

NATURE, CHARACTERISTICS AND INSTITUTIONAL BASIS OF TURKEY'S EXPERIENCE IN ENSURING FOOD SECURITY

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Abstract

This article examines current food safety reforms in Turkey, covering broad economic and social goals such as improving food safety regulations and capacity, reducing supply chain losses, preventing waste, and regulating markets.

Keywords. food safety, food, supply chain, food safety regulations, sustainable development, waste, environmental protection, export, import, value added, government funding, financial assistance, subsidies, loan programs.

Introduction

In recent years, factors such as geopolitical situations in the world, interstate trade restrictions, climate change, natural and man-made disasters, and the increase in the cost of energy resources lead to a decrease in the real income of the population and an increase in food security.

Food security is one of the most global problems affecting humanity, and according to the UN Food and Agriculture Organization (FAO), more than 735 million people in the world suffer from hunger [1]. 2028, it is predicted that the number of people experiencing food insecurity in the world will reach 956 million people, if the central banks do not take measures to strengthen the effective monetary policy against inflation and growth, the number of people suffering from hunger may reach 1 billion people.

The population of Uzbekistan will exceed 37 million people by 2024, and it is predicted to reach 43 million people by 2030, with an average annual growth of 2 percent. This leads to a 1.2-fold increase in the population's demand for food products. In this context, on February 16, 2024, Decree No. PF-36 of the President of the Republic of Uzbekistan "On additional measures to ensure food safety in the Republic" was adopted, and this decree defines the programmatic tasks to be implemented in the future and is the main support for bringing reforms in the field to a new level. serves as based on the experience of the Turkish state in ensuring food safety, we will get acquainted with its features and institutional foundations.

Food safety in Turkey is regulated by national laws and international standards. The first law related to food safety in Turkey was the Municipal Law No. 1580 in 1930. Article 15 of this law defines inspection of places of production, storage and sale of food products within

municipal boundaries as one of the municipal duties. The first comprehensive law in this area was drafted in 1930, shortly after the municipal law, Public Hygiene Law No. 1593. Articles 181 and 199 of this Act deal with assessment, control and prohibition of food products. This Law assigns the responsibility for food outside the city limits to the Ministry of Health and Social Assistance, to the municipalities within the city limits. Article 184 of the law prohibits the production, storage and sale of food products that are more or less harmful to the health of the consumer. Article 188 of the Law allows the suspension of the use of food additives and food dyes with the permission of the Ministry of Health and Social Welfare. In accordance with the Public Hygiene Law No. 1593, the Food Regulations were first enacted in 1942, followed by the Food Regulations (GMT) in 1952.

The main regulatory legal document is the Law No. 5996 "On Veterinary Services, Plant Protection, Food Safety and Feed", which defines the requirements for the production, processing and distribution of food products. Management and control in this regard is assigned to the Ministry of Agriculture and Forestry.

Law No. 5996 on "Veterinary Services, Plant Protection, Food Safety and Feed" was adopted in Turkey in 2010. This law provides a framework for regulating various aspects of food safety, including requirements for food production, processing and distribution, as well as the establishment of standards and controls [2].

The institutional framework includes several key organizations, namely the General Directorate of Food Safety and Control, which carries out "inspections and certification", and the Turkish Standards Institute, which develops national standards in accordance with international requirements, such as "Codex".

HACCP in the implementation of standards and norms (Hazard Analysis and Critical Control Points) systems and GMP (Good Manufacturing Practices) activities. Turkey actively cooperates with international organizations such as WHO and FAO in order to improve food safety and quality standards. These measures are high standards of food safety helps to ensure, protect consumer health and maintain product quality throughout the supply chain [2]. The "Eleventh Development Plan of Turkey for 2019-2023" was approved by the Strategy and Budget Office of the President of the Republic of Turkey on July 18, 2019. The developed plan covers a wide range of economic and social goals, including improving food safety regulations and capacity, reducing supply chain losses, preventing waste, and regulating markets [3]. Article of this plan is devoted to food safety issues and includes the following areas:

- ❖ Improving regulations and capacity to ensure food safety.
- ❖ Reducing losses in the supply chain.
- ❖ Waste prevention.
- ❖ Regulation of markets.

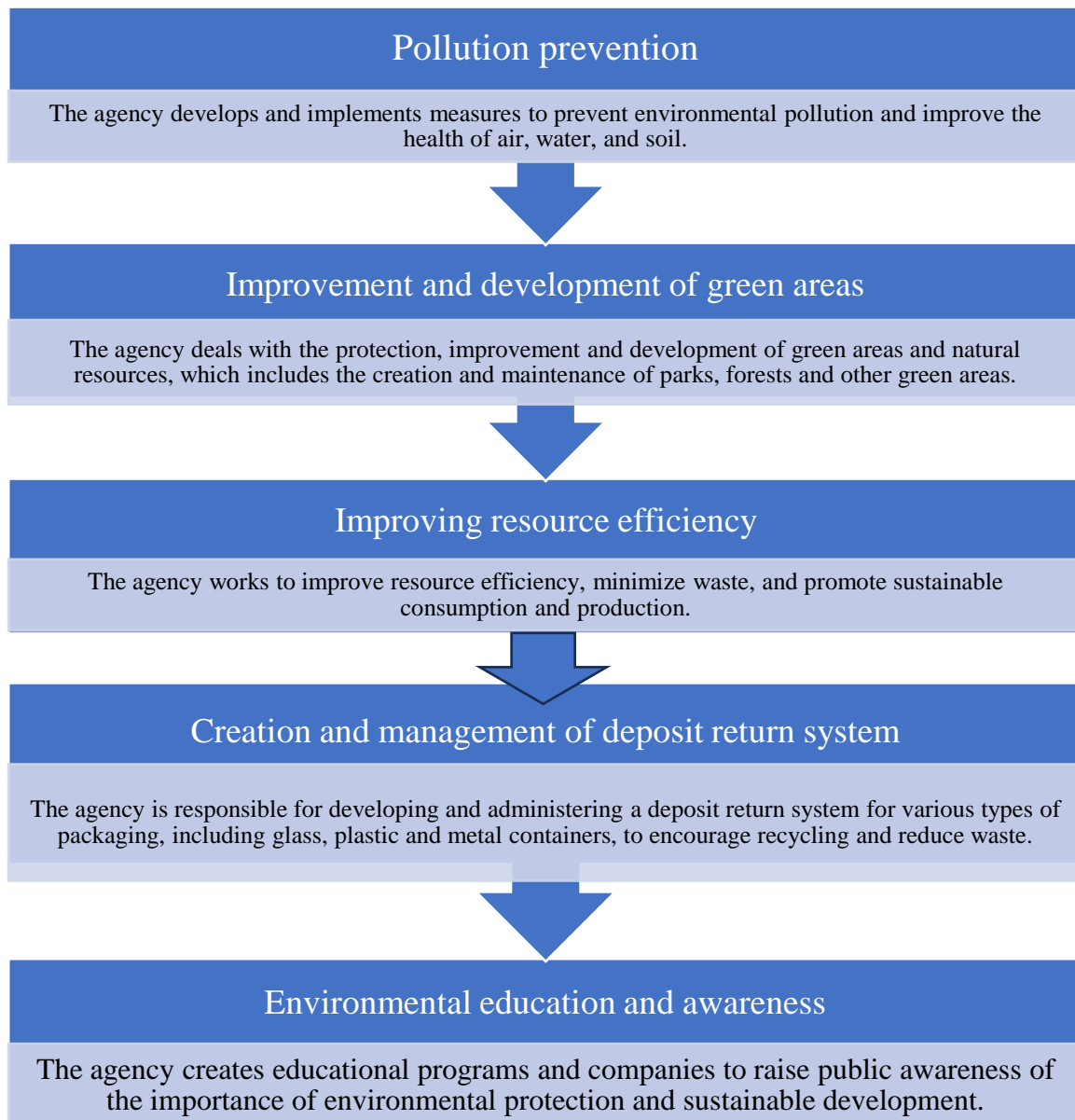
These measures are of particular importance as they are aimed at ensuring food security and sustainable development of the agri-food sector in Turkey.

Turkey's national company "Save Your Food" aimed at reducing food loss and waste has been operating since May 2020. The initiative, run in partnership with the Food and Agriculture Organization of the United Nations (FAO) and the Turkish Ministry of Agriculture and

Forestry, aims to raise public awareness of the harmful effects of food loss and waste and encourage action along the food supply chain.

Also, the "Environmental Agency of Turkey" was established by the law "On the Establishment of the Environmental Agency of Turkey and Amending Certain Laws" published in the Official Gazette No. 7261 of December 20, 2020 [3].

The main objectives and tasks of the Turkish Environmental Protection Agency include:



These goals aim to create a sustainable and environmentally safe future for Turkey, including the establishment of a zero waste system that is internationally recognized for its achievements and contribution to sustainable development [4].

Many sectors of the Turkish economy have undergone significant changes. Agriculture has become one of the important sectors that provide not only food security, but also a significant share of export earnings.

Turkey is one of the world leaders in agriculture and food production. According to the World Bank (2021), the value added in agriculture increased from 27.5 billion dollars in 2000 to 48.9 billion dollars in 2019 (at current prices). This indicator in 2010 was 69.7 billion. reached USD, it decreased significantly in 2011-2018. At constant prices in 2010, the added value of the country's agriculture showed a long-term positive trend and was 57.1 billion in 2000. 89.7 billion dollars in 2019. increased to a dollar. The share of agricultural value added in Turkey's GDP is on a downward trend, from 10 percent in 2000 to 6.4 percent in 2019. Employment in agriculture also showed a steady decline as a share of total employment. It decreased from 39.3 percent in 2000 to 18.4 percent in 2019 [3] . However, this rate remains high compared to developed or other developing countries.

Estimates based on the data of the International Trade Center (2021) show that Turkey's agricultural and food exports increased by 4 billion in 2001. 17.7 billion dollars in 2019. increased to dollars. In the same period, the share of agriculture in total exports decreased from 13 percent to 10.4 percent. The country's agricultural exports are diversified and include fruits, vegetables, flour mill products, tobacco products and others. The trade balance of agricultural products for Turkey is positive. 1.6 billion to our country in 2001. USD agricultural and food products were imported. 2019 import is almost 12.7 bln. rose to the dollar. The share of import of agricultural products in total import increased from 3.7 percent to 6.3 percent. As a result, the positive trade balance in 2022 will be 2.4 billion. 5 billion from dollars. rose to the dollar. The country's agricultural imports mainly consist of grains, oilseeds, fruits and vegetables, tobacco products, etc. [5].

Positive trends were also observed in the cultivation of vegetables in Turkey. Tomato is one of the most important vegetables produced in Turkey and has export value. Their production volume has increased significantly. If production in 1980 was 3.55 mln. tons, in 2019 it was 12.8 million. reached tons. During the same period, the harvested tomato area increased from 108 to 181.5 thousand hectares.

An additional feature of the changes in Turkish agriculture is the expansion of supermarkets. However, small producers could not meet the demands of supermarkets for product quality, consistency, volume and sort-pack-transport. Consequently, they could not take advantage of new trade opportunities. To facilitate the participation of small producers in the supply chain, the government converted wholesale markets, former state agricultural trade cooperatives, and producer associations into private organizations similar to "joint stock companies" [6].

Turkey's state financing of agriculture includes several important aspects aimed at supporting farmers, increasing productivity and sustainable development of the agricultural sector. The main financing mechanisms include direct financial assistance, subsidies and loan programs. The main components of this system are as follows [7] :

- 1) The government provides direct subsidies to farmers to cover production costs such as seeds, fertilizers, pesticides, and fuel.
- 2) Additional subsidies are available for farmers working in disadvantaged areas or implementing environmentally friendly technologies.
- 3) The government sets minimum prices for basic agricultural products (eg wheat, cotton) to protect farmers from fluctuating market prices.

- 4) supports agricultural exports to increase the competitiveness of Turkish products in international markets.
- 5) State banks, such as Ziraat, provide loans to farmers at preferential rates to finance operational costs and capital investments.
- 6) The government provides loan guarantees, which enable farmers to obtain financing even if they do not have adequate collateral.
- 7) Assists in the financing of projects aimed at introducing new technologies and innovations such as irrigation systems, process mechanization and digitization.
- 8) The government finances the construction and modernization of infrastructure, including irrigation systems, roads and warehouses.
- 9) The government subsidizes insurance policies that allow farmers to protect their income against losses from natural disasters and other perils.
- 10) State and private organizations provide advice and training to farmers on modern agricultural practices to increase production efficiency and sustainability.

Turkey is implementing several key infrastructure elements to effectively monitor and control food safety [7].

1. Authorized bodies responsible for inspection and monitoring of food establishments. These bodies ensure that safety requirements are met at all stages of the food chain, from production to consumption.
3. Modern laboratories for product analysis and testing. This may include microbiological and chemical analysis laboratories to help identify and control hazards in food products.
4. Regular inspection of food establishments and products is the main element of the system. This includes developing and implementing risk-based monitoring programs and random sampling for testing.
5. Educational work with food producers and consumers is also important. Teaching proper handling and food handling techniques can help reduce risk and improve overall food safety.
6. To ensure compliance with international standards and improve internal control systems, Turkey cooperates with international organizations such as FAO and WHO, receives technical assistance and participates in joint projects for the development of national food safety control systems.

In summary, Turkey's food safety system is robust and multi-faceted, including strong regulatory frameworks, comprehensive monitoring mechanisms, and various funding models supported by the government, international organizations, and the private sector. This comprehensive approach helps ensure that food products in Turkey are safe and meet national and international standards.

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