ANNEX II

Malawi

LIBRARY OF NONSTANDARD UNIT CONVERSION FACTORS AND REFERENCE PHOTOS

DOCUMENTATION

The Malawi Non-Standard Unit Library was initially created for the Malawi Third Integrated Household Survey (IHS3) 2010/11, and was further built upon for the Malawi Integrated Household Panel Survey (IHPS) 2013. The full dataset can be used with all IHS datasets. Detailed documentation on the creation of the dataset is annexed below. This library includes the following:

- Valid NSU combinations tables: Showing all valid combinations of item-units allowed for NSU reporting. There are three separate tables: (1) consumption allowable item-units, (2) field crop allowable crop-unit-conditions, and (3) permanent and tree crop allowable crop-units.
- Conversion factor tables: Lists of all available conversion factors for items reported in NSUs. There are three separate tables of conversion factors corresponding to the NSU combination tables listed above. Note that conversion factors may not exist for all valid item-unit pairings. When measurements do not exist, they have been omitted from the conversion tables. The conversion factor tables are provided in excel format in the files accompanying this document. The conversion factor tables in Stata format are included with the IHS3 data, available for download here.
- Reference photos used during IHS3

Researchers planning future fieldwork and incorporating NSU options from the planning phase can use a streamlined version of this NSU library, eliminating some of the overlap in unit codes and regional variation in unit measurements. In such cases, start by using the recommended valid combinations for consumption and agriculture, which eliminates both duplicate unit codes and easily-confused item-unit pairs. Photo references should be used for all of the NSUs listed and item-units in the photo should have known standard weights. This will also allow research teams to use a simpler version of the conversion factors table, as regional variation in weights can be eliminated by the use of standardize photo references throughout the country. For example, the respondent can indicate the medium size papaya in the photo as being similar to the one consumed, even if in that region a papaya of this size is considered large; the enumerator records it as medium, mitigating regional differences.

When streamlining the conversion factors dataset to match the recommended valid combinations, be sure to use the weight conversions that match the items photographed. Where such photo-data combinations are not provided, research teams should plan to collect this information prior to fieldwork. Refer to the main NSU Sourcebook for detailed instructions on how to best collect this data.

The conversion factor datasets, item-unit reference photos, and further documentation on how the data was collected will be uploaded to the LSMS website as part of the Malawi dataset.

ALLOWABLE ITEM-UNIT COMBINATIONS

Table A3: Malawi consumption item-unit combinations

		PAIL (SMALL)	PAIL - SMALL	PAIL - MEDIUM	PAIL - LARGE	PAIL (LARGE)	No.10 PLATE	No. 10 PLATE - FLAT	No. 10 PLATE - HEAPED	No.12 PLATE	BUNCH	BUNCH - SMALL	BUNCH - MEDIUM	BUNCH - LARGE	PIECE	PIECE - SMALL	PIECE - MEDIUM	PIECE - LARGE	HEAP	HEAP - SMALL	HEAP - MEDIUM	HEAP - LARGE	HEAP - SMALL	HEAP - MEDIUM	HEAP - LARGE	CUP	TIN	TEASPOON	BASIN	SATCHET/TUBE	SATCHET/TUBE - SMALL	SATCHET/TUBE - MEDIUM	SATCHET/TUBE - LARGE
		4	4A	4B	4C	5	6	6A	6B	7	8	8A	8B	8C	9	9A	9B	9C	10	10A	10B	10C	10D	10E	10F	16	17	20	21	22	22A	22B	22C
Cereals, Grains, and Cereal Products																																	
101	Maize ufa mgaiwa (normal flour)	X	X	X	X	X	X			X																			X				
102	Maize ufa refined (fine flour)	X	X	X	X	X	X			X																			X				
103	Maize ufa madeya (bran flour)	X	X	X	X	X																											
104	Maize grain (not as ufa)	X	X	X	X	X	X			X																X			X				
105	Green maize															X	X	X															
106	Rice	X	X	X	X	X	X			X																X			X				
107	Finger millet (mawere)						X			X																X			X				
108	Sorghum (mapira)						X			X																			X				
109	Pearl millet (mchewere)	X	X	X	X	X																											
110	Wheat flour	X													X																		
111	Bread														X																		
112	Buns, scones														X																		
113	Biscuits														X															X			
114	Spaghetti, macaroni, pasta														X																		
Roots, Tubers, and Plantains																																	
201	Cassava tubers	X	X	X	X	X									X	X	X	X															
202	Cassava flour	X	X	X	X	X	X			X																							
203	White sweet potato	X	X	X	X	X									X	X	X	X	X	X	X	X											
204	Orange sweet potato	X													X	X	X	X	X	X	X	X											
205	Irish potato	X	X	X	X	X													X										X				
206	Potato crisps																													X			
207	Plantain, cooking banana	X									X	X	X	X	X				X														
208	Cocoyam (masimbi)														X				X														
Nuts and Pulses																																	
301	Bean, white	X					X			X									X							X							
302	Bean, brown	X					X	X	X	X									X							X			X				
303	Pigeonpea (nandolo)	X					X	X	X	X									X							X			X				
304	Groundnut	X				X	X	X	X	X									X							X			X				
305	Groundnut flour	X						X	X	X									X														
306	Soybean flour						X			X																							
307	Ground bean (nzama)						X			X																							
308	Cowpea (khobwe)						X			X									X														

		PAIL (SMALL)	PAIL - SMALL	PAIL - MEDIUM	PAIL - LARGE	PAIL (LARGE)	No.10 PLATE	No. 10 PLATE - FLAT	No. 10 PLATE - HEAPED	No.12 PLATE	BUNCH	BUNCH - SMALL	BUNCH - MEDIUM	BUNCH - LARGE	PIECE	PIECE - SMALL	PIECE - MEDIUM	PIECE - LARGE	HEAP	HEAP - SMALL	HEAP - MEDIUM	HEAP - LARGE	HEAP - SMALL	HEAP - MEDIUM	HEAP - LARGE	CUP	TIN	TEASPOON	BASIN	SATCHET/TUBE	SATCHET/TUBE - SMALL	SATCHET/TUBE - MEDIUM	SATCHET/TUBE - LARGE
		4	4A	4B	4C	5	6	6A	6B	7	8	8A	8B	8C	9	9A	9B	9C	10	10A	10B	10C	10D	10E	10F	16	17	20	21	22	22A	22B	22C
Vegetables																																		
401	Onion											X	X	X		X	X	X	X															
402	Cabbage															X	X	X	X															
403	Tanaposi/Rape											X	X	X	X				X															
404	Nkhwani									X	X				X					X	X	X												
405	Chinese cabbage										X				X				X															
406	Other cultivated greens						X			X	X								X															
407	Gathered wild green leaves										X								X															
408	Tomato	X													X	X	X	X	X	X	X	X							X					
409	Cucumber														X				X															
410	Pumpkin															X	X	X																
411	Okra / Therere															X	X	X		X	X	X												
413	Mushroom														X				X															
Meat, Fish, and Animal Products																																		
501	Eggs														X																			
502	Dried fish															X	X	X		X	X	X	X	X	X									
503	Fresh fish															X	X	X		X	X	X	X	X	X									
504	Beef														X																			
505	Goat														X																			
506	Pork														X																			
507	Mutton														X																			
508	Chicken														X																			
509	Other poultry - guinea fowl														X																			
511	Termites, other insects (eg ngumbi, caterpillar)						X			X									X															
512	Tinned meat or fish																										X							
513	Smoked fish														X				X															
Fruits																																		
601	Mango	X									X					X	X	X	X															
602	Banana											X	X	X		X	X	X	X															
603	Citrus - naartje, orange, etc.														X														X					
604	Pineapple														X																			
605	Papaya														X																			
606	Guava	X													X	X	X	X											X					

		PAIL (SMALL)	PAIL - SMALL	PAIL - MEDIUM	PAIL - LARGE	PAIL (LARGE)	No.10 PLATE	No. 10 PLATE - FLAT	No. 10 PLATE - HEAPED	No.12 PLATE	BUNCH	BUNCH - SMALL	BUNCH - MEDIUM	BUNCH - LARGE	PIECE	PIECE - SMALL	PIECE - MEDIUM	PIECE - LARGE	HEAP	HEAP - SMALL	HEAP - MEDIUM	HEAP - LARGE	HEAP - SMALL	HEAP - MEDIUM	HEAP - LARGE	CUP	TIN	TEASPOON	BASIN	SATCHET/TUBE	SATCHET/TUBE - SMALL	SATCHET/TUBE - MEDIUM	SATCHET/TUBE - LARGE
		4	4A	4B	4C	5	6	6A	6B	7	8	8A	8B	8C	9	9A	9B	9C	10	10A	10B	10C	10D	10E	10F	16	17	20	21	22	22A	22B	22C
607	Avocado														X																			
608	Wild fruit (masau, malambe, etc)	X					X			X					X				X															
609	Apple														X																			
Milk and Milk Products																																		
702	Powdered milk																											X		X				
703	Margarine - Blue band														X															X				
705	Chambiko - soured milk																													X				
706	Yoghurt																													X				
Sugars, Fats, and Oils																																		
801	Sugar						X								X													X		X				
802	Sugar Cane														X															X				
803	Cooking Oil																														X	X	X
Spices and Miscellaneous																																		
810	Salt							X	X	X									X									X						
811	Spices																											X						
812	Yeast, baking powder,																											X						
Cooked Foods from Vendors																																		
820	Maize - boiled or roas														X																			
821	Chips (vendor)						X			X					X				X															
822	Cassava - boiled (vendor)														X																			
823	Eggs - boiled (vendor)														X																			
824	Chicken (vendor)														X																			
825	Meat (vendor)														X																			
826	Fish (vendor)														X																			
827	Mandazi, doughnut (vendor)														X																			
828	Samosa (vendor)														X																			

Table A4: Malawi field crop crop-unit-condition combinations

Crop code	Crop name	50 kg Bag			90 kg Bag			Pail (small)			Pail (large)			Bunch			Piece			Bale			Basket (Dengu)			Ox-cart		
		2			3			4			5			8			9			10			11			12		
		S	U	N/A	S	U	N/A	S	U	N/A	S	U	N/A	S	U	N/A	S	U	N/A	S	U	N/A	S	U	N/A	S	U	N/A
1	Maize local	X	X		X	X		X	X		X	X														X	X	
2	Maize composite/OPV	X	X		X	X		X	X		X	X														X	X	
3	Maize hybrid	X	X		X	X		X	X		X	X														X	X	
4	Maize hybrid recycled	X	X		X	X		X	X		X	X														X	X	
5	Tobacco burley			X			X															X						
11	Groundnut chalimbana	X	X		X	X		X	X		X	X																
12	Groundnut CG7	X	X		X	X		X	X		X	X																
13	Groundnut manipinta	X	X		X	X		X	X		X	X																
14	Groundnut mawanga	X	X		X	X		X	X		X	X																
15	Groundnut JL24	X	X		X	X		X	X		X	X																
17	Rice local	X	X		X	X					X	X																
18	Rice faya	X	X		X	X					X	X																
19	Rice pussa	X	X		X	X					X	X																
20	Rice TCG10	X	X		X	X					X	X																
21	Rice IET4094 (senga)	X	X		X	X					X	X																
22	Rice wambone	X	X		X	X					X	X																
23	Rice kilombero	X	X		X	X					X	X																
24	Rice ita	X	X		X	X					X	X																
25	Rice mtupatupa	X	X		X	X					X	X																
27	Ground bean (nsama)	X	X								X	X																
28	Sweet potato			X			X			X			X												X			X
29	Irish [Malawi] potato			X			X						X												X			X
31	Finger millet (mawere)			X			X			X			X															
32	Sorghum			X			X			X			X															
33	Pearl millet (mchewere)			X			X																					
34	Beans	X	X					X	X		X	X																
35	Soyabean	X	X		X	X		X	X		X	X																
36	Pigeonpea (nandolo)	X	X		X	X		X	X		X	X																
37	Cotton			X			X															X						
39	Sugarcane																		X									X
40	Cabbage																								X			
41	Tanaposi																								X			
42	Nkhwani			X			X			X			X			X			X						X			
43	Therere/okra			X																					X			
44	Tomato												X												X			
45	Onion			X			X																					

Table A5: Malawi permanent and tree crop crop-unit-condition combinations

Crop code	Crop name	50 kg Bag	90 kg Bag	Pail (small)	Pail (large)	Bunch	Piece	Bale	Basket (Dengu)	Ox-cart
		2	3	4	5	8	9	10	11	12
101	Cassava	X		X	X		X			
102	Tea	X								
104	Mango	X		X	X		X			
105	Orange	X		X	X					
106	Pawpaw/Papaya	X		X	X		X			
107	Banana	X				X				
108	Avocado	X		X	X		X			
109	Guava	X		X	X					
110	Lemon	X			X					
111	Naartje (Tangerine)	X								
112	Peach	X			X					
113	(Custade Apple) Poza	X		X	X					
114	Mexican Apple (Masuku)	X		X	X		X			
115	Masau	X			X					

REFERENCE PHOTOGRAPHS

MALAWI THIRD INTEGRATED HOUSEHOLD SURVEY

PHOTO AID FOR COLLECTING FOOD CONSUMPTION INFORMATION

101,102, 103,104 Maize Grain & Ufa Pails – Small (a) Medium (b) Large (c)

105. Green Maize - Piece

Small (a) Medium (b) Large (c)

201. Cassava - Piece

Small (a) Medium (b) Large (c)

203. White Sweet Potato - Heap

Small (a) Medium (b) Large (c)

204. Orange Sweet Potato-Piece
Small (a) Medium (b) Large (c)

203. White Sweet Potato-Piece
Small (a) Medium (b) Large(c)

PHOTO AID FOR COLLECTING FOOD CONSUMPTION INFORMATION

PHOTO AID FOR COLLECTING FOOD CONSUMPTION INFORMATION

PHOTO AID FOR COLLECTING FOOD CONSUMPTION INFORMATION

PHOTO AID FOR COLLECTING FOOD CONSUMPTION INFORMATION

503. Fresh Fish-Heap
Small (a) Medium (b) Large (c)

503. Fresh Fish-Heap
Small (d) Medium (e) Large (f)

601. Mango-Piece
Small (a) Medium (b) Large (c)

503. Fresh Fish-Piece

Small (a)
Medium (b)
Large (c)

602. Banana- Bunch
Small (a) Medium (b) Large (c)

602. Banana-Piece
Small (a) Medium (b) Large(c)

MALAWI THIRD INTEGRATED HOUSEHOLD SURVEY

PHOTO AID FOR COLLECTING FOOD CONSUMPTION INFORMATION

606. Guava-Piece
Small (a) Medium (b) Large (c)

803. Cooking Oil-Tube
Small (a) Medium (b) Large (c)

810. Salt
No 10Flat (a) No 10 Heaped (b)