



NATIONAL BUREAU OF STATISTICS



# COST OF A HEALTHY DIET

(OCTOBER 2023)



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Data Sources: National Bureau of Statistics (NBS)

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# INTRODUCTION

## HIGHLIGHTS

- ◆ The Cost of a Healthy Diet (CoHD) is the least expensive combination of locally available items that meets globally consistent food-based dietary guidelines, used as a measure of physical and economic access to healthy diets. This is a lower bound (or floor) of the cost per adult per day excluding the cost of transportation and meal preparation.
- ◆ The National average Cost of a Healthy Diet was N703 in October 2023.
- ◆ In October 2023, the average CoHD was highest in the South East at Ng18 per adult per day, compared to N605 per adult per day in North East.
- ◆ In recent months, the CoHD has risen faster than general inflation and food inflation. However, the CoHD and the food CPI are not directly comparable; the CoHD includes fewer items and is measured in Naira per day, while the food CPI is a weighted index.

Food environments determine a household's physical and economic access to sufficient, safe, and nutritious food for an active and healthy life. A suite of indicators known as the Cost and Affordability of a Healthy Diet (CoAHD) have been developed to improve the measurement of food access and are now monitored globally by the United Nations and the World Bank as a metric of food security. The Cost of a Healthy Diet (CoHD) metric uses the availability, price, and nutritional composition of retail food items to identify the **least expensive** combination of items that meet requirements for a healthy diet.

To compute the Cost of a Healthy Diet indicator, the following data are required: (a) Retail Food Prices, (b) Food Composition Data, and (c) a Healthy Diet Standard.

### Retail Food Prices

The retail food price data used in this analysis is collected by the National Bureau of Statistics (NBS) monthly from 10,534 informants spread across the country, from urban and rural outlets for each state. NBS collects these prices routinely for monitoring inflation, including prices of over 200 retail food items. Nearly 150 of these food items are potentially included in a healthy diet and the price data for these items are used for the computation of the CoHD.

### Healthy diet standard

In Nigeria, CoHD is the minimum cost of foods needed to meet international recommendations defined in the Healthy Diet Basket (HDB), a globally relevant set of criteria that captures similarities across most national food-based dietary guidelines (FBDG) (Table 1). The HDB was created as a comparable standard to calculate and compare the cost and affordability of healthy diets across countries; the HDB is most relevant for countries where there is not yet a quantified national FBDG, like Nigeria.

**Table 1. Description of the Healthy Diet Basket (HDB)**

Food Group	Number of food items selected	Energy content (kilocalories)	Share of total calories (%)	Typical weights of example foods (g)
Starchy Staples	2	1,160	50	322 g dry rice
Oils and Fats	1	300	13	34 g oil
Fruits	2	160	7	230-300 g
Vegetables	3	110	5	270-400 g
Legumes Nuts and Seeds	1	300	13	85 g dry bean
Animal Source Foods	2	300	13	210 g egg
<b>Total</b>	<b>11</b>	<b>2,330</b>	<b>100</b>	

# RESULT

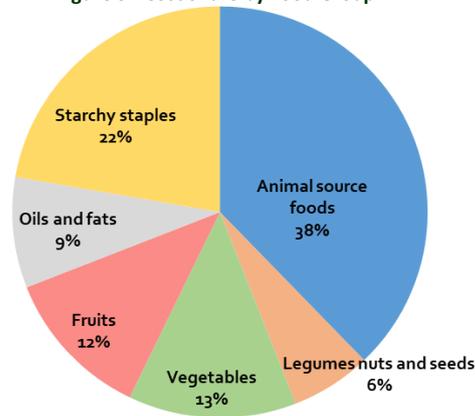
## Average Cost of a Healthy Diet (National, State & Zonal Level)

The National average Cost of a Healthy Diet was N703 per adult per day in October 2023. At the State level, Anambra, Ebonyi, and Enugu States recorded the highest cost at N950, N933, and N915, respectively, while the lowest total diet costs were recorded in Niger, Adamawa, and Bauchi at N544, N545, and N560, respectively. Lastly, at the Zonal level, the average CoHD was highest in the South East zone at N918 per day, followed by South West zone at N760 per day. The lowest average Cost of a Healthy Diet was recorded in North East zone at N605 per day. *(Please see Appendix)*

## Cost Share by Food Group

Animal source foods were the most expensive food group recommendation to meet in October 2023, accounting for 38% of the total CoHD, to provide 13% of total calories (Figure 3). Fruits and vegetables were the most expensive food groups in terms of price per calorie; they accounted for 12% and 13% of total cost while providing only 7% and 5% of total calories in the Healthy Diet Basket shown in Table 1. The least-expensive food group on average was legumes, nuts, and seeds, at 6% of the total cost.

Figure 3 - Cost Share by Food Group



## General and food inflation relative to the Cost of a Healthy Diet

The Consumer Price Index (CPI) is a measure of inflation, the average change over time in the prices of goods and services consumed by people for day-to-day living, while the food index is a subset of the CPI which reflects changes in prices that households pay for food. It records the development of market prices of agricultural commodities and foodstuffs. Figure 4a (*see Appendix*) compares the general CPI and the food CPI (indices with 2009 as the base year) with the nominal Naira value of the Cost of a Healthy Diet, to understand whether the least-cost items needed for a healthy diet are rising in cost at a rate like that of the rest of the goods and services in Nigeria. Food prices and the Cost of a Healthy Diet are both expected to rise over time; here we focus on the relative rate of that inflation. The food CPI includes a larger number of items, and more packaged and value-added items than the Cost of a Healthy Diet, as least-cost items are often unprocessed.

In the past year, the CoHD and the cost of all other goods and services increased at roughly the same rate, until July 2023, when CoHD increased at a faster rate than all goods and services (general CPI) and more than all foods for which retail prices are collected.

## Least-Cost Diets and Frequently Selected Least-Cost Items

Table 2 (*Please see Appendix*) demonstrates a complete least-cost diet in the least and most expensive locations in October 2023. In October 2023, Adamawa (Rural) had the lowest Cost of a Healthy Diet at N462 per adult per day, while the most expensive location was Anambra (Urban) with CoHD at N984. While there were similarities in the least-cost items in October (e.g., White Garri, White Maize Grains, Palm Oil, Avocados, Bitter Leaf, and Soya Beans), the cost per food item was different in these locations because of underlying price differences. Many food groups had different least-cost items as well. For example, live local chicken was the least-expensive Animal Source Food in Adamawa (Rural) compared with a dozen Agric eggs in Anambra (Urban).

Finally, Table 3 (*Please see Appendix*) shows frequently selected least-cost items in each food group across all State-Sector combinations. This table demonstrates that some items are commonly the least-cost across different locations. For example, Palm Oil was the least-expensive food in the Oils and Fats food group in 73% of all State-Sectors in October 2023, and Soya Beans were selected in more than half of all places as a least-cost item in the Legumes, Nuts and Seeds Group. There is more variation in the Vegetables category, because three (3) vegetables are recommended in each least-cost healthy diet. Bitter Leaf, Dried Okra, and Dried Kuka were the most frequently selected least-cost Vegetables in October 2023.

# POLICY IMPLICATIONS

The Cost of a Healthy Diet provides important information about food access, a key aspect of food security, which is useful for government, civil society and development partners, private sector, and researchers.

For instance, where the Cost of a Healthy Diet is high, it is possible to identify which least-cost items and food groups are driving the high cost. Stakeholders can identify supply challenges in specific foods or food groups to be addressed, for example with improved production, distribution, or market access.

The Cost of a Healthy Diet can also inform:

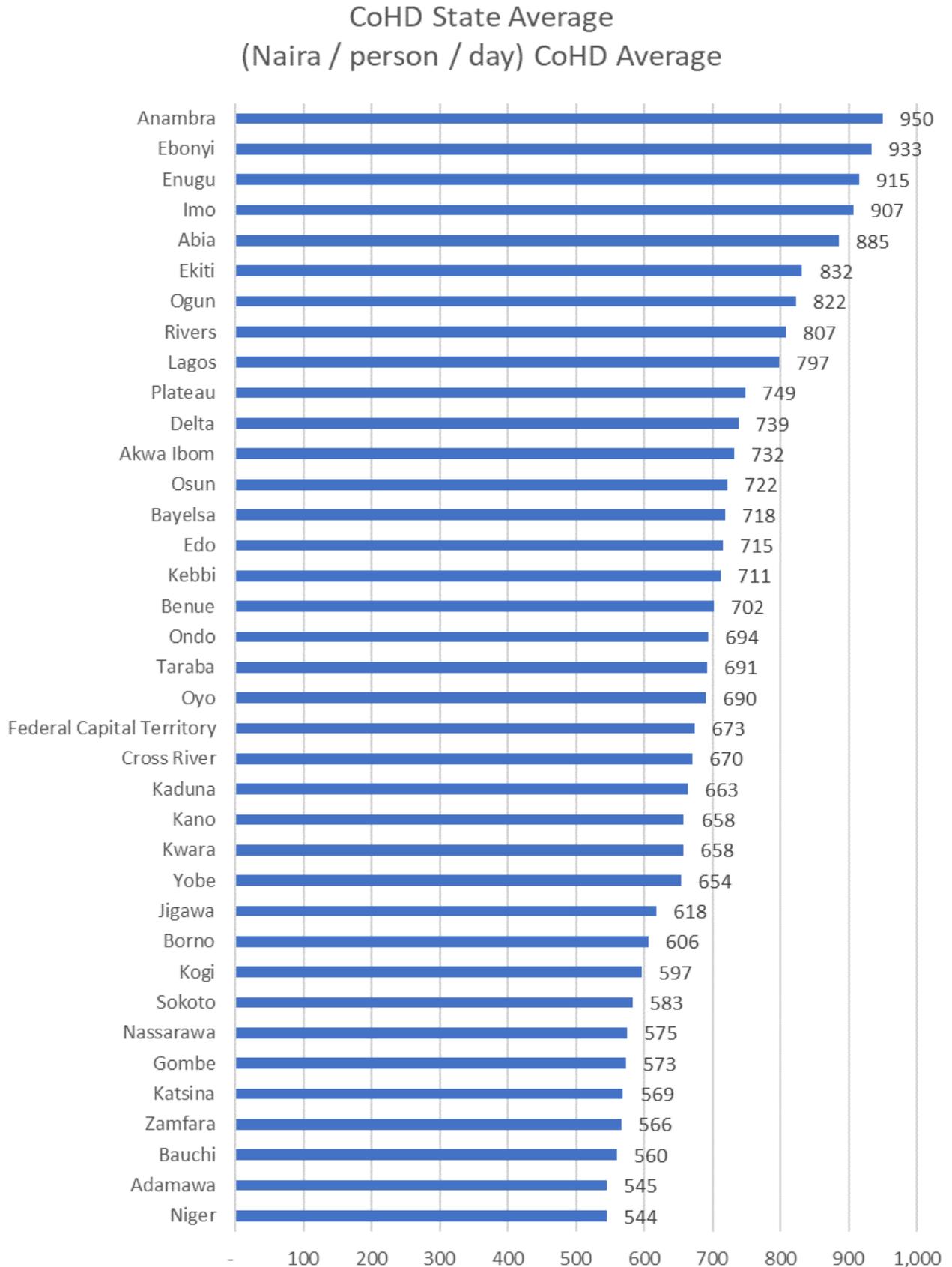
- ◆ The minimum income needed by households to access a healthy diet, and social protection and transfer amounts for vulnerable populations.
- ◆ Prioritization of commodities for agricultural production and trade policy interventions.
- ◆ Targeting interventions, including nutrition education, to populations with the most potential to benefit; nutrition education is only effective when people can afford to comply with the recommendations.
- ◆ Research on the relationship between food access and other food system factors and outcomes.

These results can also foster collaboration among a wide range of stakeholders, such as policymakers, researchers and civil society actors that focus on food security, to devise strategies that tackle access, availability, and affordability of healthy diet effectively. Future research incorporating income can also be used to determine the proportion and number of the population that are unable to afford a healthy diet.

*This bulletin was produced by the National Bureau of Statistics (NBS), Nigeria in collaboration with Global Alliance for Improved Nutrition (GAIN) and technically supported by the Food Prices for Nutrition project, led by the Friedman School of Nutrition Science and Policy at Tufts University, in partnership with International Food Policy Research Institute (IFPRI) and the World Bank. This bulletin aims to inform decision-makers from government agencies, UN agencies and NGOs to improve access to healthy diets. The bulletin is available online at <https://nigerianstat.gov.ng/elibrary>*

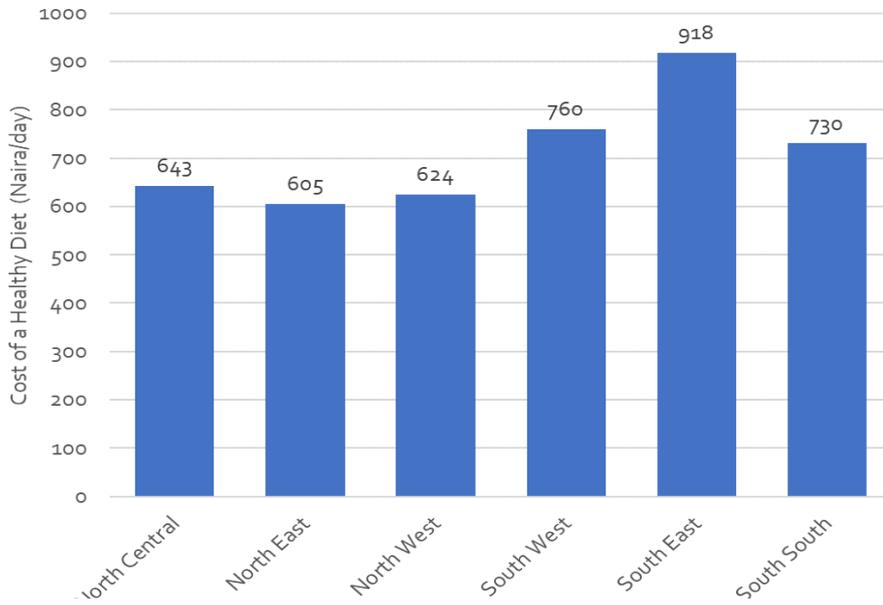
# APPENDIX

Figure 1. Average Cost of a Healthy Diet by State

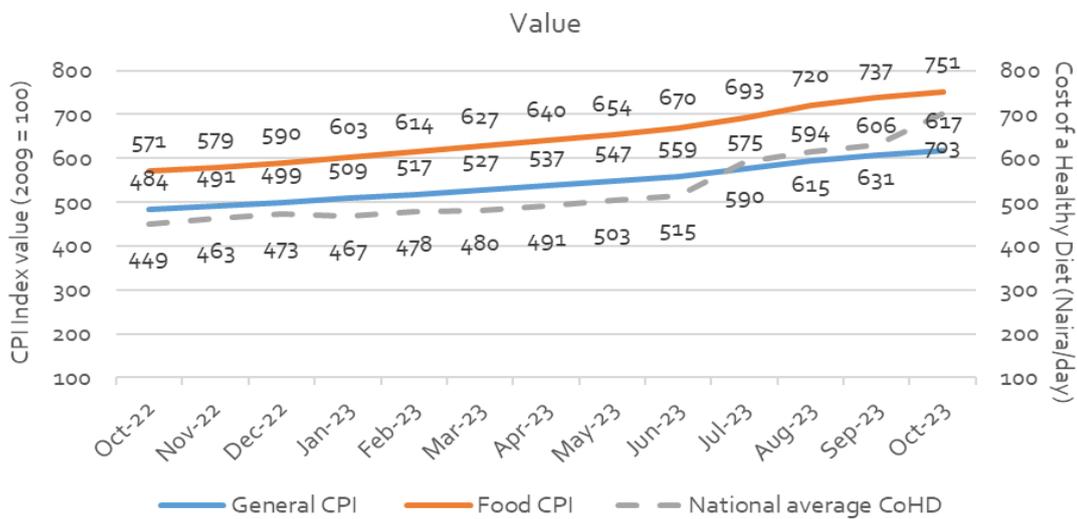


# APPENDIX

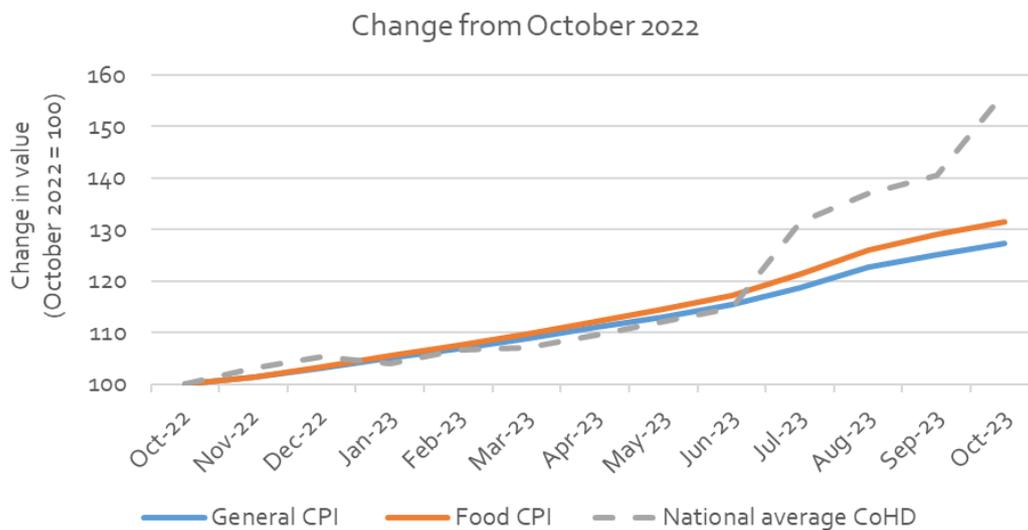
**Figure 2. Zonal Average CoHD**



**Figure 4a. National Average CoHD (Naira/day) and Consumer Price Indexes (2009=100)**



**Figure 4b. National Average CoHD and Consumer Price Indexes (Oct 2022= 100)**



# APPENDIX

**Table 2. States with Least and Most expensive Cost of Items**

October-23	Least Expensive: Adamawa Rural		Most Expensive: Anambra Urban	
	Least-cost item	Cost	Least-cost item	Cost
Starchy staples	Garri White	45	Garri White	100
	Maize Grains White	48	Maize Grains White	118
Oils and fats	Palm Oil	45	Palm Oil	65
Fruits	Pawpaw	31	Avocado Pear	47
	Avocado Pear	29	Coconut	41
Vegetables	Carrot	20	Cucumber	53
	Kuka Dried	3	Bitter Leaf	39
	Bitter Leaf	17	Green Leaf (tete)	50
Legumes, Nuts & Seeds	Soya Beans	28	Soya Beans	71
Animal source foods	Fresh Fish- Tilapia (Epiya)	134	Beef Bone in	212
	Live Local Chicken	62	Agric Eggs	186
<b>Total (CoHD)</b>		<b>462</b>		<b>984</b>

**Table 3. Top 3 most frequently selected least-cost items by Food Group**

Food Group	Item Name	Selected as least-cost % of possible selection
Starchy staples	Millet Whole grain	19%
	Maize Grains White	19%
	Garri White	16%
	Maize Grains Yellow	14%
Oils and fats	Palm Oil	73%
	Vegetable Oil	20%
	Groundnut Oil	4%
Fruits	Coconut	37%
	Avocado Pear	29%
	Date Palm fruit (Debenu)	18%
Vegetables	Bitter Leaf	23%
	Dried Okra	22%
	Kuka Dried	20%
Legumes nuts and seeds	Soya Beans	58%
	Groundnut (shelled)	39%
	Beans Cake( Akara)	3%
Animal source foods	Fresh Milk (Nono)	16%
	Crayfish (small white)	12%
	Dried Fish- Sardine	12%

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