



NATIONAL BUREAU OF STATISTICS



# COST OF A HEALTHY DIET

(DECEMBER 2023)



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Data Sources: National Bureau of Statistics (NBS)

# CONTENT

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INTRODUCTION .....	2
Retail Food Prices.....	2
Healthy Diet Standard .....	2
RESULT .....	3
Average Cost of a Healthy Diet (National, State & Zonal Levels) .....	3
Cost Share by Food Group .....	3
General and Food Inflation Relative to the Cost of a Healthy Diet .....	3
Least-Cost Diets and Frequently Selected Least-Cost Items .....	3
POLICY IMPLICATIONS .....	4
APPENDIX .....	5
Figure 1. Average Cost of a Healthy Diet by State .....	5
Figure 2. Zonal Average CoHD .....	6
Figure 4a. National Average CoHD (Naira/day) and Consumer Price Indexes (2009=100).....	6
Figure 4b. National Average CoHD and Consumer Price Indexes (DEC 2022= 100) .....	6
Table 2. States with Least and Most expensive cost of items .....	7
Table 3. Top 3 most frequently selected least-cost items by Food Group .....	7
CONTACT.....	8

# 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 N786 in December 2023.
- ◆ In December 2023, the average CoHD was highest in the South West at N979 per adult per day, compared to N663 per adult per day in North West.
- ◆ 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) 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. Note, it is from this data that nearly 150 of these food items are potentially included in a healthy diet and used for the computation.

### 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

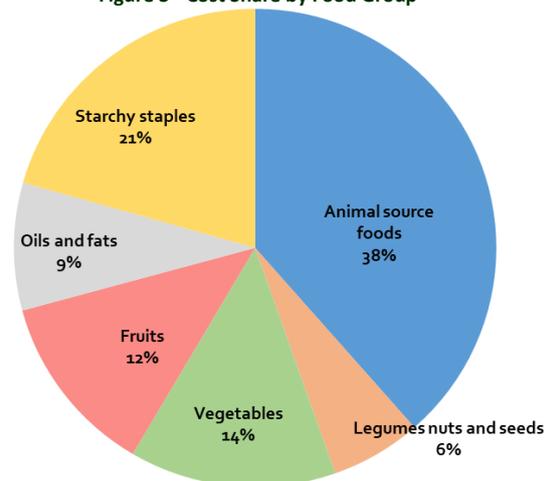
## Average Cost of a Healthy Diet (National, State & Zonal Levels)

The National average Cost of a Healthy Diet was N786 per adult per day in December 2023. At the State level, Ekiti, Osun and Ondo States recorded the highest cost with N1052, N1017, and N986, respectively, while the lowest total diet costs were recorded in Katsina, Niger and Adamawa at N594, N635, and N654, respectively. Lastly, at the Zonal level, the average CoHD was highest in the South West zone at N979 per day, followed by South East zone with N920 per day. The lowest average Cost of a Healthy diet was recorded in North West zone with N663 per day. *(Please see Appendix for full graphic representation)*

## Cost Share by Food Group

Animal Source foods were the most expensive food group recommendation to meet in December, accounting for 38% of the total CoHD to provide 13% of the total calories. Fruits and vegetables were the most expensive food groups in terms of price per calorie; they accounted for 12% and 14%, respectively, of total CoHD while providing only 7% and 5% of total calories in the Healthy Diet Basket. 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 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)* highlights a complete least-cost diet in the least and most expensive locations in December 2023. In December 2023, Adamawa (Rural) had the lowest Cost of a Healthy Diet at N543 per adult per day, while the most expensive location was Ekiti (Rural) with CoHD at N1,067. While there were a few similarities in the least-cost item in December (e.g. Bitter Leaf), the cost per food was different in these locations because of underlying price differences. Most of the food groups had different least-cost items; for example, Guinea Corn Flour were the least-expensive starchy staple in Adamawa (Rural), compared with White Garri in Ekiti (Rural).

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 that some items are commonly the least-cost across different locations. For example, in the Oils and Fats Food group, Palm Oil was the least expensive item in 74% of State-Sectors, and Soya Beans was the least-expensive item in the Legumes, Nuts and Seeds Food Group in 74% of all the State-Sectors. Coconuts were selected as a least-cost item for the Fruits Food Group in 35% of State-Sectors.

# 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:

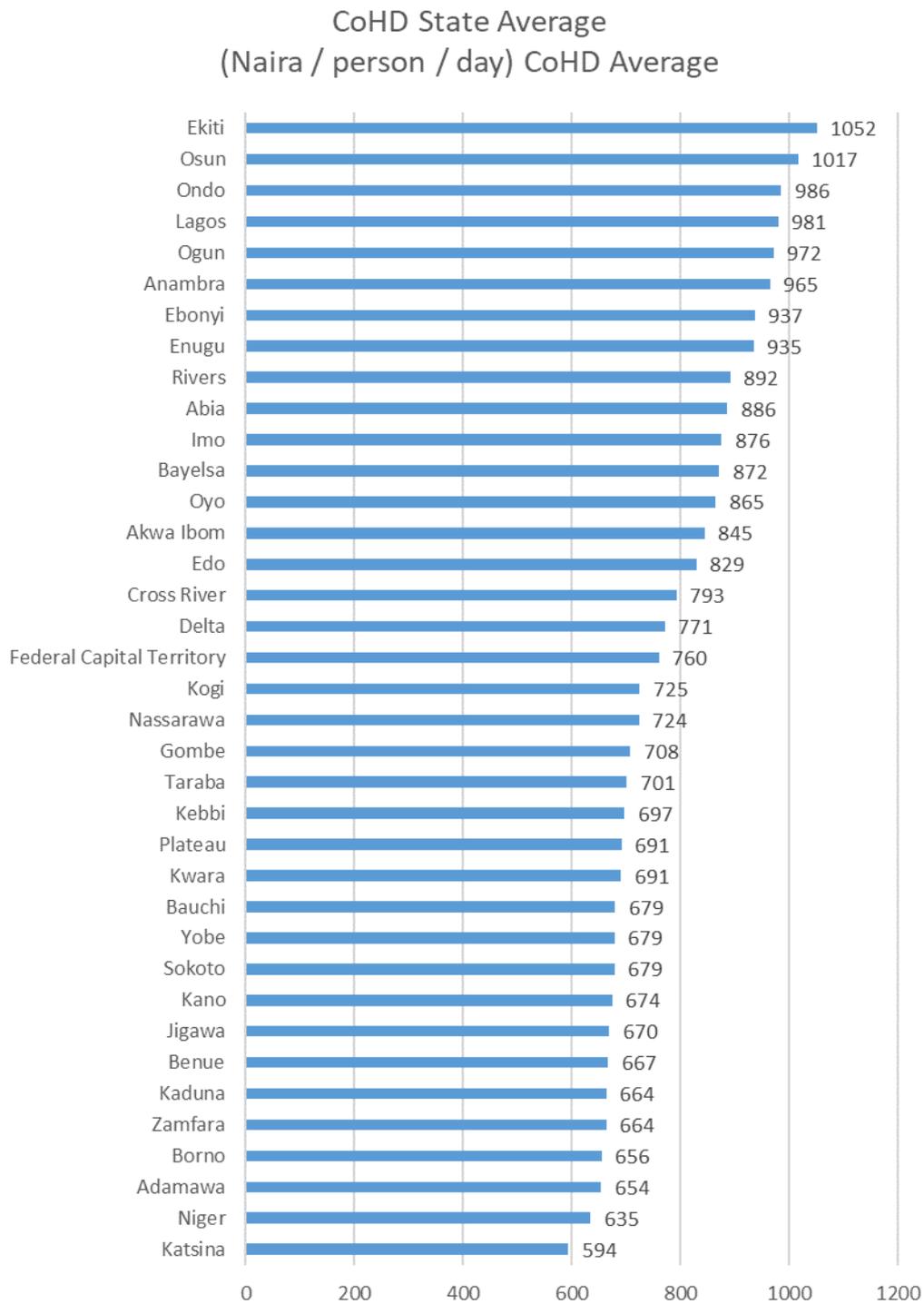
- ◆ The minimum income needed by households to access a healthy diet, and social protection and transfer amounts for vulnerable populations.
- ◆ Prioritization of commodities for agricultural production and trade policy interventions.
- ◆ Targeting interventions, including nutrition education, to populations 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

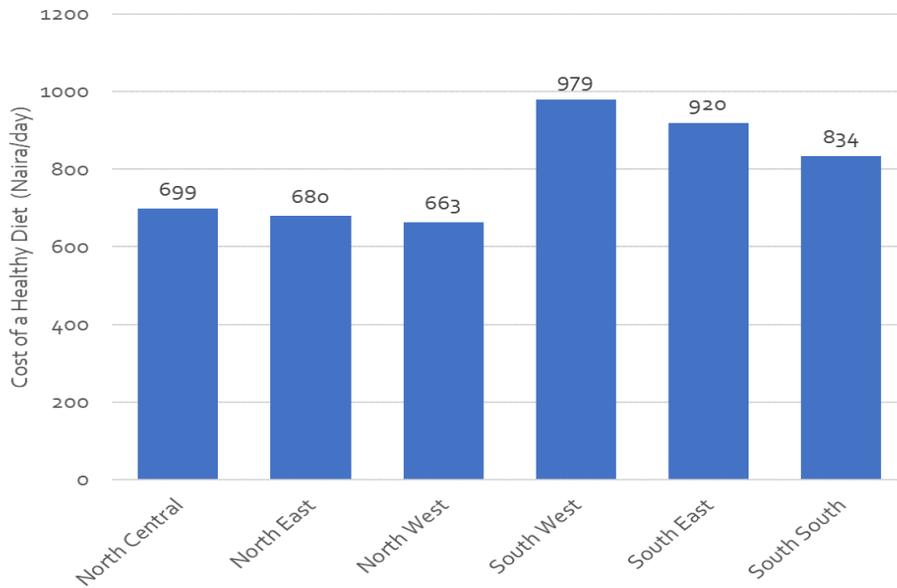


Figure 4a. National Average CoHD (Naira/day) and Consumer Price Indexes (2009=100)

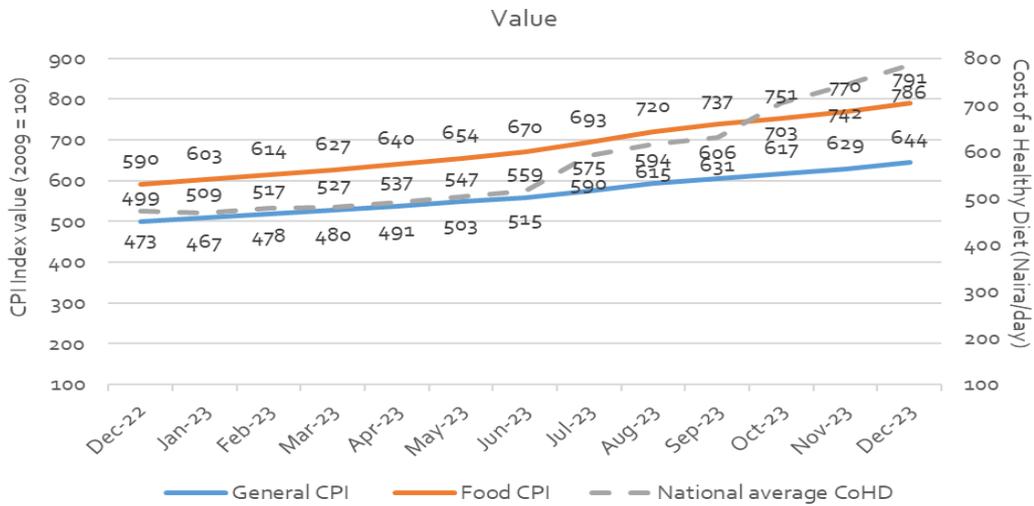
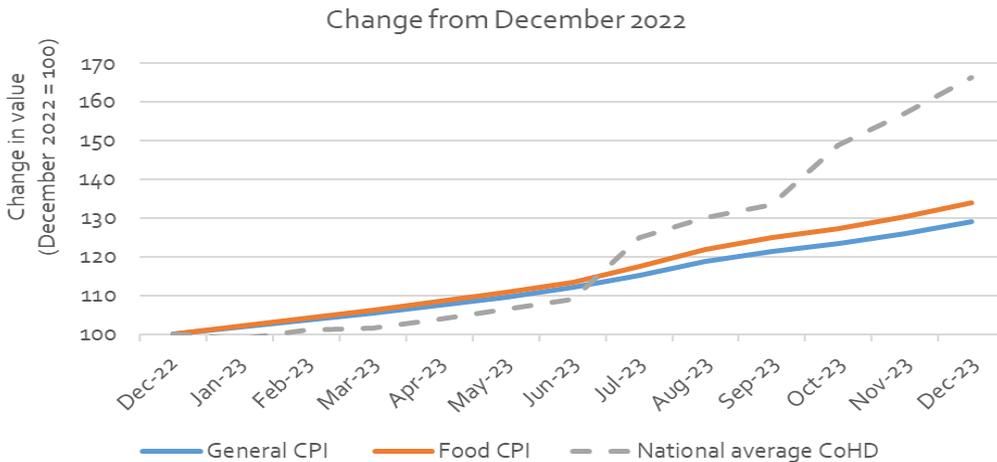


Figure 4b. National Average CoHD and Consumer Price Indexes (Dec 2022= 100)



# APPENDIX

**Table 2. States with Least and Most expensive cost of items**

23-Dec	Adamawa Rural		Ekiti Rural	
	Least-cost item	Cost	Least-cost item	Cost
Starchy staples	Guinea corn flour (sold loose)	60	Garri White	86
	Maize Flour White(Corn flour)	64	Maize Grains White	70
Oils and fats	Palm Oil	50	Vegetable Oil	82
Fruits	Avocado Pear	34	Pawpaw	77
	Fruits(Guava)	30	Coconut without top (Fibro)	39
Vegetables	Kuka Dried	8	Cabbage	86
	Bitter Leaf	26	Bitter Leaf	60
	Dried Okra	15	Green Leaf (tete)	72
Legumes nuts seeds	Groundnut(shelled)	42	Soya Beans	48
Animal source foods	Live Duck	110	Crayfish (small white)	231
	Live Local Chicken	103	Agric Eggs (1 Dozen)	217
<b>Total (CoHD)</b>		<b>543</b>		<b>1,067</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	Maize Grains White	22%
	Garri White	19%
	Millet Whole grain	14%
Oils and fats	Palm Oil	74%
	Vegetable Oil	24%
	Groundnut Oil	1%
Fruits	Coconut	35%
	Date Palm fruit (Debenu)	28%
	Avocado Pear	22%
Vegetables	Dried Okra	26%
	Bitter Leaf	26%
	Kuka Dried	18%
Legumes nuts and seeds	Soya Beans	74%
	Groundnut(shelled)	26%
Animal source foods	Crayfish (small white)	18%
	Fresh Milk(Nono)	15%
	Shrimps Red-dried	11%

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