

**Measuring the Affordability of Nutritious Diets in Africa:
Price Indexes for Diet Diversity and the Cost of Nutrient Adequacy**

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Note:

This annex is supplemental information accompanying the AJAE article entitled "Measuring the Affordability of Nutritious Diets in Africa: Price Indexes for Diet Diversity and the Cost of Nutrient Adequacy". Data and model code for replication of results is available at our project website, <http://sites.tufts.edu/candasa>.

Table A1. Descriptive Statistics of Monthly Food Prices per kg – Ghana (2011\$)

Food Groups	No	Foodstuffs	Obs.	Mean	Std. Dev.	CV	Min	Max
Grains, white roots and tubers, and plantains	1	Cassava	70	0.53	0.11	0.20	0.36	0.76
	2	Cocoyam	70	1.19	0.27	0.23	0.79	1.82
	3	Kokonte	70	1.27	0.21	0.17	0.90	1.81
	4	Gari	70	1.47	0.25	0.17	1.15	2.41
	5	Imported Rice	70	2.68	0.42	0.16	2.19	3.98
	6	Local Rice	70	1.86	0.22	0.12	1.51	2.67
	7	Maize	70	0.95	0.17	0.18	0.69	1.44
	8	Millet	70	1.48	0.19	0.13	1.16	1.94
	9	Paddy Rice	56	1.27	0.40	0.32	0.76	2.73
	10	Plantains	70	1.79	0.60	0.33	1.11	4.12
	11	Sorghum	70	1.20	0.13	0.11	0.97	1.53
	12	Yam	70	1.23	0.20	0.16	0.90	1.75
Pulses	13	Cowpea	70	2.06	0.35	0.17	1.45	2.84
	14	Soybeans	70	1.30	0.31	0.24	0.57	2.11
Nuts & seeds	15	Groundnut	70	3.26	0.62	0.19	2.25	4.45
Meat, poultry and fish	16	Anchovies	70	6.33	1.37	0.22	3.19	11.68
	17	Salted Dried Tilapia Fish	70	2.43	0.58	0.24	0.99	4.15
	18	Smoked Herrings	70	3.15	0.70	0.22	2.01	5.45
Eggs	19	Eggs	70	8.90	0.63	0.07	7.47	10.84
Vitamin A-rich vegetables and fruits	20	Mangoes	70	0.85	0.31	0.36	0.38	1.76
Other vegetables	21	Garden Eggs	70	2.29	0.59	0.26	1.20	4.14
	22	Large Onions	70	3.58	1.16	0.32	1.68	5.81
	23	Tomatoes	70	3.74	1.24	0.33	1.82	7.18
Other fruits	24	Bananas	70	1.69	0.33	0.20	1.02	2.53
	25	Oranges	70	1.35	0.41	0.31	0.55	3.09
	26	Pineapples	70	1.47	0.16	0.11	1.15	1.94

Note: Authors' calculations, from Ghana Ministry of Food and Agriculture data. Two food groups in the MDD-W are not represented in this dataset: Dairy, and Dark Green Leafy Vegetables. Kokonte and Gari refer to processed cassava products. Groundnut refers to shelled groundnut, with prices for unshelled groundnut omitted from data analysis.

Table A2. Descriptive Statistics of Monthly Food Prices per kg – Tanzania (2011\$)

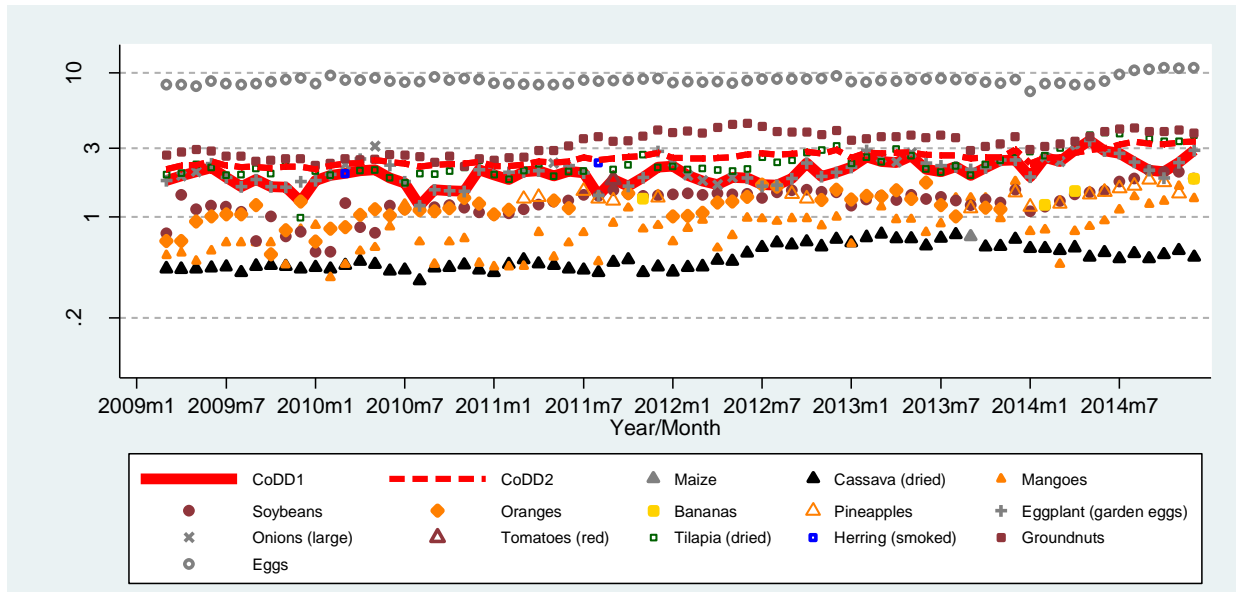
Food Group	No	Foodstuff	Obs.	Mean	Std. Dev.	CV	Min	Max
Grains, white roots and tubers, and plantains	1	Cassava flour	60	2.00	0.23	0.11	1.62	2.63
	2	Cassava fresh	60	1.23	0.11	0.09	0.95	1.43
	3	Cooking Bananas Green	60	2.00	0.11	0.05	1.77	2.32
	4	Finger millet	60	2.55	0.43	0.17	1.89	3.30
	5	Maize Flour	60	1.69	0.20	0.12	1.32	2.28
	6	Potatoes – round	60	1.73	0.10	0.06	1.52	2.02
	7	Rice	60	2.68	0.42	0.16	2.07	3.53
	8	Sweet Potatoes	60	1.47	0.12	0.08	1.25	1.69
	9	Wheat Flour	60	2.24	0.14	0.06	2.03	2.57
	10	White Maize	60	1.11	0.13	0.12	0.89	1.49
Pulses	11	Soybeans	60	2.90	0.11	0.04	2.65	3.10
	12	Lentils	60	3.81	0.35	0.09	3.20	4.40
	13	Red dry beans	60	2.63	0.13	0.05	2.43	2.94
Nuts & seeds	14	Natural Groundnuts	60	3.72	0.31	0.08	3.28	4.44
Dairy	15	Fresh cow milk	60	1.76	0.10	0.05	1.45	1.87
	16	Powdered milk	60	39.56	1.86	0.05	34.77	43.18
Meat, poultry and fish	17	Beef sausage	60	17.48	0.34	0.02	16.95	18.37
	18	Beef with bones	60	10.89	0.52	0.05	9.65	12.32
	19	Beef without bones	60	10.89	0.40	0.04	9.87	12.30
	20	Dried sardines	60	8.99	0.70	0.08	7.68	10.37
	21	Goat meat	60	10.37	0.41	0.04	9.12	11.10
	22	Industrially bred live chicken	60	13.99	0.67	0.05	11.92	14.88
	23	Pork meat	60	11.93	1.04	0.09	9.22	13.63
	24	Traditionally bred live chicken	60	25.34	1.69	0.07	21.16	28.23
Eggs	25	Eggs-layers	60	12.05	0.41	0.03	11.28	12.70
	26	Eggs-traditional	60	16.89	0.99	0.06	14.73	18.11
Dark green leafy vegetables	27	Mchicha (spinach)	60	1.72	0.17	0.10	1.46	2.05
Vitamin A-rich vegetables and fruits	28	Carrots	60	2.89	0.28	0.10	2.46	3.72
	29	Mangoes	60	2.67	0.38	0.14	1.78	3.64
	30	Papaya	60	2.42	0.22	0.09	2.03	2.86

Table A2 (continued)

Food Group	No	Foodstuff	Obs.	Mean	Std. Dev.	CV	Min	Max
Other vegetables	31	Bitter tomatoes	60	2.22	0.12	0.05	1.96	2.68
	32	Egg plant	60	2.36	0.12	0.05	2.12	2.71
	33	Cabbages	60	1.15	0.11	0.10	0.94	1.43
	34	Green peas	60	20.07	1.41	0.07	16.78	23.01
	35	Green bell pepper	60	3.29	0.18	0.06	2.96	3.83
	36	Ladies finger (okra)	60	3.72	0.25	0.07	3.29	4.37
	37	Onions	60	2.57	0.31	0.12	2.08	3.54
	38	Tomatoes red	60	1.88	0.21	0.11	1.50	2.44
Other fruits	39	Apples (Imported)	60	10.18	0.84	0.08	8.24	12.28
	40	Avocado	60	3.05	0.19	0.06	2.67	3.49
	41	Coconut mature	60	8.94	0.83	0.09	7.75	11.10
	42	Lemons	60	3.41	0.59	0.17	2.39	5.22
	43	Limes	60	4.69	0.86	0.18	3.60	7.07
	44	Oranges	60	2.04	0.21	0.10	1.60	2.59
	45	Pineapples	60	3.33	0.33	0.10	2.77	3.99
	46	Sweet banana	60	2.98	0.25	0.08	2.41	3.48

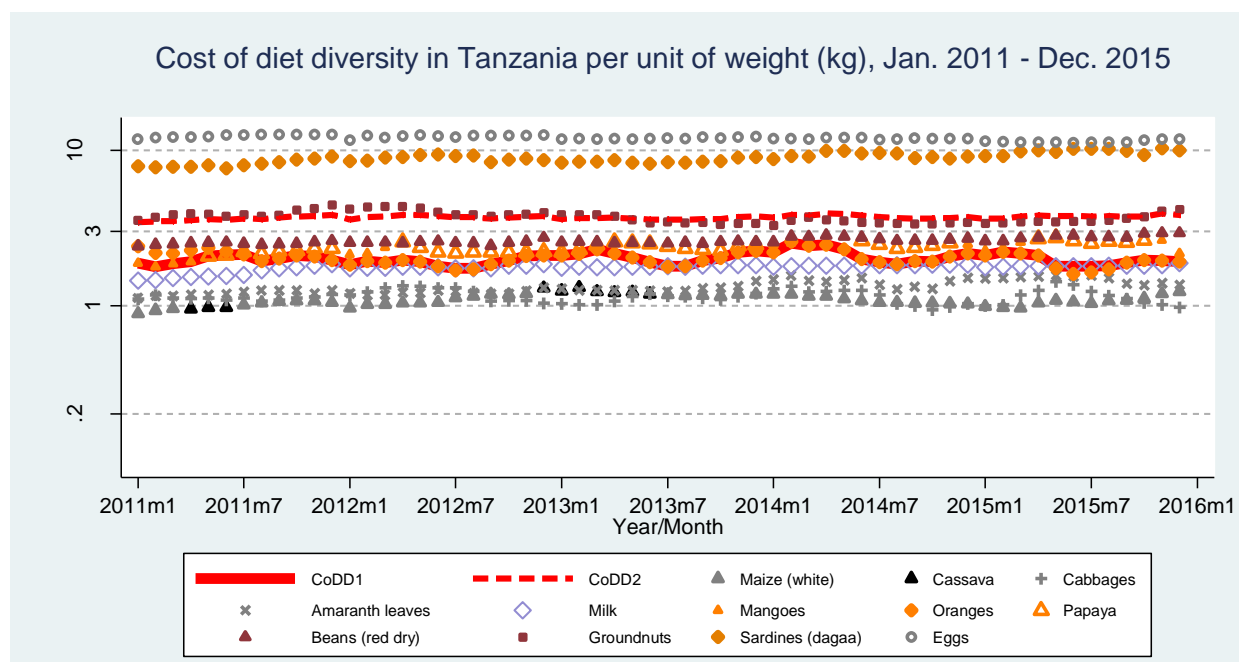
Note: Authors' calculations, from Tanzania Bureau of Statistics data.

Figure A1. Cost of diet diversity in Ghana per unit of weight, March 2009-December 2014



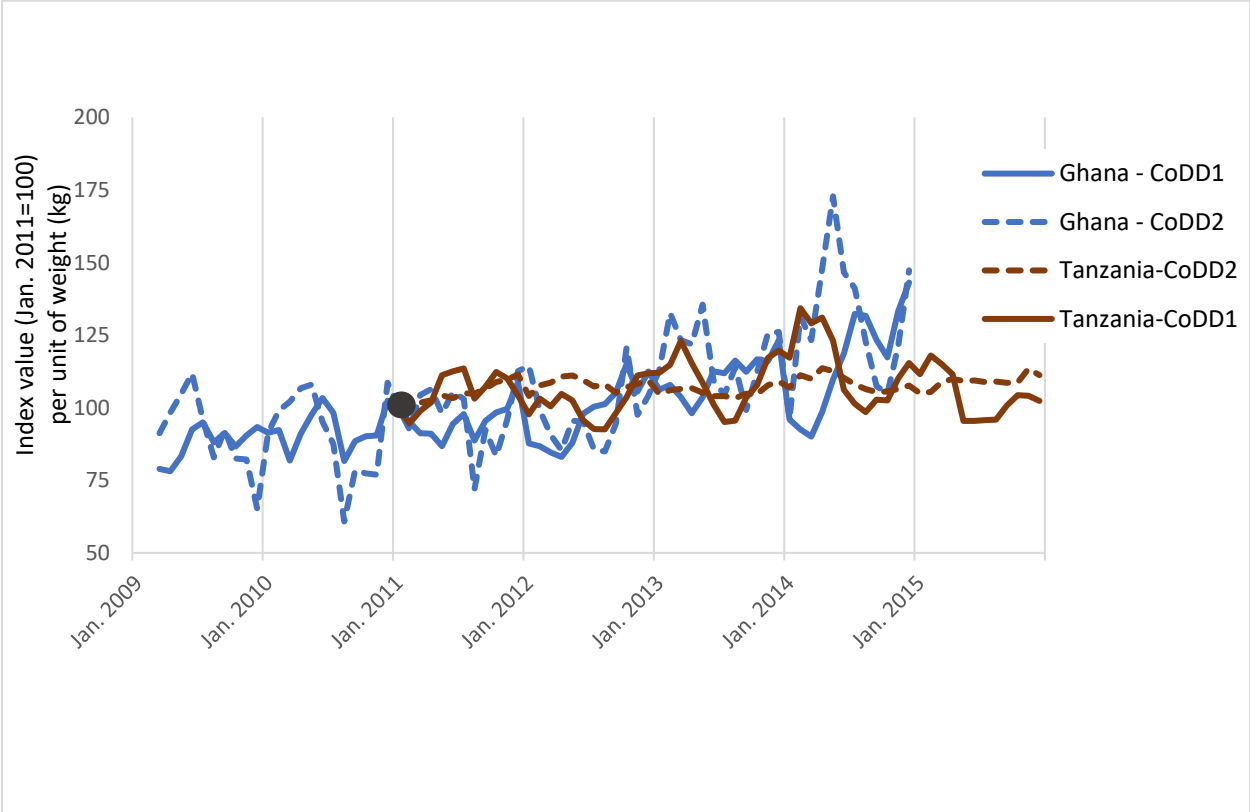
Note: Foods shown are the least-cost item in their food group that month, as defined by the Minimum Dietary Diversity for Women (MDD-W) indicator. Items are ranked in cost per kilogram. CoDD1 is the cost of reaching the 5th group, and CoDD2 is the cost of including all groups. Groups in ascending order of usual cost are starchy staples (cassava & maize), pulses (soybeans), vitamin-A rich fruits and vegetables (mangoes), other fruit (oranges, banana and pineapples), other veg (eggplant, onion, tomatoes), meat/fish (tilapia & herring), nuts/seeds (groundnuts), eggs.

Figure A2. Cost of diet diversity in Tanzania per unit of weight, January 2011 – December 2015



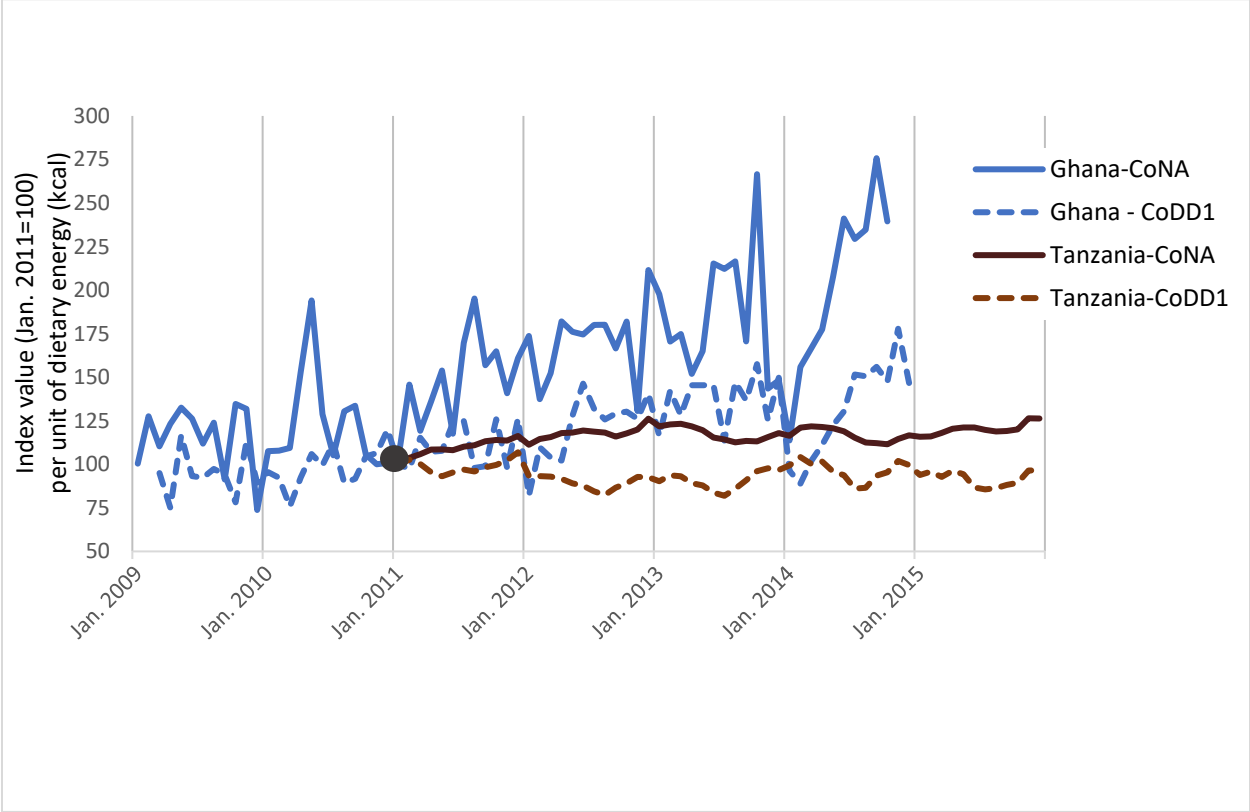
Note: Foods shown are the least-cost item in their food group that month, as defined by the Minimum Dietary Diversity for Women (MDD-W) indicator. Items are ranked in cost per kilogram. CoDD1 is the cost of reaching the 5th group, and CoDD2 is the cost of including all groups. Groups in ascending order of usual cost are starchy staples (cassava & maize), other veg. (cabbage), dark green leafy veg. (amaranth leaves), milk, vitamin-A rich fruits and vegetables (mangoes, papaya), other fruit (oranges), pulses (beans), nuts/seeds (groundnuts), meat/fish (sardines), eggs.

Figure A3. Cost of Diet Diversity indexes for Ghana and Tanzania, 2009-2015 (January 2011 = 100)



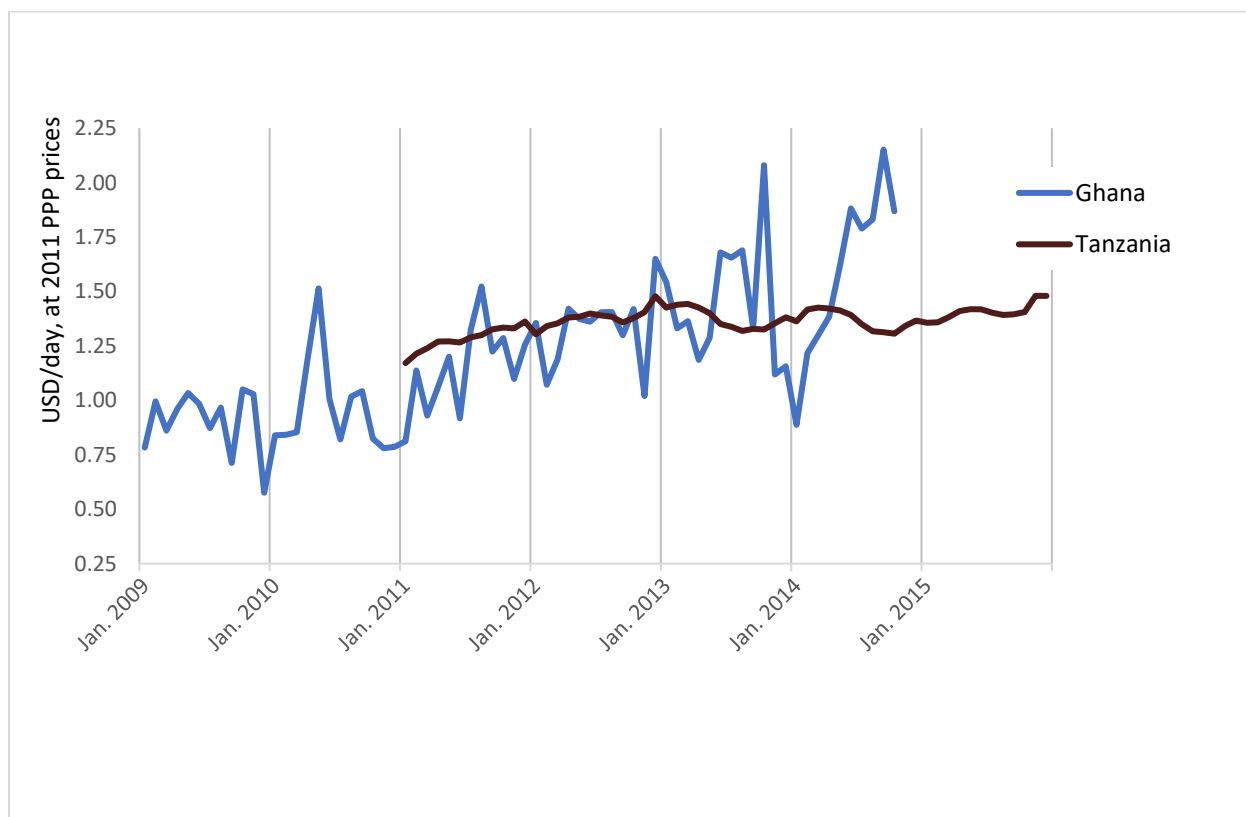
Source: Calculated from Ghana Ministry of Food and Agriculture (MoFA) and Tanzania National Bureau of Statistics (NBS) file data. Index values shown represent changes in the cost of consuming foods from diverse food groups, when using the lowest-priced food in each food group as defined for the Minimum Dietary Diversity for Women (MDD-W) indicator. CoDD1 shows the cost of reaching five food groups, and CoDD2 shows the average cost of including all available groups. Which foods and food groups are included in this minimally diverse diet varies over time and space. Data shown here are relative to January 2011 prices in real USD per kg.

Figure A4. Cost of Diet Diversity (CoDD) and Cost of Nutrient Adequacy (CoNA) indexes for Ghana and Tanzania, 2009-2015 (January 2011 = 100)



Source: Calculated from Ghana Ministry of Food and Agriculture (MoFA) and Tanzania National Bureau of Statistics (NBS) file data. Index values shown represent changes in the cost of meeting energy needs from diverse food groups (CoDD1) and reaching nutrient adequacy (CoNA). Which foods and food groups are included in the index varies over time and space. Data shown here are relative to Jan. 2011 prices in real USD/kcal.

Figure A5. The Cost of Nutrient Adequacy (CoNA) in Ghana and Tanzania, 2009-15



Source: Calculated from Ghana Ministry of Food and Agriculture (MoFA) and Tanzania National Bureau of Statistics (NBS) file data. Index values shown represent the value per day of a least-cost diet, meeting daily needs for dietary energy, protein and 17 micronutrients based on estimated average requirements for an adult woman. Foods included in the least-cost diet vary over time and space, providing a lower bound on the cost of meeting nutrient needs given other goals such as food preferences.

Table A3. Nutritional and Dietary Energy Criteria

No	Nutrient Groups	Nutrients	EARs ¹	Units
1	Dietary Energy	Energy	2,000	kcal/day
2	Macronutrient	Protein ²	36.3	g/day
3	Minerals	Calcium	800	mg/day
4		Iron	8.1	mg/day
5		Magnesium	255	mg/day
6		Phosphorus	580	mg/day
7		Zinc	6.8	mg/day
8		Copper	0.7	mcg/day
9		Selenium	45	mcg/day
10		Vitamins	Vitamin C	60
11	Thiamin		0.9	mg/day
12	Riboflavin		0.9	mg/day
13	Niacin		11	mg/day
14	Vitamin B6		1.1	mg/day
15	Folate		320	mg/day
16	Vitamin B12		2	mcg/day
17	Vitamin A		500	mcg/day
18	Vitamin E		12	mg/day

Note: Data shown are estimated Average Requirement (EAR) for adult women from 19 to 30 years old, from Dietary Reference Intakes (DRIs) developed by the U.S. Institute of Medicine of the National Academies. EAR of protein is calculated based on an adult woman of 55kg at a dietary energy level of 2000 kcal/day.

Table A4. Food Items, Food Groups and Food Composition (Ghana)

Foods	Food Groups	Energy	Protein	Calcium	Iron	Magnesium	Phosphorus	Zinc	Vitamin C	Thiamin	Riboflavin	Niacin	Vitamin B6	Folate	Vitamin B12	Vitamin A	Vitamin E	Copper	Selenium
ANCHOVIES	Meat, poultry and fish	1.310	0.204	1.470	0.033	0.410	1.740	0.017	0.000	0.001	0.003	0.140	0.001	0.090	0.006	0.150	0.006	0.002	0.365
BANANA	Other fruits	0.890	0.011	0.050	0.003	0.270	0.220	0.002	0.087	0.000	0.001	0.007	0.004	0.200	0.000	0.030	0.001	0.001	0.010
CASSAVA	Grains, white roots and tubers, and plantains	1.600	0.014	0.160	0.003	0.210	0.270	0.003	0.206	0.001	0.000	0.009	0.001	0.270	0.000	0.010	0.002	0.001	0.007
COCONUT OIL	Other oils and fats	8.920	0.000	0.010	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
COCOYAM	Grains, white roots and tubers, and plantains	1.120	0.015	0.430	0.006	0.330	0.840	0.002	0.045	0.001	0.000	0.006	0.003	0.220	0.000	0.040	0.024	0.002	0.007
COWPEA	Pulses	3.360	0.235	1.100	0.083	1.840	4.240	0.034	0.015	0.009	0.002	0.021	0.004	6.330	0.000	0.030	0.004	0.008	0.090
DRIED CASSAVA CHIPS (KOKONTE)	Grains, white roots and tubers, and plantains	3.350	0.019	1.380	0.015	0.450	1.020	0.007	0.040	0.001	0.001	0.012	0.002	0.470	0.000	0.000	0.004	0.002	0.000
EGGS	Eggs	1.430	0.126	0.560	0.018	0.120	1.980	0.013	0.000	0.000	0.005	0.001	0.002	0.470	0.009	1.600	0.011	0.001	0.307
GARDEN EGGS	Other vegetables	0.250	0.010	0.090	0.002	0.140	0.240	0.002	0.022	0.000	0.000	0.006	0.001	0.220	0.000	0.010	0.003	0.001	0.003
GARI	Grains, white roots and tubers, and plantains	3.350	0.019	1.380	0.015	0.450	1.020	0.007	0.040	0.001	0.001	0.012	0.002	0.470	0.000	0.000	0.004	0.002	0.000
GROUNDNUT	Nuts and seeds	5.670	0.258	0.920	0.046	1.680	3.760	0.033	0.000	0.006	0.001	0.121	0.003	2.400	0.000	0.000	0.083	0.011	0.072
GROUNDNUT OIL	Other oils and fats	8.840	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.157	0.000	0.000
IMPORTED RICE	Grains, white roots and tubers, and plantains	3.650	0.071	0.280	0.008	0.250	1.150	0.011	0.000	0.001	0.000	0.016	0.002	0.080	0.000	0.000	0.001	0.002	0.151

Table A4 (continued)

Foods	Food Groups	Energy	Protein	Calcium	Iron	Magnesium	Phosphorus	Zinc	Vitamin C	Thiamin	Riboflavin	Niacin	Vitamin B6	Folate	Vitamin B12	Vitamin A	Vitamin E	Copper	Selenium
LARGE ONIONS	Other vegetables	0.400	0.011	0.230	0.002	0.100	0.290	0.002	0.074	0.000	0.000	0.001	0.001	0.190	0.000	0.000	0.000	0.000	0.005
LOCAL RICE	Grains, white roots and tubers, and plantains	3.580	0.065	0.030	0.008	0.230	0.950	0.011	0.000	0.001	0.000	0.016	0.002	0.060	0.000	0.000	0.000	0.002	0.000
MAIZE	Grains, white roots and tubers, and plantains	3.650	0.094	0.070	0.027	1.270	2.100	0.022	0.000	0.004	0.002	0.036	0.006	0.190	0.000	0.110	0.005	0.003	0.155
MANGOES	Vitamin A-rich vegetables and fruits	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MILLET	Grains, white roots and tubers, and plantains	3.780	0.110	0.080	0.030	1.140	2.850	0.017	0.000	0.004	0.003	0.047	0.004	0.850	0.000	0.000	0.001	0.008	0.027
ORANGES	Other fruits	0.460	0.007	0.430	0.001	0.100	0.120	0.001	0.450	0.001	0.000	0.004	0.001	0.170	0.000	0.110	0.002	0.000	0.005
PADDY RICE	Grains, white roots and tubers, and plantains	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PALM OIL	Other oils and fats	8.840	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.159	0.000	0.000
PINEAPPLE	Other fruits	0.500	0.005	0.130	0.003	0.120	0.080	0.001	0.478	0.001	0.000	0.005	0.001	0.180	0.000	0.030	0.000	0.001	0.001
PLANTAIN	Grains, white roots and tubers, and plantains	1.220	0.013	0.030	0.006	0.370	0.340	0.001	0.184	0.001	0.001	0.007	0.003	0.220	0.000	0.560	0.001	0.001	0.015

Table A4 (continued)

Foods	Food Groups	Energy	Protein	Calcium	Iron	Magnesium	Phosphorus	Zinc	Vitamin C	Thiamin	Riboflavin	Niacin	Vitamin B6	Folate	Vitamin B12	Vitamin A	Vitamin E	Copper	Selenium
SALTED DRIED TILAPIA FISH	Meat, poultry and fish	0.960	0.201	0.100	0.006	0.270	1.700	0.003	0.000	0.000	0.001	0.039	0.002	0.240	0.016	0.000	0.004	0.001	0.418
SMOKED HERRINGS	Meat, poultry and fish	1.580	0.180	0.570	0.011	0.320	2.360	0.010	0.007	0.001	0.002	0.032	0.003	0.100	0.137	0.280	0.011	0.001	0.365
SORGHUM	Grains, white roots and tubers, and plantains	3.290	0.106	0.130	0.034	1.650	2.890	0.017	0.000	0.003	0.001	0.037	0.004	0.200	0.000	0.000	0.005	0.003	0.122
SOYBEANS	Pulses	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOMATOES	Other vegetables	0.180	0.009	0.100	0.003	0.110	0.240	0.002	0.137	0.000	0.000	0.006	0.001	0.150	0.000	0.420	0.005	0.001	0.000
YAM	Grains, white roots and tubers, and plantains	1.180	0.015	0.170	0.005	0.210	0.550	0.002	0.171	0.001	0.000	0.006	0.003	0.230	0.000	0.070	0.004	0.002	0.007

Note: Food groups apply the definition of MDD-W. Food composition data sources include National Nutrient Database for Standard Reference (USDA) and FAO's West African Food Composition Table. Data shown are nutrients contents per gram of food items. Unit is kcal for dietary energy, g for protein, mg for calcium, iron, magnesium, phosphorus, zinc, vitamin C, thiamin, riboflavin, niacin, vitamin B6, folate, and vitamin E; and mcg for vitamin B12, vitamin A, copper and selenium.

Table A5. Food Items, Food Groups and Food Compositions (Tanzania)

Foods	Food Groups	Energy	Protein	Calcium	Iron	Magnesium	Phosphorus	Zinc	Vitamin C	Thiamin	Riboflavin	Niacin	Vitamin B6	Folate	Vitamin B12	Vitamin A	Vitamin E	Copper	Selenium
APPLES (IMPORTED)	Other fruits	0.520	0.003	0.060	0.001	0.050	0.110	0.000	0.046	0.000	0.000	0.001	0.000	0.030	0.000	0.030	0.002	0.000	0.000
AVOCADO	Other fruits	1.600	0.020	0.120	0.006	0.290	0.520	0.006	0.100	0.001	0.001	0.017	0.003	0.810	0.000	0.070	0.021	0.002	0.004
SOYBEANS (BLANKETI)	Pulses	4.460	0.365	2.770	0.157	2.800	7.040	0.049	0.060	0.009	0.009	0.016	0.004	3.750	0.000	0.010	0.009	0.017	0.178
BEEF SAUSAGE	Meat, poultry and fish	4.050	0.155	0.150	0.015	0.130	1.850	0.029	0.007	0.000	0.001	0.032	0.002	0.050	0.020	0.250	0.005	0.001	0.000
BEEF WITHOUT BONES (STEAK)	Meat, poultry and fish	2.780	0.175	0.080	0.019	0.170	1.560	0.036	0.000	0.001	0.002	0.035	0.003	0.070	0.027	0.000	0.000	0.001	0.159
BITTER TOMATOES (NYANYA CHUNGU)	Other vegetables	0.250	0.010	0.090	0.002	0.140	0.240	0.002	0.022	0.000	0.000	0.006	0.001	0.220	0.000	0.010	0.003	0.001	0.003
BRINJALS/EGG PLANT (BILINGANYA)	Other vegetables	0.250	0.010	0.090	0.002	0.140	0.240	0.002	0.022	0.000	0.000	0.006	0.001	0.220	0.000	0.010	0.003	0.001	0.003
CABBAGES	Other vegetables	0.410	0.009	0.330	0.003	0.120	0.350	0.002	0.059	0.001	0.001	0.010	0.001	0.190	0.000	8.350	0.007	0.000	0.001
CARROTS	Vitamin A-rich vegetables and fruits	0.410	0.009	0.330	0.003	0.120	0.350	0.002	0.059	0.001	0.001	0.010	0.001	0.190	0.000	8.350	0.007	0.000	0.001
CASSAVA FLOUR	Grains, white roots and tubers, and plantains	3.350	0.019	1.380	0.015	0.450	1.020	0.007	0.040	0.001	0.001	0.012	0.002	0.470	0.000	0.000	0.004	0.002	0.000
CASSAVA FRESH	Grains, white roots and tubers, and plantains	1.600	0.014	0.160	0.003	0.210	0.270	0.003	0.206	0.001	0.000	0.009	0.001	0.270	0.000	0.010	0.002	0.001	0.007
COCONUT MATURE (ISYOVUNJWA)	Other fruits	1.620	0.016	0.190	0.022	0.170	1.110	0.004	0.020	0.001	0.001	0.006	0.000	0.120	0.000	0.000	0.003	0.002	0.000

Table A5 (continued)

Foods	Food Groups	Energy	Protein	Calcium	Iron	Magnesium	Phosphorus	Zinc	Vitamin C	Thiamin	Riboflavin	Niacin	Vitamin B6	Folate	Vitamin B12	Vitamin A	Vitamin E	Copper	Selenium
COOKING BANANA GREEN	Grains, white roots and tubers, and plantains	1.220	0.013	0.030	0.006	0.370	0.340	0.001	0.184	0.001	0.001	0.007	0.003	0.220	0.000	0.560	0.001	0.001	0.015
COOKING FAT	Other oils and fats	7.170	0.009	0.240	0.000	0.020	0.240	0.001	0.000	0.000	0.000	0.000	0.000	0.030	0.002	6.840	0.023	0.000	0.010
COOKING OIL VARIETY	Other oils and fats	8.840	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.382	0.000	0.000
DRIED SARDINES (DAGAA)	Meat, poultry and fish	1.500	0.280	1.030	0.023	0.460	3.670	0.023	0.000	0.000	0.002	0.109	0.013	0.050	0.143	0.250	0.011	0.001	0.000
FINGER MILLET GRAINS (PUNJE ZA ULEZI)	Grains, white roots and tubers, and plantains	3.780	0.110	0.080	0.030	1.140	2.850	0.017	0.000	0.004	0.003	0.047	0.004	0.850	0.000	0.000	0.001	0.008	0.027
FRESH COW MILK	Dairy	0.610	0.032	1.130	0.000	0.100	0.840	0.004	0.000	0.000	0.002	0.001	0.000	0.050	0.005	0.460	0.001	0.000	0.037
GOAT MEAT	Meat, poultry and fish	1.090	0.206	0.130	0.028	0.000	1.800	0.040	0.000	0.001	0.005	0.038	0.000	0.050	0.011	0.000	0.000	0.003	0.088
GREEN PEAS (NIEGERE - ZILIZOMENYWA)	Pulses	0.420	0.028	0.430	0.021	0.240	0.530	0.003	0.600	0.002	0.001	0.006	0.002	0.420	0.000	0.540	0.004	0.001	0.007
GREEN PEPPER (HOHO)	Other vegetables	0.200	0.009	0.100	0.003	0.100	0.200	0.001	0.804	0.001	0.000	0.005	0.002	0.100	0.000	0.180	0.004	0.001	0.000
INDUSTRIALLY BRED LIVE CHICKEN - (BROILERS)	Meat, poultry and fish	2.130	0.183	0.110	0.013	0.200	1.490	0.015	0.026	0.001	0.002	0.066	0.003	0.300	0.011	2.320	0.000	0.001	0.118
LADIES FINGER/OKRA (BAMIA)	Other vegetables	0.330	0.019	0.820	0.006	0.570	0.610	0.006	0.230	0.002	0.001	0.010	0.002	0.600	0.000	0.360	0.003	0.001	0.007
LEMONS	Other fruits	0.290	0.011	0.260	0.006	0.080	0.160	0.001	0.530	0.000	0.000	0.001	0.001	0.110	0.000	0.010	0.002	0.000	0.004

Table A5 (continued)

Foods	Food Groups	Energy	Protein	Calcium	Iron	Magnesium	Phosphorus	Zinc	Vitamin C	Thiamin	Riboflavin	Niacin	Vitamin B6	Folate	Vitamin B12	Vitamin A	Vitamin E	Copper	Selenium
LENTILS (CHOROKO)	Pulses	2.970	0.254	0.610	0.070	1.030	3.910	0.039	0.000	0.006	0.002	0.023	0.007	2.950	0.000	0.030	0.005	0.007	0.000
LIMES	Other fruits	0.300	0.007	0.330	0.006	0.060	0.180	0.001	0.291	0.000	0.000	0.002	0.000	0.080	0.000	0.020	0.002	0.001	0.004
MAIZE FLOUR (WHITE)	Grains, white roots and tubers, and plantains	3.610	0.069	0.070	0.024	0.930	2.720	0.017	0.000	0.002	0.001	0.019	0.004	0.250	0.000	0.000	0.004	0.002	0.154
MANGOES	Vitamin A-rich fruits and vegetables	0.600	0.008	0.110	0.002	0.100	0.140	0.001	0.364	0.000	0.000	0.007	0.001	0.430	0.000	0.540	0.009	0.001	0.006
MARGARINE	Other oils and fats	7.190	0.009	0.300	0.000	0.030	0.230	0.000	0.002	0.000	0.000	0.000	0.000	0.010	0.001	8.190	0.031	0.000	0.000
MCHICHA (SPINACH)	Dark green leafy vegetables	0.230	0.029	0.990	0.027	0.790	0.490	0.005	0.281	0.001	0.002	0.007	0.002	1.940	0.000	4.690	0.020	0.001	0.010
NATURAL GROUNDNUTS (UN ROASTED)	Nuts and seeds	5.670	0.258	0.920	0.046	1.680	3.760	0.033	0.000	0.006	0.001	0.121	0.003	2.400	0.000	0.000	0.083	0.011	0.072
ONE EGG LAYERS	Eggs	1.430	0.126	0.560	0.018	0.120	1.980	0.013	0.000	0.000	0.005	0.001	0.002	0.470	0.009	1.600	0.011	0.001	0.307
ONE EGG TRADITIONAL	Eggs	1.430	0.126	0.560	0.018	0.120	1.980	0.013	0.000	0.000	0.005	0.001	0.002	0.470	0.009	1.600	0.011	0.001	0.307
ORANGES	Other fruits	0.460	0.007	0.430	0.001	0.100	0.120	0.001	0.450	0.001	0.000	0.004	0.001	0.170	0.000	0.110	0.002	0.000	0.005
PAPAYA – PAWPAW	Vitamin A-rich fruits and vegetables	0.430	0.005	0.200	0.003	0.210	0.100	0.001	0.609	0.000	0.000	0.004	0.000	0.370	0.000	0.470	0.003	0.000	0.006
PINEAPPLES	Other fruits	0.500	0.005	0.130	0.003	0.120	0.080	0.001	0.478	0.001	0.000	0.005	0.001	0.180	0.000	0.030	0.000	0.001	0.001
PORK MEAT	Meat, poultry and fish	3.760	0.139	0.190	0.007	0.130	1.550	0.016	0.004	0.006	0.002	0.038	0.003	0.040	0.006	0.020	0.003	0.001	0.284

Table A5 (continued)

Foods	Food Groups	Energy	Protein	Calcium	Iron	Magnesium	Phosphorus	Zinc	Vit C	Thiamin	Riboflavin	Niacin	Vit B6	Folate	Vit B12	Vit A	Vit E	Copper	Selenium
POTATOES - ROUND/IRISH	Grains, white roots and tubers, and plantains	0.770	0.021	0.120	0.008	0.230	0.570	0.003	0.197	0.001	0.000	0.011	0.003	0.150	0.000	0.000	0.000	0.001	0.004
POWDERED MILK	Dairy	4.950	0.259	9.680	0.007	0.910	7.350	0.035	0.113	0.003	0.013	0.007	0.003	0.390	0.033	2.280	0.005	0.001	0.000
RED DRY BEANS	Pulses	3.370	0.225	0.830	0.067	1.380	4.060	0.028	0.045	0.006	0.002	0.021	0.004	3.940	0.000	0.000	0.002	0.007	0.032
RICE	Grains, white roots and tubers, and plantains	3.600	0.066	0.090	0.008	0.350	1.080	0.012	0.000	0.001	0.000	0.016	0.001	0.090	0.000	0.000	0.000	0.001	0.000
ROUND ONIONS	Other vegetables	0.400	0.011	0.230	0.002	0.100	0.290	0.002	0.074	0.000	0.000	0.001	0.001	0.190	0.000	0.000	0.000	0.000	0.005
SWEET POTATOES	Grains, white roots and tubers, and plantains	0.860	0.016	0.300	0.006	0.250	0.470	0.003	0.024	0.001	0.001	0.006	0.002	0.110	0.000	7.090	0.003	0.002	0.006
SWEET BANANA	Other fruits	0.890	0.011	0.050	0.003	0.270	0.220	0.002	0.087	0.000	0.001	0.007	0.004	0.200	0.000	0.030	0.001	0.001	0.010
TOMATOES RED	Other vegetables	0.180	0.009	0.100	0.003	0.110	0.240	0.002	0.137	0.000	0.000	0.006	0.001	0.150	0.000	0.420	0.005	0.001	0.000
TRADITIONALLY BRED LIVE CHICKEN (KUKU WA KIENYEJI)	Meat, poultry and fish	2.130	0.183	0.110	0.013	0.200	1.490	0.015	0.026	0.001	0.002	0.066	0.003	0.300	0.011	2.320	0.000	0.001	0.118
WHEAT FLOUR	Grains, white roots and tubers, and plantains	3.640	0.103	0.150	0.012	0.220	1.080	0.007	0.000	0.001	0.000	0.013	0.000	0.260	0.000	0.000	0.001	0.001	0.339
WHITE MAIZE GRAINS	Grains, white roots and tubers, and plantains	3.650	0.094	0.070	0.027	1.270	2.100	0.022	0.000	0.004	0.002	0.036	0.006	0.000	0.000	0.000	0.000	0.003	0.155

Note: Food groups apply the definition of MDD-W. Food composition data sources include National Nutrient Database for Standard Reference (USDA) and FAO's West African Food Composition Table. Data shown are nutrients contents per gram of food items. Unit is kcal for dietary energy, g for protein, mg for calcium, iron, magnesium, phosphorus, zinc, vitamin C, thiamin, riboflavin, niacin, vitamin B6, folate, and vitamin E; and mcg for vitamin B12, vitamin A, copper and selenium.