Asia        | All sweeteners        | Processed honey, pure         |
| West-Asia        | All sweeteners        | Processed honey, pure         |
| West-Asia        | All sweeteners        | White sugar, granulated, cane |
| Global           | Uncategorized           | Apple juice                   |
| Global           | Uncategorized           | Baby cereals                  |
| Global           | Uncategorized           | Baby food                     |
| Global           | Uncategorized           | Black Pepper, ground         |
| Global           | Uncategorized           | Butter biscuits               |
| Global           | Uncategorized           | Carbonated Soft Drink [Specified brands] (Large) |
| Global           | Uncategorized           | Carbonated Soft Drink [Specified brands] (Small) |
| Global           | Uncategorized           | Chicken Extract (bouillon/stock cube) |
| Global           | Uncategorized           | Chili powder                  |
| Global           | Uncategorized           | Chili sauce                   |
| ICP product list | EAT-Lancet food group | ICP item name |
|------------------|-----------------------|--------------|
| Global           | Uncategorized           | Chilies (Long) |
| Global           | Uncategorized           | Chocolate bar |
| Global           | Uncategorized           | Chocolate cake (Individual serving) |
| Global           | Uncategorized           | Chocolate cake (Whole) |
| Global           | Uncategorized           | Cocoa Powder, Tin |
| Global           | Uncategorized           | Coffee Roasted 100% Arabica |
| Global           | Uncategorized           | Coffee Roasted 100% Robusta |
| Global           | Uncategorized           | Cooking salt |
| Global           | Uncategorized           | Cornflakes [Specified brand] |
| Global           | Uncategorized           | Curry Powder |
| Global           | Uncategorized           | Flavored biscuits/cookies sweet |
| Global           | Uncategorized           | Frozen chipped potatoes |
| Global           | Uncategorized           | Fruit drops (Hard candies) |
| Global           | Uncategorized           | Garlic (White) |
| Global           | Uncategorized           | Ginger (Mature) |
| Global           | Uncategorized           | Green Olives (with stones) |
| Global           | Uncategorized           | Ice cream, Cornetto-type |
| Global           | Uncategorized           | Ice cream, packed |
| Global           | Uncategorized           | Instant coffee [Specified brand] |
| Global           | Uncategorized           | Lemonade |
| Global           | Uncategorized           | Margarine, regular fat |
| Global           | Uncategorized           | Mayonnaise |
| Global           | Uncategorized           | Milk, condensed |
| Global           | Uncategorized           | Mineral water |
| Global           | Uncategorized           | Mixed Fruits in Syrup |
| Global           | Uncategorized           | Orange juice |
| Global           | Uncategorized           | Orange marmalade |
| Global           | Uncategorized           | Pineapple Jam |
| Global           | Uncategorized           | Potato chips |
| Global           | Uncategorized           | Sandwich biscuits/cookies |
| Global           | Uncategorized           | Strawberry/Apricot Jam |
| Global           | Uncategorized           | Thin Soya Sauce |
| Global           | Uncategorized           | Toffee |
| Global           | Uncategorized           | Tomato ketchup |
| Global           | Uncategorized           | Tomato paste (Large) |
| Global           | Uncategorized           | Tomato paste (Small) |
| Asia             | Uncategorized           | Black Pepper, powder |
| Asia             | Uncategorized           | Buffalo, without bones, non-specific cut |
| Asia             | Uncategorized           | Cake mix |
| Asia             | Uncategorized           | Carbonated Soft Drink, small bottle |
| Asia             | Uncategorized           | Chilies, dried |
| Asia             | Uncategorized           | Chinese cake/Moon cake |
| Asia             | Uncategorized           | Chocolate bar [Specified brand] |
| ICP product list | EAT-Lancet food group | ICP item name |
|------------------|-----------------------|---------------|
| Asia             | Uncategorized          | Coffee whitener [Specified brand 1], jar |
| Asia             | Uncategorized          | Coffee whitener [Specified brand 1], packet |
| Asia             | Uncategorized          | Cornflakes [Specified brand 1] |
| Asia             | Uncategorized          | Cornflakes [Specified brand 1], smaller package |
| Asia             | Uncategorized          | Cup cakes |
| Asia             | Uncategorized          | Dark soy sauce |
| Asia             | Uncategorized          | Decaffeinated coffee [Specified brand 1] |
| Asia             | Uncategorized          | Decaffeinated coffee, exclude [Specified brand 1] |
| Asia             | Uncategorized          | Doughnuts |
| Asia             | Uncategorized          | Fish sauce |
| Asia             | Uncategorized          | Fruit juice, not from concentrate, ready to drink |
| Asia             | Uncategorized          | Ghee, vegetable |
| Asia             | Uncategorized          | Infant powdered milk, box |
| Asia             | Uncategorized          | Infant powdered milk, tin |
| Asia             | Uncategorized          | Instant coffee, exclude [Specified brand 1] |
| Asia             | Uncategorized          | Jam, high fruit content |
| Asia             | Uncategorized          | Jam, low fruit content |
| Asia             | Uncategorized          | Malted beverage [Specified brand 1], glass Jar |
| Asia             | Uncategorized          | Malted beverage [Specified brand 1], glass Jar, small |
| Asia             | Uncategorized          | Malted beverage [Specified brand 1], packet |
| Asia             | Uncategorized          | Malted beverage [Specified brand 2 or 3], packet |
| Asia             | Uncategorized          | Malted beverage [Specified brand 2], tin |
| Asia             | Uncategorized          | Malted beverage [Specified brand 2], tin, small |
| Asia             | Uncategorized          | Malted beverage [Specified brand 3], glass jar |
| Asia             | Uncategorized          | Muffin |
| Asia             | Uncategorized          | Peanut butter |
| Asia             | Uncategorized          | Powdered Juice Mix [Specified brand] |
| Asia             | Uncategorized          | Savory pie |
| Asia             | Uncategorized          | Soft drinks, small bottle |
| Asia             | Uncategorized          | Sponge Cake |
| Asia             | Uncategorized          | Tamarind |
| Asia             | Uncategorized          | Tamarind, preserved |
| Asia             | Uncategorized          | Turmeric powder |
| Africa           | Uncategorized          | Baby food |
| Africa           | Uncategorized          | Bean Leaves |
| Africa           | Uncategorized          | Black Olives |
| Africa           | Uncategorized          | Black or white pepper corns |
| Africa           | Uncategorized          | Black or white pepper powder |
| Africa           | Uncategorized          | Blended coffee |
| Africa           | Uncategorized          | Bouillon/stock cube [Specified brand] |
| Africa           | Uncategorized          | Branded baby food, fruit based |
| Africa           | Uncategorized          | Carbonated Mineral Water |
| Africa           | Uncategorized          | Carbonated Soft Drink [Specified brands and model] |
| ICP product list | EAT-Lancet food group | ICP item name                                      |
|------------------|------------------------|---------------------------------------------------|
| Africa           | Uncategorized            | Carbonated Soft Drink, can                        |
| Africa           | Uncategorized            | Chilies                                           |
| Africa           | Uncategorized            | Chocolate biscuit                                 |
| Africa           | Uncategorized            | Chocolate croissant                               |
| Africa           | Uncategorized            | Cinnamon powder                                   |
| Africa           | Uncategorized            | Cloves                                            |
| Africa           | Uncategorized            | Cola Drink                                        |
| Africa           | Uncategorized            | Condensed milk sweetened                          |
| Africa           | Uncategorized            | Coriander seeds                                   |
| Africa           | Uncategorized            | Custard powder                                    |
| Africa           | Uncategorized            | Dark chocolate                                    |
| Africa           | Uncategorized            | Domestic Corn Based Baby Food                     |
| Africa           | Uncategorized            | Doughnuts                                         |
| Africa           | Uncategorized            | Fresh Parsley                                     |
| Africa           | Uncategorized            | Ginger juice (fresh)                              |
| Africa           | Uncategorized            | Ginger powder                                     |
| Africa           | Uncategorized            | Gizzard                                           |
| Africa           | Uncategorized            | Guava juice                                       |
| Africa           | Uncategorized            | Ice cream cone                                    |
| Africa           | Uncategorized            | Lemon-lime flavored Carbonated Soft Drink         |
| Africa           | Uncategorized            | Lime juice                                        |
| Africa           | Uncategorized            | Local Soft Drink                                  |
| Africa           | Uncategorized            | Mango juice                                       |
| Africa           | Uncategorized            | Milk chocolate                                    |
| Africa           | Uncategorized            | Mustard Seed                                      |
| Africa           | Uncategorized            | Orange Drink                                      |
| Africa           | Uncategorized            | Orange juice - nectar                             |
| Africa           | Uncategorized            | Peppers                                           |
| Africa           | Uncategorized            | Pineapple juice                                   |
| Africa           | Uncategorized            | Pineapple juice freshly squeezed                 |
| Africa           | Uncategorized            | Red or green chili paste                           |
| Africa           | Uncategorized            | Regular chewing gum                               |
| Africa           | Uncategorized            | Rice Based Baby Food                              |
| Africa           | Uncategorized            | Sausage                                           |
| Africa           | Uncategorized            | Sesame                                            |
| Africa           | Uncategorized            | Shells                                            |
| Africa           | Uncategorized            | Simple cookie                                     |
| Africa           | Uncategorized            | Sponge Cake                                       |
| Africa           | Uncategorized            | Tomato juice                                      |
| Africa           | Uncategorized            | Tonic                                             |
| Africa           | Uncategorized            | Wafers                                            |
| Africa           | Uncategorized            | Wheat Based Baby Food                             |
| Africa           | Uncategorized            | White Vinegar                                     |
| ICP product list | EAT-Lancet food group | ICP item name |
|-----------------|-----------------------|---------------|
| LAC             | Uncategorized          | Chili sauce   |
| LAC             | Uncategorized          | Cinnamon      |
| LAC             | Uncategorized          | Cocoa Powder, bag |
| LAC             | Uncategorized          | Dulce de leche |
| LAC             | Uncategorized          | Fruit nectars (single flavor) |
| LAC             | Uncategorized          | Guava jam     |
| LAC             | Uncategorized          | Guava jelly   |
| LAC             | Uncategorized          | Hard candy, filled |
| LAC             | Uncategorized          | Instant coffee granulated |
| LAC             | Uncategorized          | Instant fruit-juice flavored drink, powder |
| LAC             | Uncategorized          | Mayonnaise in doypack |
| LAC             | Uncategorized          | Mustard       |
| LAC             | Uncategorized          | Orange juice  |
| LAC             | Uncategorized          | Sandwich biscuits/cookies packaged |
| LAC             | Uncategorized          | Sports drink  |
| West-Asia       | Uncategorized          | Apple cider vinegar |
| West-Asia       | Uncategorized          | Baby milk, Powder (Nan standard) |
| West-Asia       | Uncategorized          | Baklava       |
| West-Asia       | Uncategorized          | Biscuit Assortment |
| West-Asia       | Uncategorized          | Breakfast corn cereal |
| West-Asia       | Uncategorized          | Breakfast wheat cereal |
| West-Asia       | Uncategorized          | Caramels and toffees |
| West-Asia       | Uncategorized          | Cream biscuits |
| West-Asia       | Uncategorized          | Custard powder |
| West-Asia       | Uncategorized          | Domestic Garlic |
| West-Asia       | Uncategorized          | Doughnuts     |
| West-Asia       | Uncategorized          | Dried Cardamom |
| West-Asia       | Uncategorized          | Dried Cinnamon |
| West-Asia       | Uncategorized          | Dried Coriander |
| West-Asia       | Uncategorized          | Dried Cumin   |
| West-Asia       | Uncategorized          | Dried Ginger  |
| West-Asia       | Uncategorized          | Fruit jellies |
| West-Asia       | Uncategorized          | Ground coffee |
| West-Asia       | Uncategorized          | Ice cream, Mixed |
| West-Asia       | Uncategorized          | Imported Garlic |
| West-Asia       | Uncategorized          | Instant Coffee |
| West-Asia       | Uncategorized          | Iodized salt  |
| West-Asia       | Uncategorized          | Kaak (Bakssamat) |
| West-Asia       | Uncategorized          | Katayef       |
| West-Asia       | Uncategorized          | Knefeh        |
| West-Asia       | Uncategorized          | Liquid Tahini |
| West-Asia       | Uncategorized          | Mineral water, Carbonated water, 1 liter |
| West-Asia       | Uncategorized          | Mineral water, noncarbonated, 0.5 liters |
| ICP product list | EAT-Lancet food group | ICP item name |
|------------------|------------------------|---------------|
| West-Asia        | Uncategorized           | Orange juice (fresh) |
| West-Asia        | Uncategorized           | Oranges jam |
| West-Asia        | Uncategorized           | Peanut butter |
| West-Asia        | Uncategorized           | Regular cake(multiple) with cream topping |
| West-Asia        | Uncategorized           | Ripe(black) Olives |
| West-Asia        | Uncategorized           | Ripe(black) Olives, can or unpackaged |
| West-Asia        | Uncategorized           | Saffron |
| West-Asia        | Uncategorized           | Sanbousik |
| West-Asia        | Uncategorized           | Semi sweet baking chocolate |
| West-Asia        | Uncategorized           | Suckers lollipops |
| West-Asia        | Uncategorized           | Tahini |
| West-Asia        | Uncategorized           | Tonic water [Specified brand] |
| West-Asia        | Uncategorized           | Watermelon seeds |
| West-Asia        | Uncategorized           | White distilled vinegar |
References

1. World Bank. Measuring the Real Size of the World Economy: The Framework, Methodology, and Results of the International Comparison Program—ICP. Washington, DC: World Bank; 2013.

2. UN. World Population Prospects: The 2017 Revision. Geneva: United Nations (UN), Department of Economic and Social Affairs, Population Division 2017.

3. Charrondiere UR, Stadlmayr B, Wijesinha-Bettoni R, Rittenschöber D, Nowak V, Burlingame B. INFOODS contributions to fulfilling needs and meeting challenges concerning food composition databases. Procedia Food Science. 2013;2:35-45.

4. USDA. USDA National Nutrient Database for Standard Reference, Release 27 (slightly revised), Version Current: May 2015.2015.

5. Ahuja JK, Moshfegh AJ, Holden JM, Harris E. USDA food and nutrient databases provide the infrastructure for food and nutrition research, policy, and practice. The Journal of nutrition. 2012;143(2):241S-9S.

6. Padovani RM, Lima DM, Colugnati FA, Rodriguez-Amaya DB. Comparison of proximate, mineral and vitamin composition of common Brazilian and US foods. J Food Compost Anal. 2007;20(8):733-8.

7. Garcia V, Rona R, Chinn S. Effect of the choice of food composition table on nutrient estimates: a comparison between the British and American (Chilean) tables. Public Health Nutr. 2004;7(4):577-83.

8. Willett W, Rockström J, Loken B, Springmann M, Lang T, Vermeulen S, et al. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. The Lancet. 2019;Published Online January 16, 2019. http://dx.doi.org/10.1016/S0140-6736(18)31788-4:1-47.

9. FAO. FAO/INFOODS Global Food Composition Database for Fish and Shellfish Version 1.0 - uFiSh1.0. In: Nations FaAOotU, editor. Rome2016.

10. World Development Indicators (WDI) database. Data retrieved: 24 March 2019 [Internet]. 2019.

11. Deaton A. Measuring poverty in a growing world (or measuring growth in a poor world). Rev Econ Statist. 2005;87(1):1-19.

12. Beegle K, Christiaensen L, Dabalen A, Gaddis I. Poverty in a rising Africa: The World Bank; 2016.

13. Berkelaar M, Dirks J, Eikland K, Notebaert P, Ebert J, Gourvest H. lpSolve: Interface to Lp_solve v. 5.5 to solve linear/integer programs. R package version 5.6. 10. 2010.