



World Health  
Organization

REGIONAL OFFICE FOR Europe



# FEEDCITIES PROJECT

KEY FINDINGS FOR TURKMENISTAN

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This factsheet reflects the key findings of the **FEEDCities project in Turkmenistan**. The study was carried out in 2016 and analyses conducted at the Center for Nutrition and Public Health. The project aims to describe the urban food environments in Central Asia, Caucasus and Eastern Europe, with a particular attention on food markets. It focuses on the availability and nutritional composition of foods, both homemade and industrially-produced. In Ashgabat, samples were collected in eight different food markets, food courts and supermarkets to assess their salt content and fat composition.

### THIS STUDY REVEALS THAT:

A diverse range of foods are available, including fruits and vegetables. However, the nutritional composition of many homemade and industrial foods available in Ashgabat could be improved.



Savoury snacks in particular contained worryingly high concentration of salt, reaching 6.6 g per 100 g. Such a serving would exceed the WHO recommendations for daily salt intake. Other high salt foods included savoury pastries, prepared salads, doner kebabs and hamburgers.



The fat composition of many food products revealed high levels of **trans-fats** and **saturated fats**, especially in sweet pastries and snacks. Values of trans-fats per 100g of total fat in cookies were eight times the recommended limit.



Such high levels of salt and trans fat in food pose a risk for the population if consumed regularly.



The results from Turkmenistan are similar to those from other countries where the study has been performed indicating a need for effective policies to reduce salt in foods and eliminate trans-fats.



## FEEDCITIES PROJECT

### ABOUT FEEDCITIES PROJECT

Food markets and street vending sites have traditionally played an important role in the food culture in Central Asian and Caucasus regions, offering a diverse range of fruits, vegetables and ready-to-eat meals. They have long provided an accessible and inexpensive food source, and are essential to ensure availability of fruit and vegetables to urban populations. At the same time, studies have suggested that they are also a source of energy-dense foods rich in saturated fat, trans-fats, free sugars and salt. Previous research on street food has mainly focused on food safety and rarely examined its potential contribution and influence on the diet of the population. There is also very little information

available on the nutritional composition of commonly available foods in these settings. This is in a context where diet-related noncommunicable diseases are on the rise in the region and represent the leading cause of premature mortality. As such, the FEEDCities project aims to fill this knowledge gap, characterize the food environment in major urban centres of the region, understand the composition of foods and help governments to formulate an appropriate policy response. The findings described in this factsheet reflect the results of the study conducted in Ashgabat, Turkmenistan from 2016-2018.

### FEEDCITIES TURKMENISTAN

The FEEDCities study protocol was applied in Turkmenistan during October 2016.

#### The objectives of the study were to:



Describe the characteristics of the vending sites in Ashgabat



Characterize the food offered at selected vending sites



Sample products in order to assess their composition, specifically looking at mineral (sodium/salt, potassium) and trans-fat content

Using cross-sectional methods for the field work, the most commonly available food items were identified – both homemade and industrially-produced. Using random and systematic sampling procedures, 128 samples from 12 different food categories were collected from eight different food markets, food courts and supermarket.

Samples from the following food categories were analysed: boiled corn, bread, fast-food garnishes, ice-cream, prepared salads, savoury pastries, snacks, soup, sweet pastries, sweets/confectionery and “others”.

## RESULTS

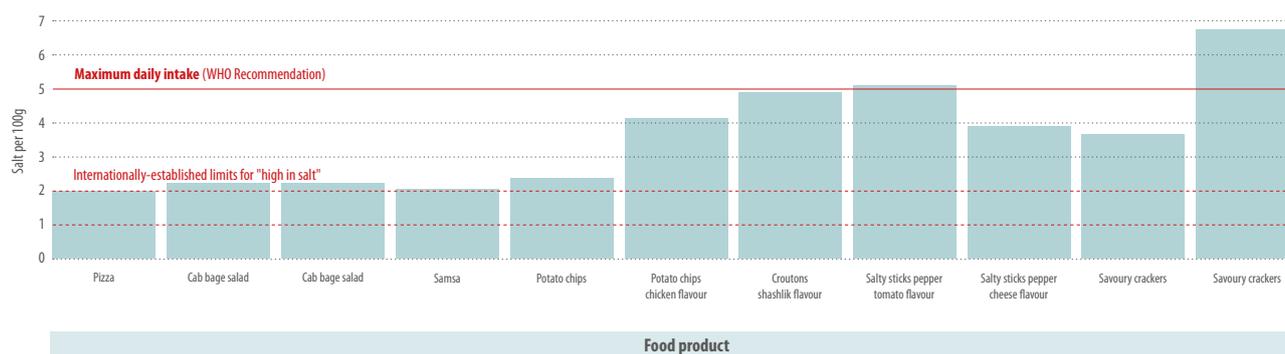
### SALT

WHO recommends a maximum daily intake of no more than 5g of salt. High salt consumption (>5g/day) is associated with increased blood pressure and increased risk of heart disease and stroke. A significant proportion of salt in the diet comes from processed foods and salt added during the preparation of food. Despite WHO recommendations, salt intake in almost all countries exceeds 5g per day and research has documented the wide availability of foods with excess salt content.

The findings of this study in Turkmenistan echo international research and show that some products exceed or are very close to the WHO daily limit in 100g alone. Savoury snacks, especially salty sticks and crackers, were found to be the food category with highest absolute salt content, reaching 6.6g/100g and 5.1g/100g respectively. Figure 1 provides an overview of the results for salt per 100g from the study.

**Figure 1: Amount of salt in grams per 100 grams**

Salt (> 2g) / 100 g of Food

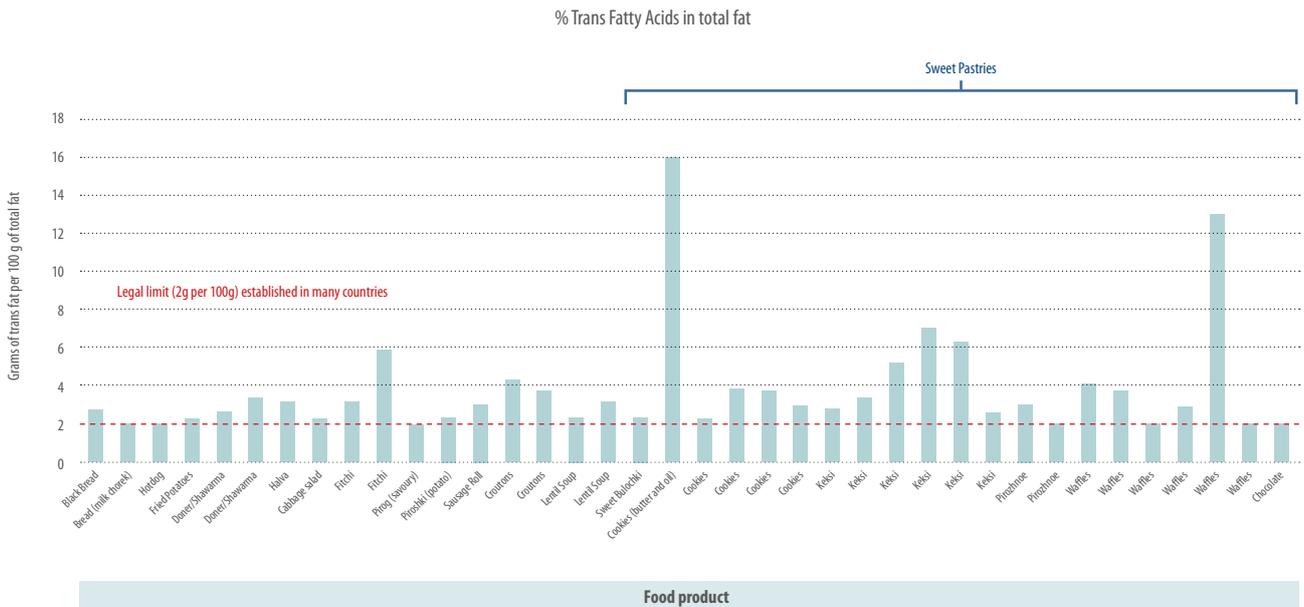


### TRANS FATTY ACIDS

Trans fats are a type of unsaturated fatty acid that can be found in food naturally or as a result of industrial processes. Industrial trans fats represent the major source of trans fat in the diet in most countries and, in many countries, are still widely present in processed foods, such as cookies, pastries, fast food, savoury snacks and margarines. Excess trans fats consumption has been shown to significantly increase the risk of coronary heart disease (CHD) and should be limited in the diet and replaced by mono-unsaturated or poly-unsaturated fatty acids in order to maximise health benefits. Trans fats have no nutritional benefit and WHO recommends that industrial trans fats are removed from the food supply so that trans fat contribute no more than 1% of total energy intake across the day.

The FEEDCities research in countries such as Kyrgyzstan, Republic of Moldova and Tajikistan has revealed alarmingly high levels of TFAs in food products. In Turkmenistan the highest values have been found in cookies and wafers. Internationally, foods containing more than 2g per 100g of total fat are considered to be high in trans fat and many countries have established legal limits at this threshold. As demonstrated in Figure 2, this study in Ashgabat identifies sweet pastries as the food category with the most products exceeding this threshold. Cookies, for example, have eight times the recommended limit (16g trans fat per 100g total fat).

**Figure 2: Amount of trans fatty acids in grams per 100g of total fat**



## SATURATED FATTY ACIDS

The consumption of food that contains high amounts of saturated fats is also associated with adverse health outcomes. Limiting saturated fat intake is associated with reduced risk of coronary heart disease. As such, WHO recommends limiting saturated fat to no more than 10% of total energy intake across the day. This means a shift towards alternative sources of fat, such as vegetable and seed oils.

When replacing trans-fats in foods, as WHO recommends, preference should be given to unsaturated fats. Substitution with saturated fats will reduce the positive impact of the efforts to reduce trans fats in food.

An overview on saturated fatty acid content of foods commonly available in Ashgabat (Figure 3) indicates that snacks, more specifically potato chips, present the highest values, along with sweet pastries and sweets.

**Figure 3: Amount of saturated fat in grams per 100 g of food product**

Potato chips (sample 1)



Potato chips (sample 2)



Waffles (sample 1)



Chocolate bar



Waffles (sample 2)



Cookie





## FINAL CONSIDERATIONS

A diverse range of foods is available in Ashgabat, both homemade and industrial. Foods from markets and bazaars offer an important source of food for the urban population, and can facilitate access to fruit and vegetables. However, the analysis from this study shows that the nutritional composition of street foods available in Ashgabat could be improved, since many of the commonly available foods contain high concentrations of salt, trans fats and saturated fats. The highest amount of added salt was found in snacks (6.6g per 100g), followed by fast foods, prepared salads, and bread. Cookies and waffles had the highest amount of trans fats with many samples containing more than 2g of trans fat per 100g total fat. It should also be noted that the foods high in saturated fat were those that contain the highest amounts of

trans fats and salt. Efforts to promote healthy diets must therefore focus on improving the composition and reducing consumption, of these products.

Improvements to the nutritional composition of foods are possible and could positively influence the diet of the population and prevent the occurrence of diet-related NCDs in the future. Strengthened policy actions to move towards a healthier food environment should learn from effective policies that have been previously implemented in other countries and be incorporated into existing strategies and the national nutrition programme. Such actions will help to strengthen the promotion of healthy diets and help prevention cardiovascular diseases.

### POSSIBLE POLICY OPPORTUNITIES FOR CONSIDERATION INCLUDE:

1. Implement a trans-fat ban to address its use in production and excess consumption. Consider establishing a maximum limit of <2g trans fat per 100g of total fat to ensure its virtual elimination from the food supply.
2. Enforce maximum salt content limits in certain food product categories to put downward pressure on salt in food and to respond to the excess salt consumption. Such legislation would ensure compliance and create a level playing field for producers.
3. Mandate nutrition declarations on all packaged foods and require labelling of salt/sodium, total and saturated fat, and total sugars. Consider implementing front of pack labelling, including warning labels for high salt foods.
4. Raise awareness among the public of the harmful effects of excess salt and trans fat intake, including by highlighting foods that typically contain high amounts of these nutrients.
5. Provide incentives for the vendors to use healthier ingredients and train them to limit the amount of salt and unhealthy fats in cooking. Encourage the continuing availability of fresh fruits and vegetables in food marketing and food vending settings.
6. Introduce routine monitoring of dietary intake of the public, as well as food composition of both local and imported food.



## FEEDCITIES PROJECT

### KEY FINDINGS FOR TURKMENISTAN

#### Useful links

<http://www.euro.who.int/ru/countries/turkmenistan>

<https://gateway.euro.who.int/ru/country-profiles/turkmenistan/>

<http://www.euro.who.int/ru/health-topics/environment-and-health/urban-health/news/news/2016/09/feedcities-project-studying-urban-food-environments>

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МИНИСТЕРСТВО  
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