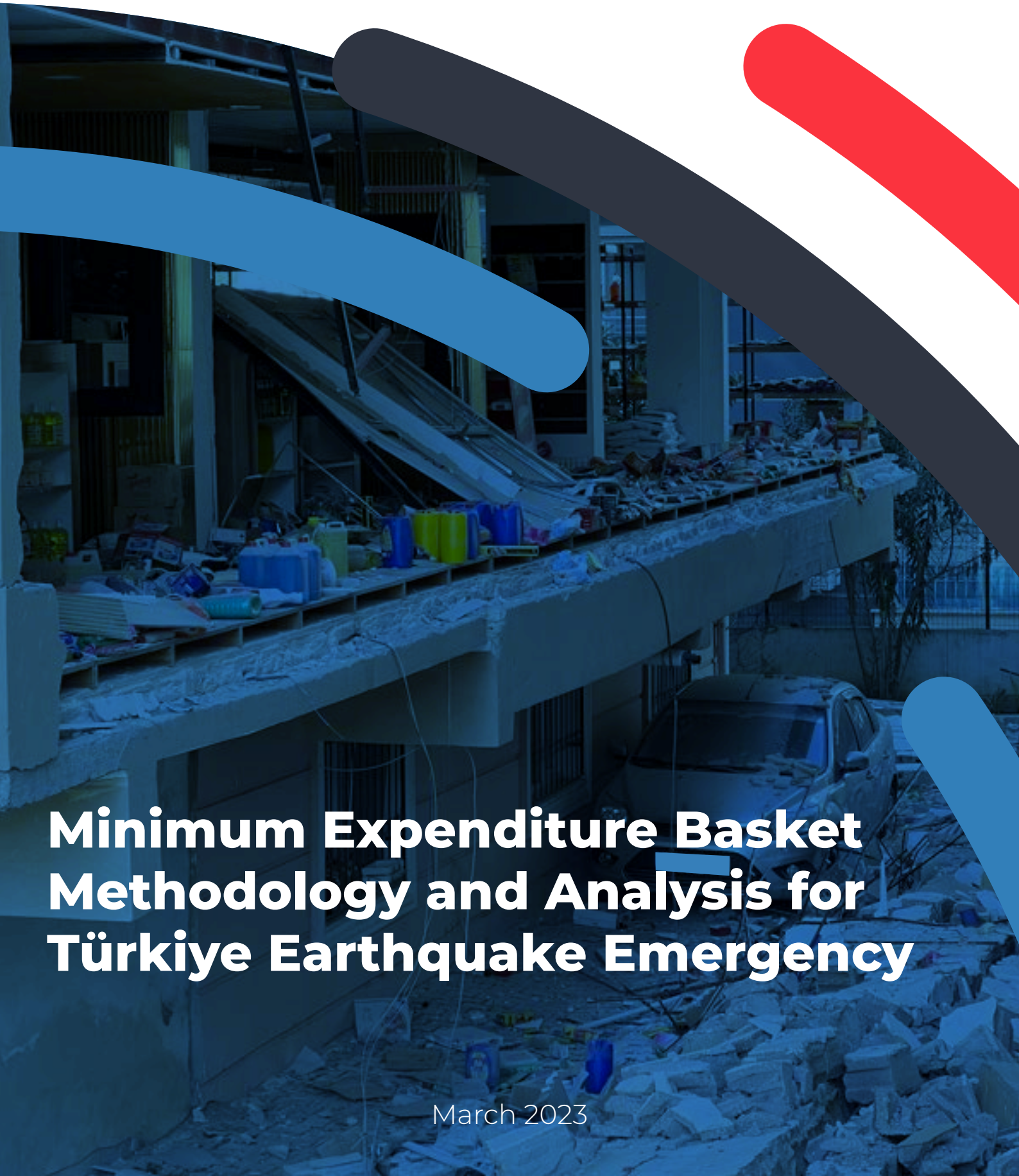
WFP World Food Programme

TÜRK KIZILAY

IFRC



Minimum Expenditure Basket Methodology and Analysis for Türkiye Earthquake Emergency

March 2023

Earthquake Disaster in Türkiye and Minimum Expenditure Basket

On February 6, 2023, two major earthquakes with the epicenter of Kahramanmaraş happened in Türkiye's South-East Anatolia and Eastern Mediterranean region, affecting the lives of 13.5 million people in 10 provinces.[1] At an international level emergency, UN World Food Programme (WFP), Turkish Red Crescent (TRC) and International Federation of Red Cross and Red Crescent (IFRC) collaboratively designed a Minimum Expenditure Basket (MEB) and calculated monthly cost to suggest guidance for programs providing cash assistance to the affected population when determining transfer value.

MEB Design

A) MINIMUM EXPENDITURE BASKET COMPONENTS

The MEB here is built on the WFP-TRC analysis of cost of living for refugees in Türkiye in May 2018,[2] and composed of 7 basic needs for food security as well as protection perspectives: food, non-food (hygiene), accommodation (shelter and utilities), education, health, transportation and communication. The food items remained the same with the items in the MEB designed for refugees as they also reflect the staple items consumed by the Turkish population, which are commonly found in the food baskets delivered in Ramadan as well (see Monthly Food Basket table for item details). The food basket is designed to meet the daily energy need (2,100 k/cal per person) where the nutritional values also reflect the Sphere standards (10 percent from protein and 17 percent from fat).[3]

Monthly Food Basket		
Item	Quantity	Unit
Bread	7.5	kg
Rice	3	kg
Bulgur	1.5	kg
Dry beans	1.5	kg
Eggs	30	piece
Yogurt	1.5	kg
White cheese	1.5	kg
Tomatoes	0.9	kg
Cucumber	0.9	kg
Sunflower oil	0.75	kg
Sugar	1.5	kg
Salt	0.15	kg
Tea	0.15	kg

The Sphere standards also guided the design, selection and quantity of the non-food items such as the household and personal hygiene items, accommodation components that includes water supply, rent, and energy needed by the household (electricity and tube gas canister) along with their access to healthcare (health service and medicine costs). Transportation and communication expenses are considered from the protection perspective and to deliver an affective humanitarian intervention. the MEB item list are shown in the table on the left.

[1] The figures later updated to 11 province and 15.6 million.
[2] https://reliefweb.int/report/turkey/revising-food-basket-minimum-expenditure-basket-analysis-calculate-realistic-cost
[3] https://spherestandards.org/wp-content/uploads/Sphere-Handbook-2018-EN.pdf

B) TARGET POPULATION PROFILE

Given that the dimensions used in the MEB are calculated per household (other than food dimension), household composition of the affected population is used to determine the essential needs of households and to tailor the items in the MEB accordingly. Based on the latest population data retrieved from Turkish Statistical Institute (TURKSTAT), average household size in the 10 provinces is calculated as 4.1 people before the earthquake.[4] However, the severe damage to buildings left many in hardship for shelter needs. The field staff observed that the affected population is inclined to live in larger households compared to pre-earthquake, both in the region and where they are relocated in different provinces. The 2022 data shows that 35 percent of the population in the affected region is under the age of 18, of which 10 percent are children under the age of 5. When the elderly population figures are also added into analysis, a typical household of the affected population is found to be composed of 1 baby, 1 school aged child, and three adults. Therefore, items such as education materials and personal hygiene items (diapers and dental care) are customized to reflect this household composition.

Non-food items	◦ Laundry detergent ◦ Dishwashing liquid ◦ Disinfectants and insecticides ◦ Toilet paper ◦ Bath soap ◦ Shaving articles ◦ Articles for dental hygiene ◦ Shampoo ◦ Baby diapers ◦ Hygiene pads for women
Shelter	◦ Rent ◦ Electricity ◦ Tube gas canister ◦ Water
Health	◦ Medicine ◦ Specialist doctor visit
Education	◦ Notebook ◦ Pencil ◦ Other stationery
Transportation	◦ Public bus ride
Communication	◦ Mobile phone package

MEB Calculation

A) DATA AND METHODOLOGY

Regarding the MEB calculation method, two approaches were utilized. The previous MEB versions had benefited from the monthly item price data received from TURKSTAT for each MEB component. Due to its accreditation process with Eurostat, TURKSTAT has not been releasing price data since April 2022. However, in line with Eurostat, TURKSTAT has started releasing monthly inflation indices for item groups, and indices for certain items in the MEB composition. Therefore, the first approach utilized these indices over the item prices retrieved in April 2022.

As a second approach, a market price analysis was conducted as a corroborating measure to ensure the reliability of the use of indices. This process involved analyzing the food and non-food item (hygiene) prices from four the most affordable chain markets – namely, BIM, Şok, A101, and Migros - through their online websites. These markets are selected as they offer market-brands items, which are expected to be cheaper than other products that are available in all markets across the country. This process was initiated on the week of 20 February following the earthquake, in collaboration with TRC, WFP, and IFRC.

[4] TurkStat, Population and Demographics figures, 2022. https://data.TURKSTAT.gov.tr/Kategori/GetKategori?p=Nufus-ve-Demografi-109

B) ANALYSIS AND OUTCOMES

A significant number of the affected population are internally displaced and moved to various locations in the country both through government-led evacuation centers and personal connections. Therefore, a national level MEB is found suitable for calculations. The same analysis procedure is run with both the price data calculated through indices from TurkStat and web-scraping of market item prices separately. While food items were calculated as individual level MEB components, items other than food were calculated at household level for a 5-people household.

In the analysis, it was found that the MEB amounts calculated based on TurkStat inflation indices and those calculated based on market item prices are in line with expectations; the prices are slightly lower for the market brand items, as TurkStat collects data from over 27 thousand markets across the country with varying item price and availability.[5]

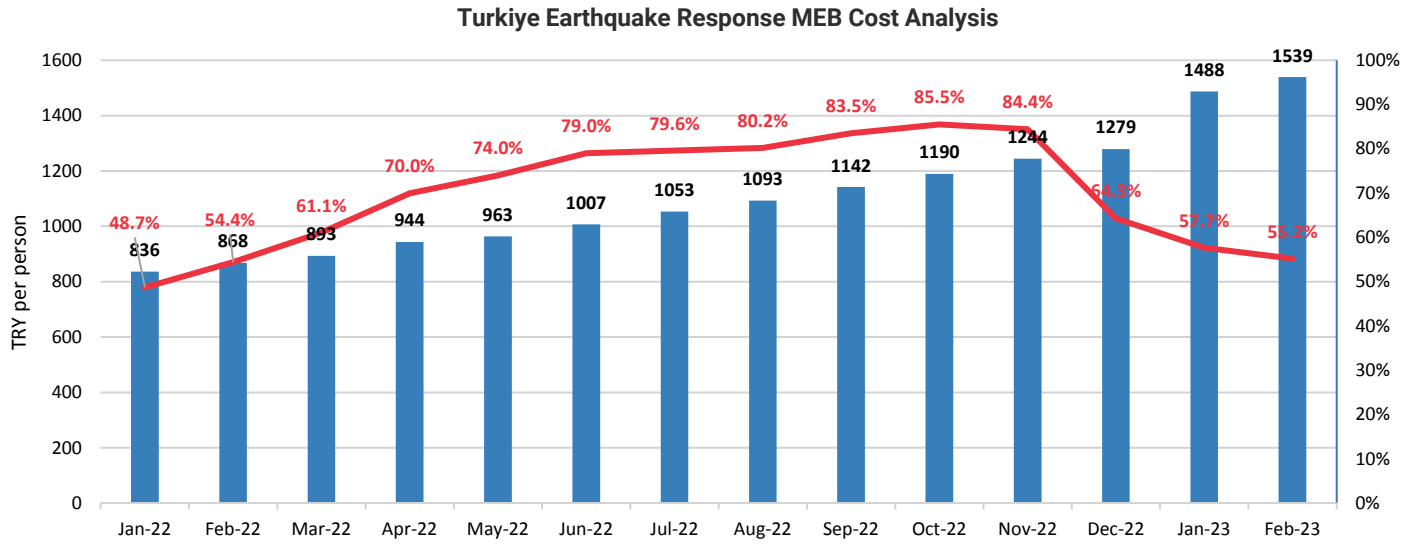
Commodities	MEB per household		MEB per person	
	TURKSTAT	Market	TURKSTAT	Market
Food	3222	3105	644	621
Rent	2146	2146	429	429
Utilities (with water)	986	986	197	197
NFIs	615	478	123	96
Health	280	280	56	56
Education	111	111	22	22
Transport	223	223	45	45
Communication	114	114	23	23
MEB cost	7696	7444	1539	1489

These findings reflect that the methodology used here through utilizing TurkStat indices for price calculation is suitable for MEB calculation and offers a cost-efficient and sustainable data access. This monthly data would allow updating the MEB cost per month. Given the inflation rates remain high in the country, monthly MEB calculations would permit tracking the adequacy of the provided assistance. As this MEB is prepared for the affected population of the earthquake disaster in an emergency context and it can be refined and improved with more data becomes available through time.

[4] https://data.tuik.gov.tr/Bulten/Index?p=T%C3%BCketici-Fiyat-Endeksi-%C5%9Eubat-2023-49656&dil=1

Current MEB Cost

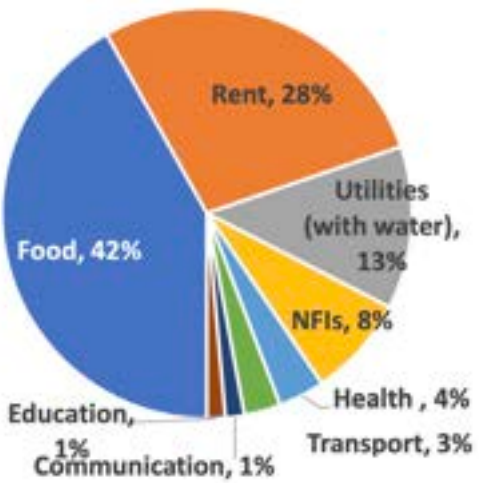
The MEB in February 2023 is calculated as TRY 7,696 TRY for a 5-people for a month, where the monthly cost for an individual is TRY 1,539 according to the TurkStat data. For comparative purposes, a retrospective MEB cost calculation is conducted. As seen in the chart below, the inflation rates remained high in the country in 2023 and MEB cost is continuously on the rise, monthly MEB costs should be taken into account for transfer value calculations and adequacy.



Annex

I. SECTORAL SHARE IN THE BASKET

When the cost share of each basic need dimension in the MEB is calculated, results indicated that food costs have the highest share at 42 percent, followed by rent at 28 percent. The shares are similar both for TurkStat and Market data, and TurkStat data is taken into account here.



	TurkStat basket share	Market basket share
Food	42%	42%
Rent	28%	29%
Utilities (with water)	13%	13%
NFIs	8%	6%
Health	4%	4%
Transport	3%	3%
Communication	1%	2%
Education	1%	1%

II. TURKSTAT DATA: MEB COST DIFFERENCE BETWEEN ESTIMATIONS AND INDEXED DATA

Before accessing the index data provided by TurkStat, both WFP and TRC relied on the monthly inflation (such as food inflation, shelter inflation etc.) rates to estimate the cost of MEB in the absence of data since April 2022. However, not all items have the same price increase rate and therefore the inflation rates might only provide an estimation. Previously, TRC, WFP and IFRC relied on the data estimation through inflation rates for a 6-people household due to the emergency context. However, with the current calculation based on the indices and after making the adjustment of households to 5-people to reflect the affected population households more accurately, the figures have changed. Furthermore, the previous MEB was calculated for 10 NUTS regions in Türkiye, whereas the new methodology is based on the national average figures.

As seen in the table below, the food cost that was estimated to be TRY 555 per person in January 2023, the actual index data show that the food cost in January 2023 is TRY 612. Items other than food are calculated for 6 people as mentioned earlier, which results in less cost per person as they share the same rent etc. Therefore, the individual level MEB based on the index and calculated for 5 people seems to be more costly than the estimated MEB that is calculated for 5 people.

	Estimation by inflation rate	Calculation through index
	6 People Household	5 People Household
Food	555	612
Rent	1747	2090
Utilities (with water)	1028	960
NFIs	761	608
Health	265	280
Education	162	110
Transport	152	220
Communication	104	111
Total per HH	**7550**	**7438**
Total per person	**1258**	**1488**

Meryem Kesgin
meryem.kesgin@wfp.org

Nur Duygu Keten Sav
duygu.keten@kizilay.org.tr