

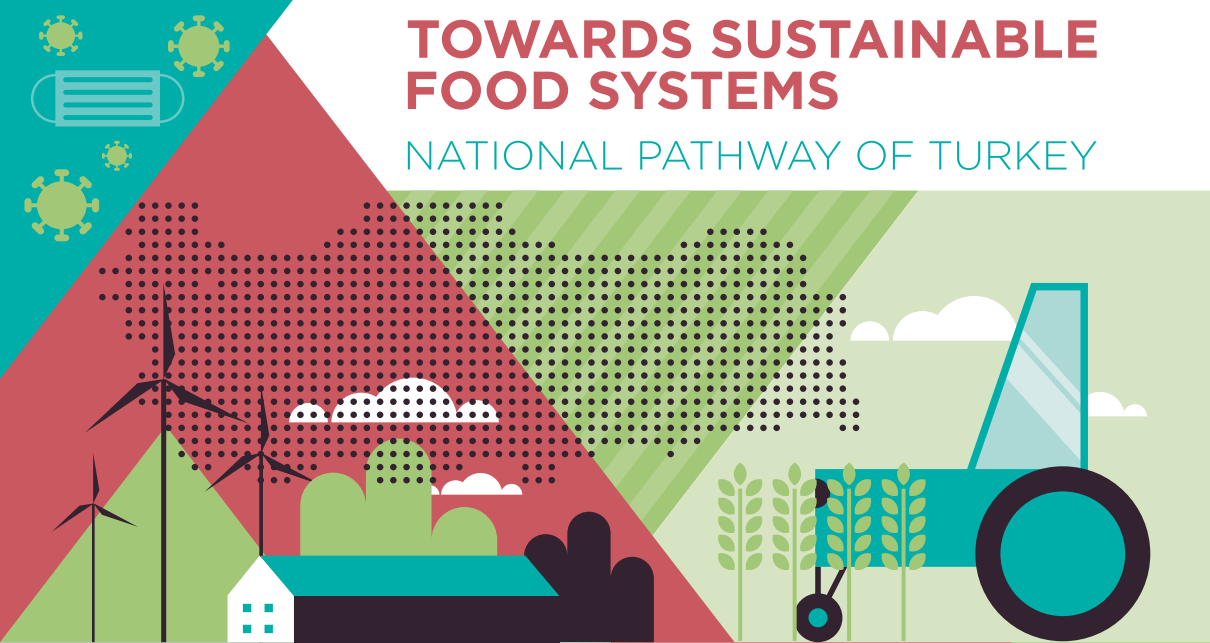


REPUBLIC OF TURKEY
MINISTRY OF AGRICULTURE
AND FORESTRY



TOWARDS SUSTAINABLE FOOD SYSTEMS

NATIONAL PATHWAY OF TURKEY



2021

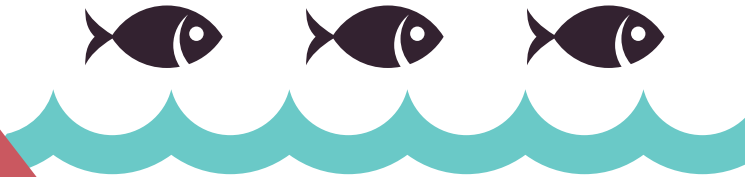


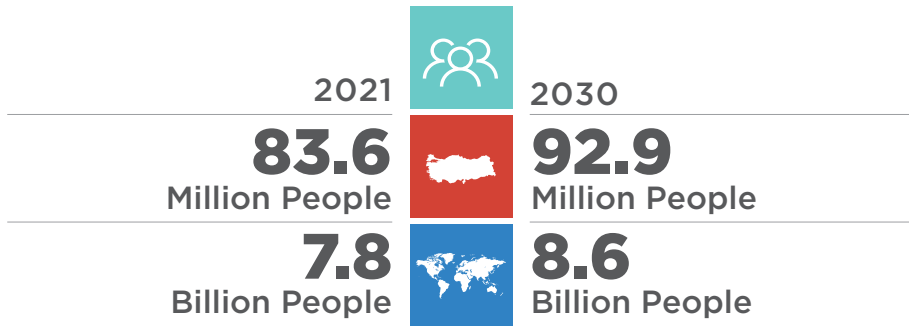


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NATIONAL PATHWAY OF TURKEY





Covid-19
Added About
132
Million More
Hungry
People
Between
720 and **811**
Million
People
faced hunger in 2020.



931
Million Tonnes
of Food is
Wasted
17% of
Global Food
Production
which means go to
Waste



22% of
Children
under **5 years**
of age are
Stunted



Sustainable food systems could serve as a useful instrument to ensure food security and nutrition for all while securing the economic, social and environmental well-being of future generations. Food systems should be addressed in a sustainable way with a holistic and coordinated approach in order to solve today's problems and achieve the UN 2030 Agenda for Sustainable Development Goals.

Sustainable food systems do not only contribute to reaching the “Zero Hunger” goal but also are important for achieving critical progress on all Sustainable Development Goals (SDGs).

SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD






1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION 
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	 THE GLOBAL GOALS For Sustainable Development



Food Systems Summit was convened by **United Nations (UN)** with the aim of maximizing the co-benefits of a food systems approach across the entire **2030 Agenda** and meeting the challenges of climate change.

The Summit provided a platform for ambitious **new actions, innovative solutions, and plans to transform food systems** and leverage these shifts to deliver progress across all of the SDGs.

In the framework of the UN Food System Summit, **5 Main Action Tracks** have been identified. These are;

ACTION TRACK 1 	Ensure access to safe and nutritious food for all
ACTION TRACK 2 	Shift to sustainable consumption pattern
ACTION TRACK 3 	Boost nature positive production at sufficient scale
ACTION TRACK 4 	Advance equitable livelihoods
ACTION TRACK 5 	Build resilience to vulnerabilities, shocks & stresses

FOOD SYSTEMS

IN TURKEY





Turkey has extensive resources of **land and water and rare agro-ecological** conditions with a total land area of

769,630 km²

Agricultural land including permanent meadows and pastures is

37,762,000 hectares 

of which **41.4%** is used for crop production.



Area for **fruit, beverage and spice crops** has

increased by **36.4%** between **2001-2020**, though sown areas for cereals decreased by **12.8%** during the same period.

Primary agriculture accounts for **3.3%** of exports, **6.7%**

of GDP and employs



16%

of the workforce in **2020**

2.306.305

registered to System of the Ministry of Agriculture and Forestry



Small-scale farmers

(≤100 Decares) represent **82.6%**

while large-scale farmers

(>200 Decares) are **6.4%**

Small-scale farmers in Turkey are among most important actors of food systems when considering their strong impact in food production. Turkey implements several support mechanisms to strengthen those farmers and families.



The rate of **Urbanization** is over **75%**. And is expected to be over **80%** in the next decade



Turkey hosts around **45%** of all **Syrian refugees** **3,710,532** in the region

According to the food security index, Turkey is a strong country in terms of proportion of population under the global poverty line, sufficiency of supply, micronutrient availability, market access and agricultural financial services, food safety, protein quality and food safety net programs. Turkey ranks first in hazelnut, cherry, fig and apricot production on global scale.



5.4% of the consumers throw away leftover food and **23%** of the purchased food is thrown away without being consumed, according to 2018 Waste Report of Turkey.

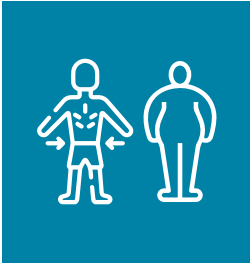
National **'Save Your Food'** campaign made Guinness record as the most promised campaign to reduce food loss and waste in the field of environmental sustainability.



SAVE YOUR FOOD
YOUR ACTIONS MATTER



According to FAO statistics, average protein supply in Turkey increased to **109.3 G / CAPITA / DAY** in the period of 2016-2018 from **103.7 G / CAPITA / DAY** in the period of 2000-2002. Average supply of protein of animal origin significantly increased to **37.7 G / CAPITA / DAY** in the period of 2016-2018 from **24.3 G / CAPITA / DAY** in the period of 2000-2002.



One of the main health problems in Turkey is the increasing prevalence of obesity among adults and children, which is related to malnutrition and to protein-energy malnutrition in children.

Excessive use of salt, lack of **vitamins of B1, B2, B6 and D** and also some minerals such as **calcium, magnesium, iron, zinc and potassium** are main causes of nutritious related health problems.

65%



of Turkish soils are **arid and semi-arid** and sensitive to erosion.



Major agricultural contributors causing emissions in the agricultural sector are **enteric fermentation, manure management** and **agricultural soils**

which account for more than **95%** of agricultural emissions.



Forest area in Turkey increased to **22.6 million hectares** between **2002-2019** with an increase of **8.7%**

and is planned to increase to **23.4 million hectares** in **2023**

Turkey is located in a region sensitive to forest fires and thus has experienced quite serious forest fires recently. Turkey prioritizes afforestation and the works for reducing deforestation and forest damage with use of high technology.

As of the end of 2020, **6.7 million hectares** of a total of **8.5 million hectares** of economically irrigable area in Turkey has been opened for irrigation.





The 11th National Development Plan targets to increase the total size of irrigated lands by **2 million hectares** until 2023

Turkey ranks **7th** in the world in terms of **agricultural economic size.**

Total **pesticide** use decreased by

11%



to **53,672 tonnes** in 2020 from **60,020 tonnes** in 2018.



The number of **members of cooperatives** is **3.5 MILLION**

Agricultural Credit Cooperatives of Turkey with a **Central Union** and



17 Regional Unions,
1615 Cooperatives,
200 Service Bureaus,
19 Companies,
10 Thousand Employees,

The largest farmer organization in Turkey. **35 billion TRY** total assets and **800 thousand** members approximately.



Sum insured in the state supported agricultural insurance system (TARSİM) reached



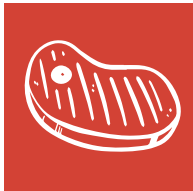
83 billion TRY in 2020. Insurance penetration increases every year with the ever-expanding coverage of insurance policies.



According to the 2020 data of the **Ministry of Agriculture and Forestry**,

the number of farmers engaged in organic plant production is **52,590**; organic plant production area is **382,665 hectares**, and organic plant production amount is **1,631,943 tonnes**.

With respect to animal production, there has been an increase of



300 thousand tonnes in red meat production,
12 million tonnes milk production,
1.4 million tonnes in poultry meat production
and **8.2 billion tonnes** in egg production
in the years of 2002-2020



Since 2005, the number of farmers and production

have increased approximately **3 times** and the production area has increased **4 Times**



According to FAO statistics,
Turkey ranks



2nd

after China in terms of global honey
production in the world in **2019**

Turkey ranks **1st** in the number of
colonies and **honey production** and
is in the first place in consumption of
honey (daily grams per capita)



With approximately

42.1 million heads of sheep and

12 million heads of goats

(54,113,000 heads in total)

Turkey ranks **1st** in Europe and among the
Top 10 Countries in the world.

Turkey is one of the most competitive countries in Broiler and Egg Poultry Sectors



Turkey is among the **top 11 countries** in
the world in terms of number of chickens; in
Europe, it ranks **2nd**; in terms of production.

In Turkey, approximately **1.5 Million People** including producers,
farmers, tradesmen related to the sector and people from feed,
pharmaceuticals, sub-industry, transportation, marketing sectors
earns a livelihood from the poultry sector, which is one of the fastest
growing and strongest sectors in Turkish agriculture.



Manufacturing of Agri-Food Products

Manufacturing of Agri-Food Products	Net Sales (TRY)	The Number of Workplaces (Unit)	The Number of Paid Workers	The Average Incomes (TRY)
Manufacturing of Food Products	334,010,000,000	51,974	463,725	3,393
Manufacturing of Beverage Products	17,282,612,278	753	15,706	5,074
Manufacturing Animal Production	27,502,055,124	6,828	34,313	3,189
Agriculture, Forestry and Aquaculture	72,453,142,737	16,493	95,574	3,148

Source: Entrepreneurship Information System, The Ministry of Science and Technology



According to TURKSTAT and the Ministry of Agriculture and Forestry statistical data, fisheries and aquaculture production decreased by **6.1%** in **2020** compared to the previous year and amounted to

785,811 tonnes

Fisheries production in Turkey was

836,524 tonnes in 2019

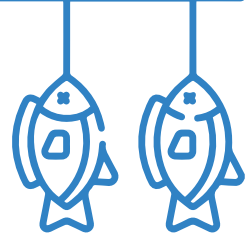


While the production by catch fisheries was

463,168 tonnes, the aquaculture production based on sea in 2019. It was

293,175 tonnes,

128,263 tonnes in inland waters in 2019



The most important fish species grown were trout with

127,905 tonnes

in inland waters, sea bass with

148,907 tonnes

and sea bream with

109,749 tonnes

in seas.



Among the EU Member States Turkey ranks **5th** in total Fisheries Production.



NATIONAL DIALOGUES PROCESS FOR FOOD SYSTEMS SUMMIT

Within the scope of the **3rd Agriculture Forest Council**, **21 working groups** were formed with a total of **1300 participants** in order to shed light for the future of Turkey in the fields of agriculture and forestry. Based on the results of the **3rd Agriculture Forest Council**, **46 main actions** and their sub-actions were determined by the Ministry of Agriculture and Forestry at the beginning of 2020, and these actions are monitored quarterly, until the end of 2023.

SURVEY 1

6 Responses of 13 Private Sector entities were received completely. The questions covering the five main action tracks were sent to the members of Business Council for Sustainable Development Turkey (BCSD Turkey).

NATIONAL WORKSHOP

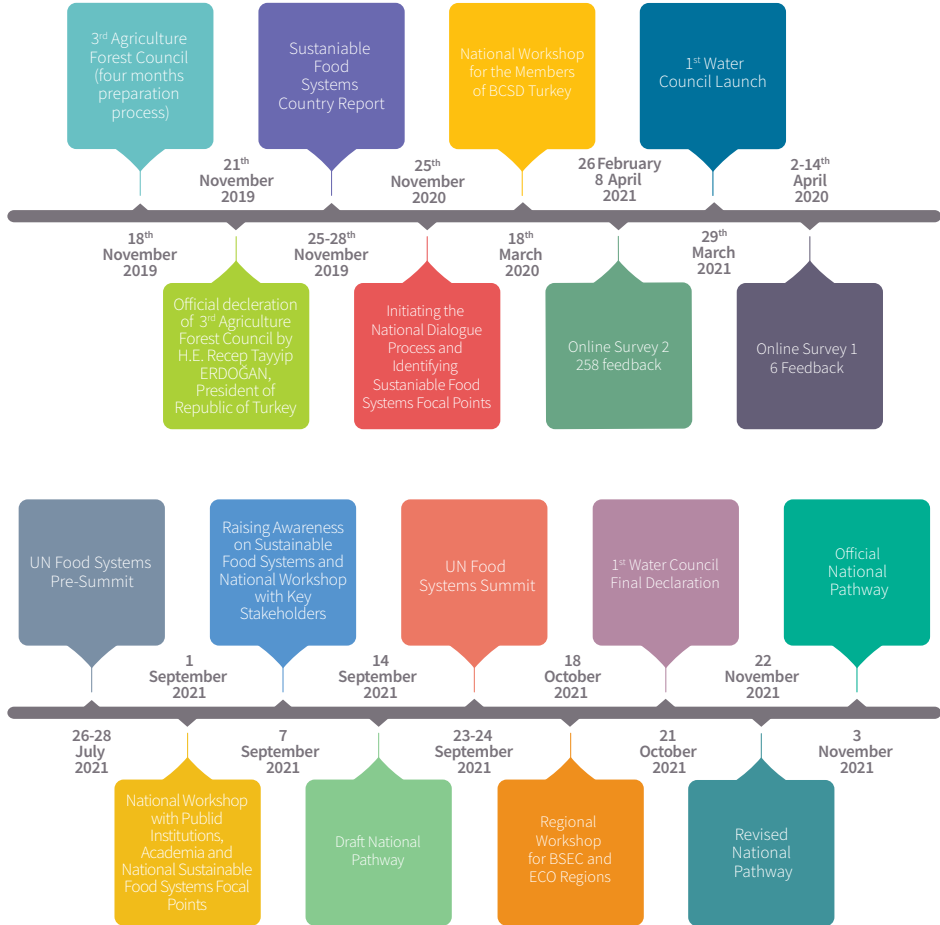
SURVEY 2

258 Responses were received from members of the 3rd Agriculture Forest Council. This survey was sent to over 1000 members of the **3rd Agricultural Forest Council** from academia, public and private sectors, NGOs and CSOs and public institutions etc. at the local and national level. Over **500 problems** and **1000 solutions** and actions recommendations to transform food systems were determined.

A national workshop was organized virtually to make a gap analysis from the previous studies. Participants were divided into 5 discussion groups, on the basis of 5 Action Tracks to discuss a thematic topic.

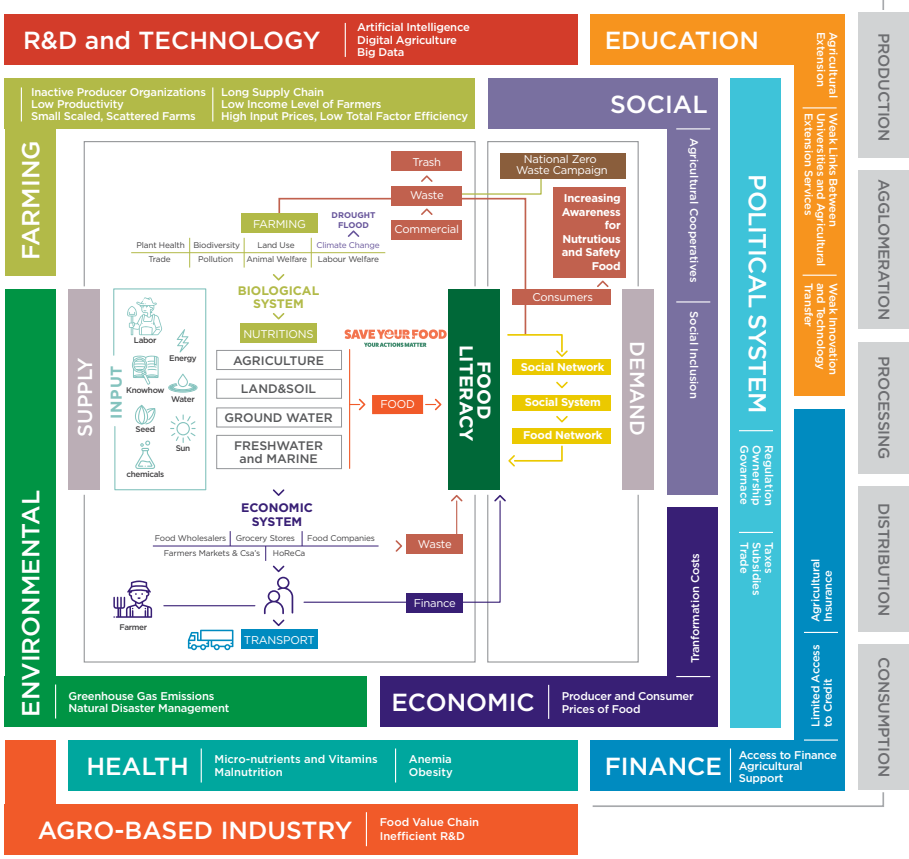


NATIONAL PREPARATION PROCESS FOR FOOD SYSTEMS SUMMIT





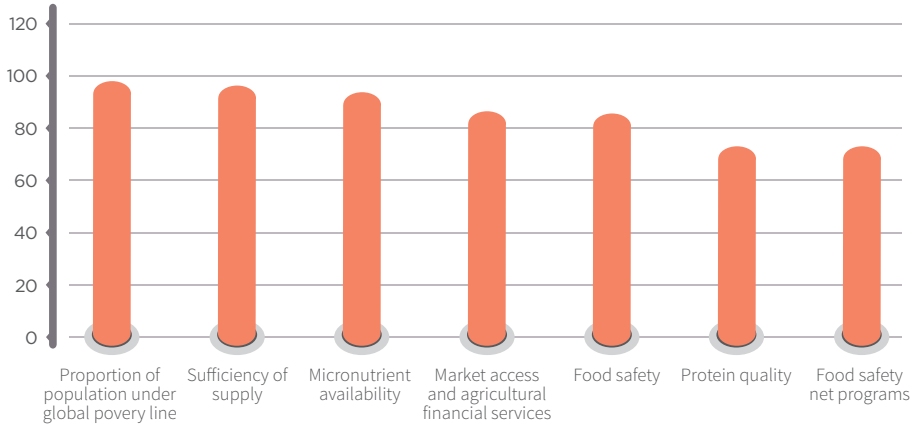
FOOD SYSTEMS IN TURKEY





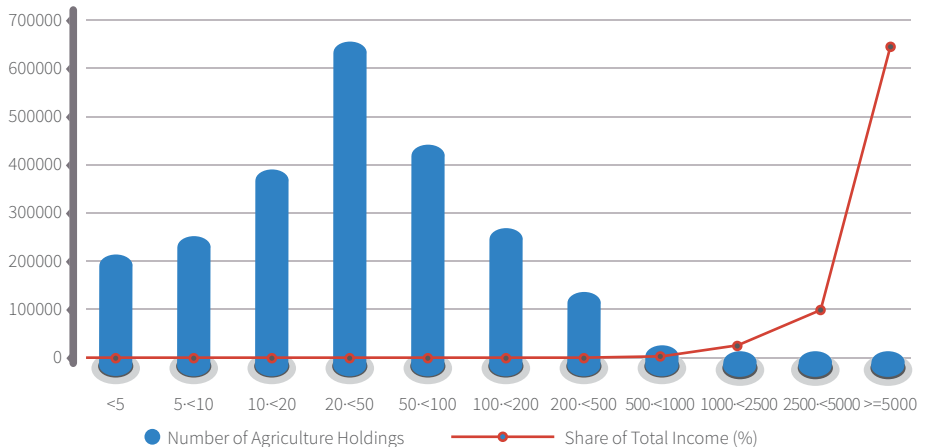
The figure below shows that Turkey is resilient regarding proportion of population under global poverty line, sufficiency of supply, micro-nutrient availability, market access and agricultural financial services, food safety, protein quality and food safety net programs.

FOOD SECURITY INDEX OF TURKEY



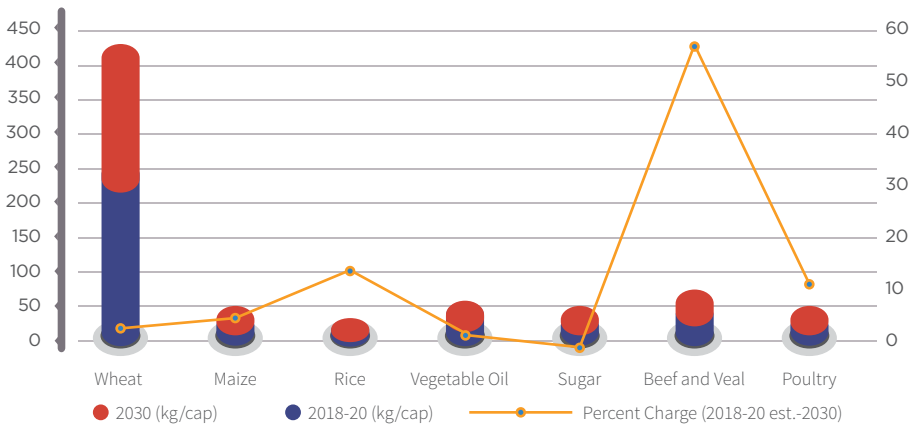
Farm output in perishable products such as fruit and vegetables and fish may be produced for consumption in an area fairly close to the farm. Cooperative marketing is one of the most effective ways for subsistence farmers to deal with marketing problems.

FARM SIZE AND SHARE OF TOTAL INCOME IN TURKEY

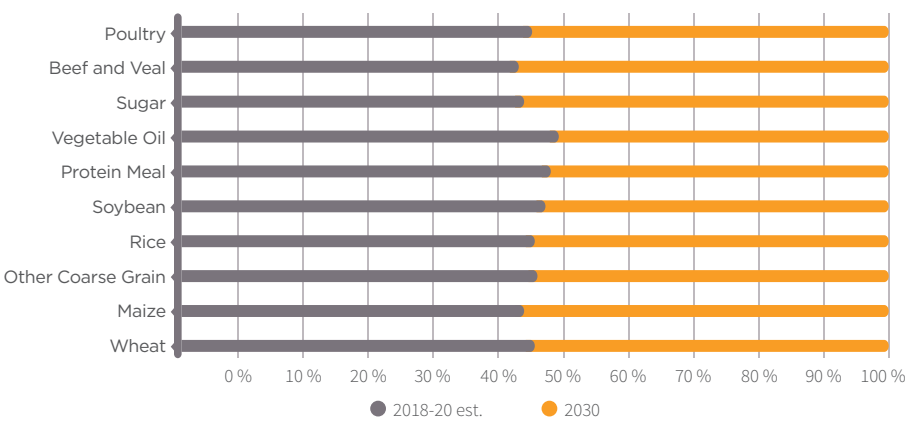




CONSUMPTION PROJECTIONS IN SOME AGRICULTURAL PRODUCTS



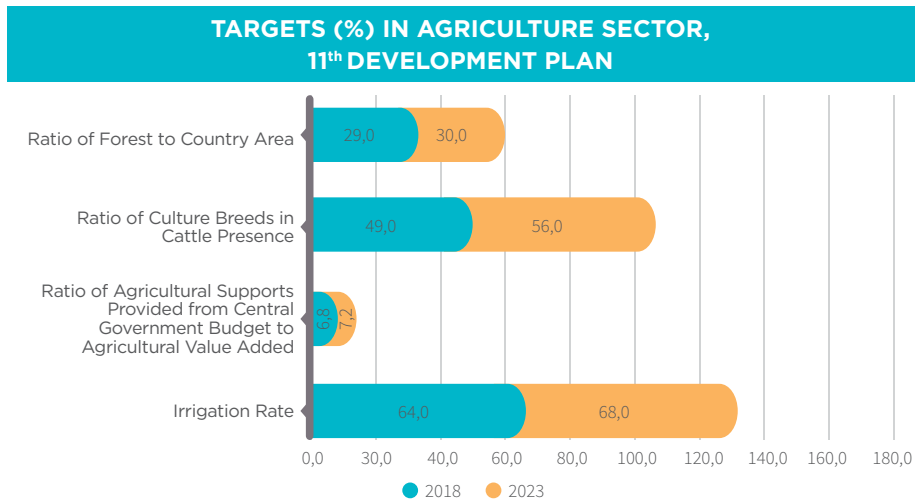
AGRICULTURAL PRODUCTION AND PROJECTIONS FOR 2030



According to a survey made by the Ministry of Health (2019), the frequency of individuals who are worried that they will not be able to find enough food due to a lack of food is **23.4%**. The frequency of those indicating that they cannot consume healthy and nutritious food was found as **22.7%**. With respect to health, the prevalence of obesity in the adult population (18 years and older) was **32.1%** in 2016, which was **22.2%** in 2000.



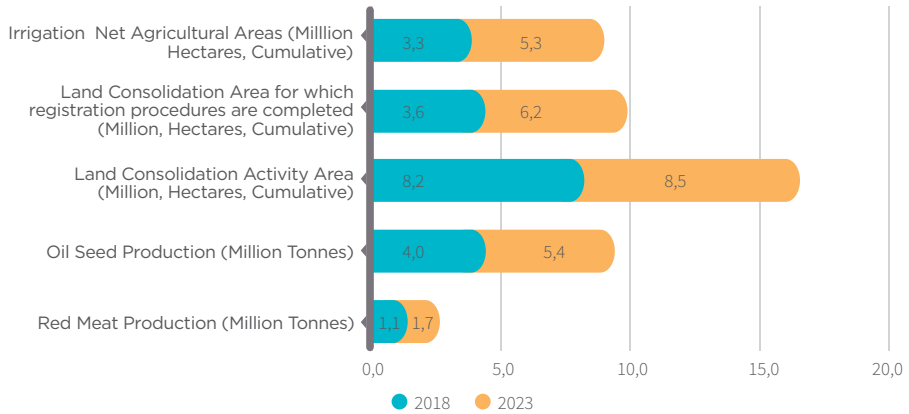
The **11th Development Plan of Turkey** puts some targets to be achieved by 2023, which are considered important for the food security and nutrition challenge. Increasing production of red meat, oilseeds, land consolidation and increasing irrigated net agricultural area, pasture reclamation and land management area are some of the targets to be achieved in the plan. In terms of the meat sector, there is a production expansion for red meat and poultry meat in Turkey.



Source: Strategy and Budget Department of Presidency, 2019

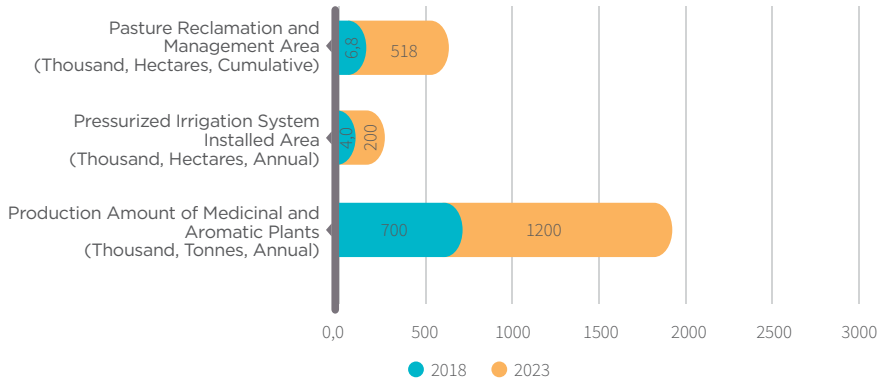


TARGETS (MILLION Hectares/Tonnes) IN AGRICULTURE SECTOR, 11th DEVELOPMENT PLAN



Source: Strategy and Budget Department of Presidency, 2019

TARGETS IN AGRICULTURE SECTOR, 11th DEVELOPMENT PLAN



Source: Strategy and Budget Department of Presidency, 2019



DAILY RECOMMENDED INTAKE OF VITAMINS (%)



Woman
aged 15
and over



Man
aged 15
and over

VITAMIN B2	82	109,3	VITAMIN A	212,4	243,8
VITAMIN B1	87,7	100,4	VITAMIN C	135	128,2
VITAMIN B6	83,2	91,6	VITAMIN E	150	149,1
F O L A T E	110,1	139,4	VITAMIN D	16,9	23,7

Source: The Ministry of Health, 2020

DAILY RECOMMENDED INTAKE OF MINERALS (%)

COOPER



PHOSPORUS



IRON



CALSIUM



POTASSIUM



ZINC



MAGNESIUM



Woman
aged 15
and over

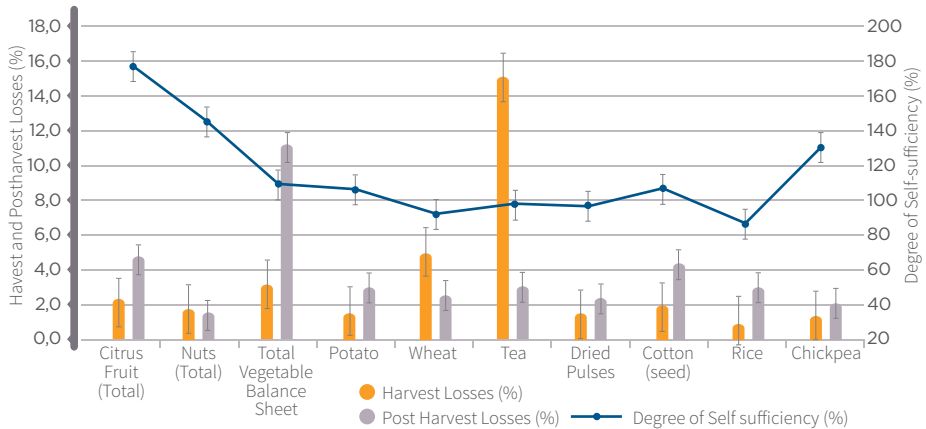


Man
aged 15
and over

Source: The Ministry of Health, 2020



CROP PRODUCTS BALANCE, 2019-20



Source: TURKSTAT, Crop Products Balance Sheets, 2018-2019

There are some significant losses in many stages of food from farmers to consumers. In the producer side, there is some misapplying of inputs and also traditional agricultural practices are common.

Food waste regarding consumption are also high.



In 2013, Turkey launched a campaign at the national level in order to raise awareness on prevention of bread waste to promote healthy bread consumption. In 2014, the FAO considered the campaign for preventing bread waste as the most comprehensive practice carried out through a public institution and declared it as an example of good practice around the world for reducing food loss and waste.

<http://www.ekmegevefa.com>



SAVE YOUR FOOD

YOUR ACTIONS MATTER

In May 2020, Turkey launched the Save Your Food Campaign in cooperation with FAO (<https://gidanikoru.com>).

The aims of the campaign are



to combat
against
food losses
and
waste
both at
national and
international
level



to raise
public
awareness
on food losses
and waste



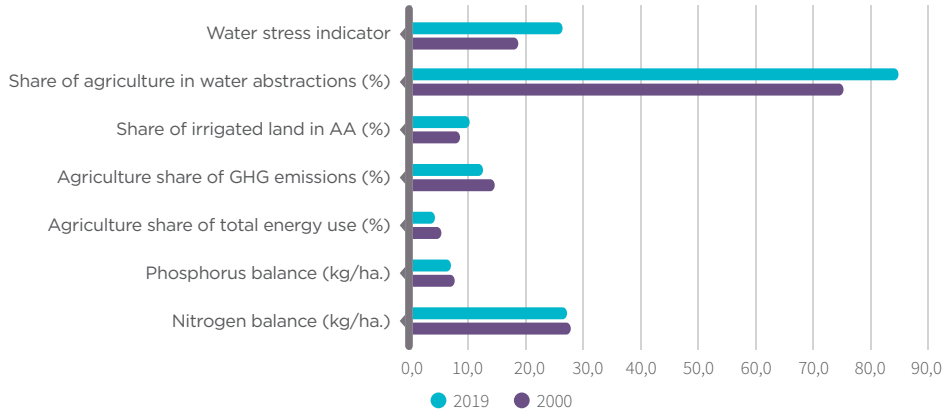
to **create** a
role model
by extending
good practices
on food losses
and for
other
countries
in the region



to support the
National
Zero Waste
project

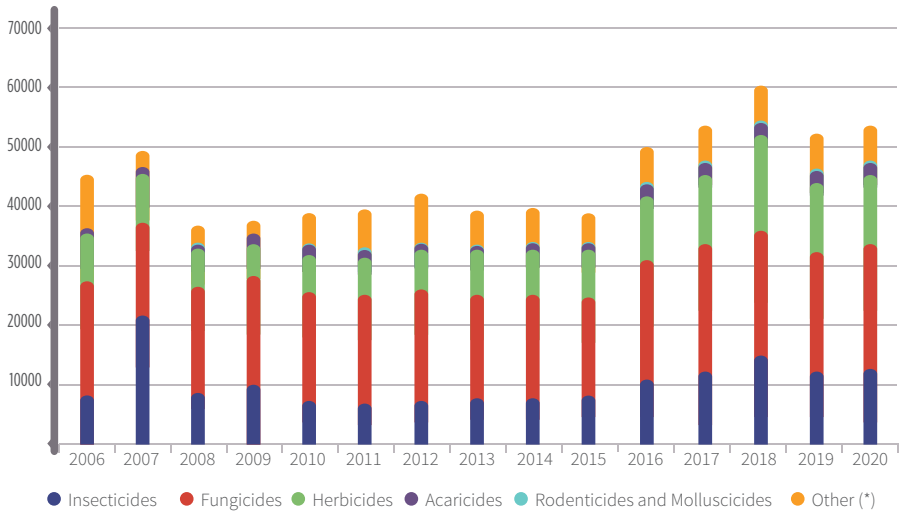


ENVIRONMENTAL INDICATORS OF TURKEY



Source: OECD, 2021

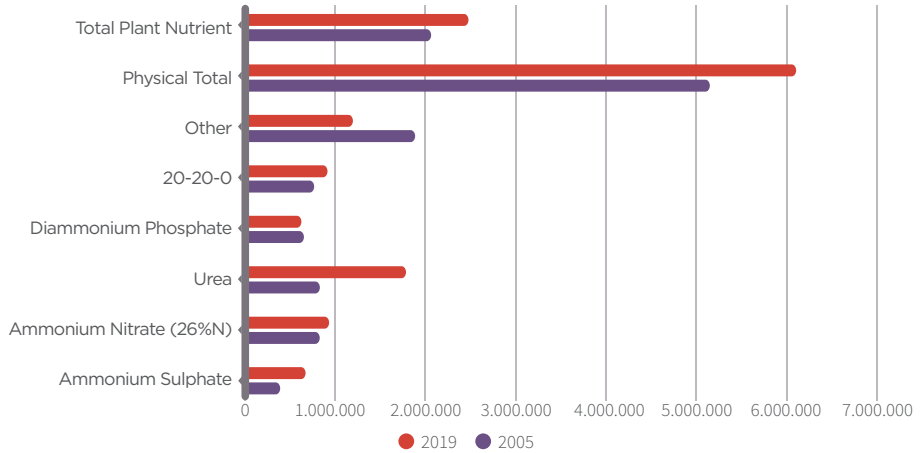
PESTICIDE USE IN TURKEY, 2006-2020



Source: TURKSTAT, 2021

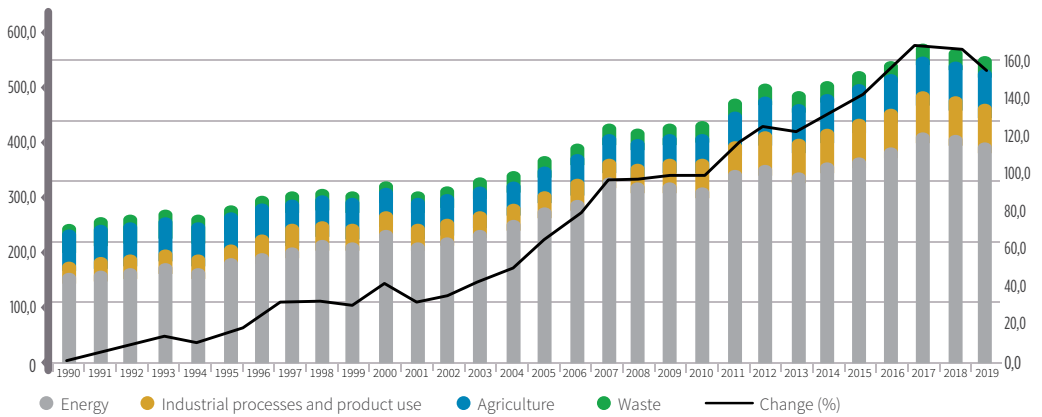


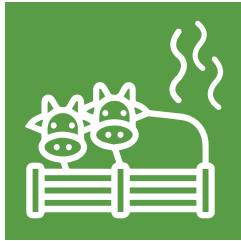
FERTILIZER CONSUMPTION (TONNES), 2005-2019



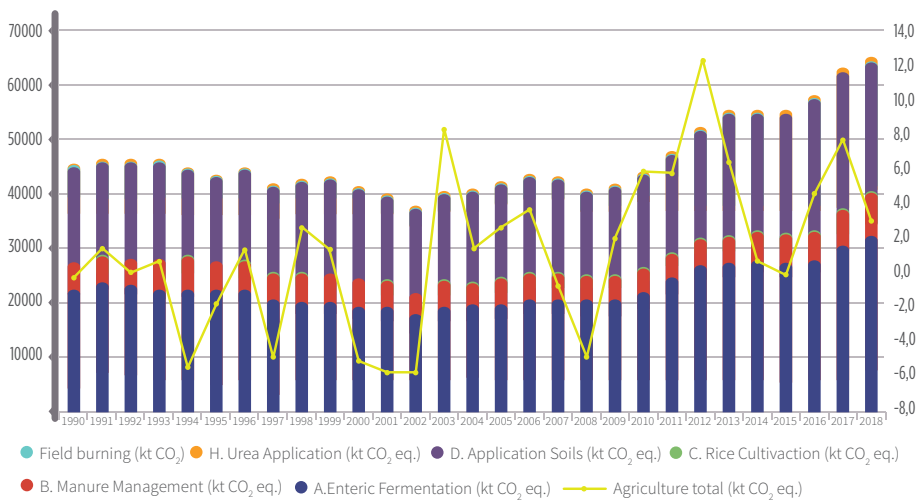
Source: Ministry of Agriculture and Forestry, 2020

GREENHOUSE GAS EMISSIONS BY SECTORS (CO₂ EQUIVALENT), 1990-2019





OVERVIEW OF AGRICULTURE SECTOR EMISSIONS, 1990-2018



Source: TURKSTAT, 2021



Action Tracks	Targets
 Action Track 1 (AT1) Ensure Fair Access to Safe and Nutritious Food for All	Developing Fair Access to Safe and Nutritious Food, Particularly for Vulnerable Groups Improving Public Health, Food Safety and Strengthening Inspections and Controls with Innovative Methods
 Action Track 2 (AT2) Shift to Sustainable Consumption Pattern	Encouraging the Sustainability Supply and Value Chain in Agri-Food Sector and Reducing Food Loss and Waste Raising Consumer Awareness and Promoting Sustainable Consumption
 Action Track 3 (AT3) Boost Nature Positive Production at Sufficient Scale	Improving Climate Change Compatible Production Models Efficient Use of Water Resources Sustainable Use of Natural Resources
 Action Track 4 (AT4) Equitable Livelihoods	Development of More Inclusive Policy and Measures for Disadvantaged Groups (such as Women, Youth, Seasonal Workers, People under Temporary Protection, Children etc.) in Agri-Food Sector Increasing Rural Vitality
 Action Track 5 (AT5) Build Resilience to Vulnerabilities, Shocks & Stresses	Building Resilience of Food Systems against Climate Change, Natural Disasters and Unexpected Crisis



DEVELOPING FAIR ACCESS TO SAFE AND NUTRITIOUS FOOD

Turkey will continue ongoing school nutrition, school meal and school food programs. Turkey also promotes local products with geographical indication, providing healthy and safe food at affordable prices, implementation of measures to prevent food price fluctuations, digitalising food value chain and increasing the accessibility and transparency of all stages of the food value chain for producers and consumers, dissemination of bio-economy and circular economy approaches, conducting R&D and P&D to extend the shelf life of foods and to expand their use and promoting the alternative staple foods for a healthy and balanced food consumption instead of a single type of food.



IMPROVING PUBLIC HEALTH, FOOD SAFETY AND STRENGTHENING INSPECTIONS AND CONTROLS WITH INNOVATIVE METHODS



The Scientific and Technological Research Council of Turkey focuses on food-feed safety and quality, using modern techniques in food and feed production and product development, development of food-feed storage and packaging techniques, application of new methods in food and feed analysis, valorisation of food wastes and traditional foods.

Transforming food systems to more sustainable ones requires a long-term focus and a coherent set of commitments and actions. The challenges of malnutrition, health and the environment are all fundamentally interlinked. Policy coherence in these areas needs to be strengthened.

The main priorities under this target are development of food traceability infrastructure through the widespread use of digital technology and solutions and monitoring pesticide residues, effective and rapid intervention with counterfeiting and adulteration in food products, establishing more effective monitoring and surveillance systems for fishing and promoting aquaculture and training of all key actors in the food supply chain on food safety and quality management systems.



ENCOURAGING THE SUSTAINABILITY SUPPLY AND VALUE CHAIN IN AGRI- FOOD SECTOR AND REDUCING FOOD LOSS AND WASTE

Developing and supporting more robust climate finance mechanisms for small-scale food producers is highly critical for the sustainability of the food chains. In addition to the farmers, livestock keepers, fishers, food processors, forest villagers are also members of this group who are very fragile towards socio-economical shifts with very low income.



The harvest and post-harvest losses are over 10% in Turkey. Reducing food losses and waste significantly contributes to ensuring food security. The most comprehensive initiative which covers all sectors and all food products and also handle food banking practices for reducing food loss and waste by the Republic of Turkey is the Save Your Food Campaign. In May 2020, Turkey launched Save Your Food Campaign in cooperation with FAO. Turkey also made a Guinness Record for the most promised campaign in the field of environmental sustainability on reduction of food loss and waste. “Preventing Bread Waste Campaign” was launched on 17 January 2013 by our President, H.E. Recep Tayyip ERDOĞAN, on a national scale, in order to prevent bread waste and economic losses caused by wastage, to promote the consumption of healthier whole wheat bread, and to raise social awareness on these issues. According to the results of the research conducted to evaluate the results of the campaign, the waste of bread, which was 5.95 million loaves per day, was reduced to 4.9 million loaves per day with the effect of the Campaign. Thus, 1 million 50 thousand loaves of bread per day and 384 million loaves of bread per year were saved from being thrown away.

Turkey will maintain to raise awareness of consumers through social media and other tools in order to combat food waste. The main priorities are to reduce, to prevent and to manage food loss and waste effectively at the consumption level. Shortening food supply and value chain by developing the necessary technological infrastructure and block chain applications including the monitoring and evaluation systems to ensure the cold chain in food products will be another focus under this target.



RAISING CONSUMER AWARENESS AND PROMOTING SUSTAINABLE CONSUMPTION

Turkey conducted a Healthy Nutrition and Physical Activity Programme. Prevention of Childhood Obesity and Physical Activity Action Plan prepared by the Ministry of Health with a multi-sectoral approach is implemented. The School Food Program is carried out in Turkey in collaboration with the Ministry of National Education and the Ministry of Health and with this Programme, it is aimed to increase the awareness



on healthy nutrition and active living in schools and to improve school health by supporting good practices in this regard. In accordance with the cooperation protocol signed between the Ministry of National Education and the Turkish Standards Institute (TSE), efforts are underway to develop a standard way to measure the quality of nutrition and to monitor the growth and development of school-age children with the “Control Guide for Developing Healthy Eating Habits and Increasing Physical Activity in Educational Institutions”. An Erasmus+ project entitled as “Increasing Food Literacy Competencies of Adults (2020-2022)” has been carried out by General Directorate of Agricultural Research and Policies. In this project, the target group which is composed of retired people, housewives, and unemployed people who are desperate to contribute house income by cooking and selling, their products will benefit from food literacy education for adults. Furthermore, they can acquire self-efficacy and will be able to make healthier eating choices, and the economy will be improved through creating more and decent job opportunities.

Turkey will continue to raise awareness among consumers through social media and other tools in order to combat food waste in collaboration with national and global actors to prevent misinformation in nutritious food. Increasing average consumption level for blue foods, decreasing food-borne diseases (including combat against obesity, malnutrition, micronutrient deficiency especially in vulnerable groups), raising consumer awareness and promoting sustainable consumption and increasing food literacy are the main priorities. Diversifying the diets in the following decade will be important regarding agriculture and health policies.



IMPROVING CLIMATE CHANGE COMPATIBLE PRODUCTION MODELS

Increasing use of smart technologies in agriculture along with disseminating digitalization among agri-food system actors is another crucial milestone that the pathway intends to achieve. Turkey has shown great improvement in digital access. Turkey ranks 5th in digital access out of 150 countries for improvements in network coverage, performance and availability. 97% of inhabitants have mobile subscriptions. This coverage rate presents many opportunities to integrate digital solutions to Turkey's food system. Under MoAF coordination several national data sets and the digital services established and used for improving agricultural service, including: National Geographic Information Systems, Farm Accountancy Data Network, Land Parcel Identification System, Integrated Management and Control System, Agricultural Information Network, Farmer Registration System, Animal Registration System, Farmland Registration System and Village Database. These systems also support product verification and tracking, national research programs, map and satellite imagery production, and other key Ministry operations. Turkey will thus be continuing the improvement of those data sets and establishing needed ones for the benefit all stakeholders along the value chain, increasing efficiency, equitability, and profitability of food systems while simultaneously reducing environmental impact.



Turkey will continue to conduct research and modelling studies on the short, medium and long-term effects of climate change on food supply. Research activities to determine the effects of climate change on crop production and livestock on the basis of agricultural basins will also be maintained. Determining the product pattern that will increase agricultural output by optimizing the use of resources, identifying plant species and varieties suitable for agricultural basins, planning the most suitable fertilization and irrigation methods according to the climate and soil demand and sharing them with the farmers, conservation of biodiversity and animal gene resources, development of new animal breeds with high adaptation to climate change as well as dissemination of local varieties resilient to climate change and carrying out the production processes in accordance with climate change and ensuring their sustainability by reviewing the agricultural calendar are the key priorities. Turkey will also continue to disseminate organic agriculture and good agricultural practices by including bio-economy, biomass and circular economy approaches with firm steps.



EFFICIENT USE OF WATER RESOURCES

Saving water in the agricultural sector, which uses approximately 74% of the water potential in Turkey, is one of the most important priority policies of Turkey for the effective, efficient use and sustainable and resilient management of water resources by considering the balance of protection and use. The dissemination of pressurized closed system modern irrigation projects comes to the fore as the most effective way of saving water used for irrigational purpose. On the other side, every change in the amount and quality of water affects agricultural production.



The Blue Peace Initiative in the Middle East is a regional initiative established in 2009 with the vision of water as a means of cooperation, and its member states are Iraq, Lebanon, Jordan, Turkey Syria and Iran. Prince Hassan Bin Talal of Jordan is chairman of the Policy Advisory Board and chairs the board of directors. As of 2019, Turkish Water Institute has been the “Coordination Center” of the initiative. WATERMED 4.0 (2019-2022) project aims to increase the amount of water (conventional/alternative water sources) used in agriculture in the Mediterranean, which is expected to be significantly affected by climate change, to a more efficient and sustainable point by introducing smart technologies. Within the scope of project which is titled as “Obtaining Drinking Water by Treating Dirty Water with Low Cost and Efficient Solar Energy”, a drinking water disinfection system with very low cost and simple technology has been developed for poor countries (especially for Africa) that are experiencing water stress due to the increasing population and climate change.

The Water Council was created by the Ministry of Agriculture and Forestry with public, private and representations from universities and NGOs. Turkey targets to open irrigated land for 2 million hectares in 2018-2023 as indicated in the 2023 vision. This will positively impact the productivity of agricultural land. Turkey will continue to invest in modern irrigation techniques through rural development grant programs. Taking measures to prevent water loss and waste and raise awareness on optimum water use in target groups, efficient use of water sources including ground water and preventing water pollution, and calculating water foot print for agricultural products are key priorities.



SUSTAINABLE USE OF NATURAL RESOURCES

Turkey will continue its efforts on land consolidation which will make a remarkable contribution to the transformation of food systems in Turkey. By using the monitoring systems developed by the Ministry of Agriculture and Forestry, identifying agricultural areas sensitive to erosion and applying erosion control methods more effectively in these areas, efficient use of renewable energy, reducing erosion by extending methods such as terracing and planting, updating the national basic soil maps and accordingly preparation and follow-up of land use and production plans, establishment and support of production stations for fauna are key priority areas.



DEVELOPMENT OF MORE INCLUSIVE POLICIES AND MEASURES FOR DISADVANTAGED GROUPS (SUCH AS WOMEN, YOUTH, SEASONAL WORKERS, PEOPLE UNDER TEMPORARY PROTECTION, CHILDREN ETC.) IN AGRI-FOOD SECTOR

Turkey will continue to invest in farming activities conducted by small holders. Turkey implemented a young farmer programme in order to mitigate rural migration and ensure natural habitat. This program supports real persons between the ages of 18-40, residing/wanting to reside in rural areas and engaged in/wanting to display agricultural activities. Turkey will maintain policies to empower women working in the agriculture sector. Adapting existing social protection policies and developing new social policies to register informal workers and to prevent hidden unemployment and diversification of decent work opportunities in rural and agricultural food sectors in disadvantaged groups, especially youth and women are among key priority areas. Turkey will disseminate digital literacy and use of smart applications among smallholders and women and youth of rural areas via custom training programs and support mechanisms. Soup-Kitchen for elderly, disabled, homeless and diseased people who have difficulty in accessing nutrition will also be continued with national and local administrations.





INCREASING RURAL VITALITY

Rural poverty and absence of financial and social incentives continue to stand as one of the major reasons behind rural-urban migration causing also problems for urban development. The 1st objective of the 2019-2023 Strategic Plan of our Ministry is to increase the welfare of rural people in the rural area, to ensure a stable food supply by increasing the yield and quality in agricultural production. Reducing rural



to urban migration, improving access to finance for small farmers and cooperatives, small businesses, decreasing the rural poverty by diversifying alternative income methods such as inland fisheries, handicraft works, agro-based industry and rural tourism including local food culture and local cuisine in rural areas and increasing the number of geographical indications by preserving traditional production methods for local products and local cuisine and strengthening its position in supply chains.



BUILDING RESILIENCE OF FOOD SYSTEMS AGAINST CLIMATE CHANGE, NATURAL DISASTERS AND UNEXPECTED CRISIS

Turkey invests in e-commerce applications for virtual marketing (DITAP-Digital Agriculture Platform) and accelerating digital transformation in agriculture by developing innovative management models and strengthening vertical and horizontal cooperation and R&D infrastructure. Development of land ownership, land banking, community-based mechanisms, building resilience of food systems to climate change and natural disasters, review of measures against loss of income and breakdown in food supply due to loss of livelihoods as a result of COVID-19 and strengthening food security for other emergencies, ensuring food supply resilience against future crises by encouraging urban farming activities including vertical farming practices against climate change, where more crops are obtained by using 95% less water, promoting sustainable agriculture, ensuring sustainability and maintaining competitiveness in agriculture by minimizing the effects of climate change and drought, adapting to climate change, water management, strengthening environmental resilience, Accelerating digital transformation in agriculture by developing innovative management models, cooperation and R&D infrastructure, increasing the crop resilience, enhanced network, cooperation and governance between national and international actors, reinforced measures and insurance system with building up meteorological forecast systems, early warning systems and registration in agriculture), improvement of supply management system on agricultural inputs are among key priority areas.



As a result, ensuring the efficiency and sustainability of agricultural production with innovative methods, improving sustainable food systems with reliable food supply and healthy consumption, developing new models resilient to climate change by benefiting digitalization, highlighting the importance of vulnerable groups will be key objectives under the targets of Turkey's National Pathway. These vertical targets identified in transformation of Turkish food systems will be supported by horizontal targets such as digitalization, agricultural extension and cooperation among local, regional, national and international organizations.



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT1: Ensure Access to Safe and Nutritious Food for All	11 th Development Plan (2019-2023)	408. Livestock farming will be developed.
		410. In order to ensure food safety, efficiency of inspections will be increased, the services for combating plant and animal disease and pests will be developed.
		411. The rules and capacities for market regulation will be improved in order to ensure food safety, efficient inventory management, reducing losses in the supply chain and preventing waste.
	New Economy Program (2019-2021)	Food value chain will be reconstructed by execution of The National Unity in Agriculture Project in priority of food safety and international competition. In this context, support will be given to the studies of the Marketplace State Law.
	2021 Economic Reform Package	2.3.a The products remaining in the field and in conditions will be brought together with the buyers in the special section to be opened in the Digital Agriculture Market (DITAP).
		2.3.d. In order to prevent food waste, the Food Banking System will be made attractive and expanded
	3 rd Agriculture Forest Council -Main Actions by 2024	1. Establishing a Digital Value Chain from Field to Fork
		4. Making legislative arrangements and put into practice for penalties to the deter of food fraudulence and adulteration
		5. Preventing information pollution in food and increasing food literacy
		17. Enhancing Cooperation among Public, Private Sector and University for R&D and Innovation
		18. Promoting international projects for the exchange of experience and know-how.
	Strategic Plan of Ministry of Agriculture and Forestry (2019-2023)	32. Increasing the share of sheep and ovine meat in red meat production by increasing the number of sheep and goats
		A1: Raising welfare in rural areas, ensuring stable food supply by increasing yield and quality in agricultural production
		A2: To ensure food and feed safety from production to consumption, to take necessary measures for plant and animal health and welfare
	Action Plan for Prevention and Control of Adult and Childhood Obesity and Physical Activity 2019 – 2023 (Action Plan for Adults)	A7: Developing institutional capacity
		A. Strengthening cooperation in the development of holistic health management and healthy nutrition
		B. Establishment of healthy nutrition environments
C. Supporting the gains of lifelong healthy nutrition, especially for disadvantaged groups		
Action Plan for Prevention and Control of Adult and Childhood Obesity and Physical Activity 2019 – 2023 (Action Plan for Childhood Obesity)	D. Reorganization of health services; presentation of integrated healthcare services (providing nutrition-related information and counseling, early diagnosis, treatment rehabilitation services)	
	A. Supporting a healthy start in life	
	B. Promote healthy environment in schools and pre-school	
	C. Informing and strengthening of families	
	D. Ensuring that healthy options are easy options	
National Rural Development Strategy (2021-2023)	E. Reducing marketing pressure to children	
	Priority 1.1 Improving the competitiveness of the agriculture and food sectors	



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT2: Shift to Sustainable Consumption Pattern	11 th Development Plan (2019-2023)	403. By providing accurate and reliable data at macro and micro level, the whole chain extending from seed to table will be fully recorded, annual monitoring and evaluation activities will be institutionalized, agricultural information systems will be completed and effective use will be ensured.
		411. The rules and capacities for market regulation will be improved in order to ensure food safety, efficient inventory management, reducing losses in the supply chain and preventing waste.
		413. Cooperatives and producer unions will be actively incorporated into the system in order to reduce the number of intermediaries in the distribution chain in the marketing of agricultural products, to ensure the consumer access to the product at reasonable prices and to establish a direct connection between the producer and the consumer.
		414. Mechanisms will be established to ensure that agricultural products produced at local and regional level achieve the added-value they deserve.
	2021 Economic Reform Package	2.3.a The products remaining in the field and in conditions will be brought together with the buyers in the special section to be opened in the Digital Agriculture Market (DITAP).
		2.3.c. Support will be given to the establishment of a cold chain in order to reduce the loss of vegetables and fruits.
		2.3.d. In order to prevent food waste, the Food Banking System will be made attractive and expanded.
		2.3.e. Awareness of consumers about food waste will be increased through social media and other communication tools
	3 rd Agriculture Forest Council -Main Actions by 2024	6. Establishing the infrastructure to prevent food loss and waste
		7. Encouraging the Consumption of Capri and Ovine Animals' Meat and Increasing its Market Share
		17. Enhancing Cooperation among Public, Private Sector and University for R&D and Innovation
		18. Promoting international projects for the exchange of experience and know-how.
		28. Supporting R&D projects for the re-use of wastes in order to reach the zero waste goal
	Strategic Plan of Ministry of Agriculture and Forestry (2019-2023)	33. Increasing alternative aquaculture species, production and productivity in aquaculture and hunting activities within the framework of sustainability principles
		A2: Ensuring food and feed safety from production to consumption, taking necessary measures for plant and animal health and welfare
	National Strategy Document on Prevention, Reduction and Monitoring of Food Loss and Waste And Its Action Plan	A7: Developing institutional capacity
		Strategic Goal 1. Prevent and Reduce Food Loss and Waste
		Strategic Goal 2. Food Recovery and Redistribution for Direct Human Consumption
		Strategic Goal 3. Converting Former Foodstuffs to Animal Feed, Without Competing with Recovery and Redistribution for Direct Human Consumption
	Action Plan for Prevention and Control of Adult and Childhood Obesity and Physical Activity 2019 – 2023 (Action Plan for Adults)	Strategic Goal 4. Recycle Food Loss and Waste
B. Establishment of healthy nutrition environments		



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT2: Shift to Sustainable Consumption Pattern	Action Plan for Prevention and Control of Adult and Childhood Obesity and Physical Activity 2019 – 2023 (Action Plan for Childhood Obesity)	B. Promote healthy environment in schools and pre-school
		D. Ensuring that healthy options are easy options
		E. Reducing marketing pressure to children
	National Drought Strategy and Action Plan (2017-2023)	Purpose3/H-3.1 Organizing trainings to inform the society.
		Target 5.6. Improving waste and residue management in agricultural production
		Target 5.7. Reducing food loss and waste
Green Deal Action Plan 2021	Target 5.8. Raising awareness on the EU Farm-to-Fork Strategy and Biodiversity Strategies	
	Eleventh Development Plan (2019-2023)	405. Protection, effective use and management of agricultural lands will be ensured.
		406. Investments will be prioritized and maintained in order to expand irrigated areas, and efforts towards quality and quantity wise preservation and efficient use of water will be furthered.
407. Plant production will be increased.		
408. Livestock farming will be developed.		
409. Production and exports will be increased in the aquaculture sector.		
412. In agricultural production, biodiversity in the field of local animal breed and seeds will be preserved and made sustainable.		
415. The contribution of forests to the economy will be increased through sustainable forest management.		
416. The efficiency and quality of agricultural R&D activities will be increased by improving coordination and cooperation between public, university, private and industrial sectors in agricultural research activities.		
New Economy Program (2019-2021)		An early warning system that allows a healthy supply and yield forecasts for agricultural products will be established.
		Necessary institutional and legal infrastructure will be established in order to bring the idle agricultural lands into agricultural production.
2021 Economic Reform Package	2.3.b. Guidance will be provided with guide documents for the production, logistics and retail sectors	
	2.3.f In order to contribute to agricultural production planning, increase predictability in production and prevent price fluctuations, contract farming mechanisms will be developed that will increase the confidence of farmers and industrialists in written contracts.	
	2.3.g. The Proposal of the Market Law, which will also reduce the intermediation costs in unprocessed food prices, will be submitted to the Parliament.	
	4.1.e. With the amendment to be made in the Energy Efficiency Law; buildings and energy efficiency supports in agriculture and service sectors will be included in the scope	



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT3: Boost Nature Positive Production at Sufficient Scale	3 rd Agriculture Forest Council-Main Actions by 2024	1. Establishing a Digital Value Chain from Field to Fork
		2. Establishing and Implementing an alternative support model with contractual production
		8. Establishing 7 more heifer centers under the Breeding Heifer Production Center Project; consequently, increasing the total number to 32
		9. Building mass feeding houses and establishing a mulberry garden within the scope of Silkworm Production Basin Project
		10. Completion of branding infrastructure works for agriculture and forestry products
		11. Efficient use of meteorological information in every stage of production in agriculture and forestry
		13. Increasing the production of fiber plants to be used for industrial purposes
		14. Use of high technology and artificial intelligence applications in response to forest fires
		16. Establishing the necessary legal regulations in terms of fire safety in licensing of dwellings and workplaces in and around the forest
		17. Enhancing Cooperation among Public, Private Sector and University for R&D and Innovation
		18. Promoting international projects for the exchange of experience and know-how.
		19. Evaluating all legislation on agriculture and forest with a holistic approach, establishing a simple legislative structure
		21. Enacting Water Law
		22. Establishing and disseminating alternative models such as land banking and co-production in order to bring idle agricultural lands to production and solving the problem of transfer in agricultural lands by developing inheritance legislation
		23. Using soil and water resources within the Framework of Sustainable Management Principles
		25. Fighting against desertification and erosion effectively and efficiently
		26. Uncovering our nature tourism potential and becoming an international brand in nature tourism
		27. Completing the identification and restraint studies of pastures, highlands and winter quarters
		28. Supporting R&D projects for the re-use of wastes in order to reach the zero waste goal
		29. Development of Licensed Warehousing, dissemination of electronic product trade
		30. Increasing buffalo number and productivity
		31. Reaching international averages in calf mortality and fertility statistics
		33. Increasing alternative aquaculture species, production and productivity in aquaculture and hunting activities within the framework of sustainability principles
		34. Development and expansion of domestic and national seed and seedling sectors
		35. Conservation, development and commercialization of local (Ata) seed varieties
		36. Increasing production and marketing opportunities with Medicinal and Aromatic Plants Action Plan
		37. By promoting the production and use of organic and organomineral fertilizers, reducing the import of chemical fertilizers and environmental pollution, spreading the biological and biotechnical control methodologies



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan	
AT3: Boost Nature Positive Production at Sufficient Scale	3 rd Agriculture Forest Council-Main Actions by 2024	38. Conservation and breeding of our pet genetic resources	
		39. Increasing studies on determination, protection, improvement and dissemination of domestic genetic resources and biodiversity in the areas of agriculture and forestry, genetic resource database project	
		40. Production of veterinary biological products and pharmaceutical active ingredients by encouraging technology and R&D investments	
		41. Completing the national forest inventory	
		42. Making our country an international forest sapling production and marketing center.	
		43. Eliminating the ownership problems experienced in the allocation and determination of the places to be moved beyond the forest boundary, by completing the registration of the forests whose cadastre has been finalized	
		44. Preparation of land use plans and agricultural land use plans, completion of detailed soil surveys	
		45. Completion of land consolidation projects by ten years	
	Strategic Plan of Ministry of Agriculture and Forestry (2019-2023)	46. Prioritization of new irrigation investments and rehabilitation projects	
		A1: Raising welfare in rural areas, ensuring stable food supply by increasing yield and quality in agricultural production	
		A3: Protecting fisheries and aquaculture resources, ensuring their sustainable operation	
		A4: Ensuring sustainable management of soil and water resources	
		A6: Conserving biodiversity and ensuring its sustainable management	
	National Energy Efficiency Action Plan 2017-2023	A7: Developing institutional capacity	
		T1-Encouraging the renewal of tractors and combine harvesters with more energy efficient versions	
		T2-Transition to energy efficient irrigation methods	
		T3-Supporting energy efficiency projects in the agriculture sector	
		T4-Encouraging the use of renewable energy resources in agricultural production	
		T5-Identification of agricultural by-product and waste potential to obtain biomass and promoting its use	
	National Basin Management Strategy (2014-2023)	T6-Supporting energy efficiency in the fisheries and aquaculture	
		Goal 1: Strengthening legal and institutional capacities for sustainable management of basins, ensuring coordination and cooperation between institutions and stakeholders.	
		Goal 2: Sustainable management and use of water resources of the basins.	
			Goal 4: Protecting and managing the biological diversity, natural and cultural landscape resource values of the basins and ensuring the sustainability of ecosystem services.



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT3: Boost Nature Positive Production at Sufficient Scale	Climate Change Action Plan (2011- 2023)	PURPOSE T3. Developing information infrastructure and capacity in the agriculture sector
		PURPOSE O3. Limiting the negative impact of land uses and changes such as forests, pastures, agriculture and settlements on climate change
		PURPOSE UT2. Developing and expanding R&D and scientific studies to identify the impacts of climate change on agriculture and to ensure adaptation to climate change
		PURPOSE UT3. Sustainable planning of water utilization in agriculture
		PURPOSE UT4. Protecting soil and agricultural biodiversity against the impacts of climate change
		PURPOSE UO1. Integration of the climate change adaptation approach to ecosystem services, biodiversity and forestry policies
		PURPOSE A1. Ensuring Effective Waste Management
		PURPOSE US1. Integrating adaptation to the impacts of climate change into water resource management policies
		PURPOSE US3. Developing and expanding R&D and scientific studies to ensure adaptation to the impacts of climate change in water resources management
		PURPOSE US4. Integrated management of water resources and water basins for adaptation to climate change
	National Rural Development Strategy (2021-2023)	Priority 1.1 Improving the competitiveness of the agriculture and food sectors
		Priority 2.1 Ensuring the sustainability of soil and water resources
		Priority 2.2 Ensuring effectiveness in the use of agricultural land
		Priority 2.3 Ensuring the sustainability of forest resources
	National Drought Strategy and Action Plan (2017-2023)	Purpose 1/H-1.1 To develop legislation on drought management.
		Purpose 1/H-1.2 To determine policy and to ensure national coordination and international cooperation regarding drought management.
		Purpose 2/H-2.1 Conducting Research, Planning and Implementation Studies in Drought Management
		Purpose 2/H-2.2 To coordinate and prioritize the drought-related investments and activities carried out by the relevant institutions and organizations.
		Purpose 2/H-2.3 To create a "National Drought Database" based on Geographic Information System.
		Purpose 2/H-2.4 Developing Agricultural Product Yield Insurance System
		Purpose 3/H-3.1 Organizing trainings to inform the society.
		Purpose 4/H-4.1 To determine the possible effects of climate change on drought through scientific research and modeling studies.



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT3: Boost Nature Positive Production at Sufficient Scale	Green Deal Action Plan 2021	Target 1.2. Continuing evaluation studies for a national carbon pricing mechanism
		Target 2.1. Development of green transformation of industry and circular economy in our country
		Target 2.3. Integrated pollution prevention and control studies within the scope of sustainable consumption and production
		Target 2.4. Improving the sustainable use of water in production and consumption and improvement of the reuse of waste water
		Target 2.5. Sustainable Products Initiative harmonization studies
		Target 2.7. Reducing Endocrine Disrupting Chemicals
		Target 5.1. Reducing the use of pesticides and anti-microbials
		Target 5.2. Improvement of organic agriculture
		Target 5.3. Reducing the use of chemical fertilizers
		Target 5.4. Land consolidation activities
		Target 5.5 Increasing the use of renewable energy in agriculture
		Target 5.6. Improving waste and residue management in agricultural production
		Target 5.8. Raising awareness on the EU Farm-to-Fork Strategy and Biodiversity Strategies
	National Strategy and Action Plan to Combat Desertification (2019-2030)	Strategic Goal 1: Improving the conditions of affected and likely to be affected ecosystems, combating desertification / land degradation, promoting sustainable land management and Contributing to Land Degradation Neutrality (LDN)
	National Water Plan 2019-2023	Strategic Goal 4: Contributing to global benefits through the effective implementation of the UNCCD
		1. Water Resources Management
		2. Water Resources Data Status
		3. Protection and Improvement of Water Resources in terms of Quantity, Quality and Ecosystems
		4. Supply-Demand Balance and Water Allocation
		5. Finance, Budget and Business
6. Water Efficiency		
7. Socio-Economic Analysis		
8. Information and Decision Support Systems		
9. Water Safety		
10. Water Policy		



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT4: Advance Equitable Livelihoods	Eleventh Development Plan (2019-2023)	404. The efficiency of agricultural subsidies will be increased.
		413. Cooperatives and producer unions will be actively incorporated into the system in order to reduce the number of intermediaries in the distribution chain in the marketing of agricultural products, to ensure the consumer access to the product at reasonable prices and to establish a direct connection between the producer and the consumer.
		414. Mechanisms will be established to ensure that agricultural products produced at local and regional level achieve the added-value they deserve.
		417. Activities to protect the income of producers in agriculture will be supported.
		418. The effectiveness of agricultural training and extension activities will be increased and expanded.
	2021 Economic Reform Package	2.3.f In order to contribute to agricultural production planning, increase predictability in production and prevent price fluctuations, contract farming mechanisms will be developed that will increase the confidence of farmers and industrialists in written contracts.
	3 rd Agriculture Forest Council -Main Actions by 2024	2. Establishing and Implementing an alternative support model with contractual production
		17. Enhancing cooperation among public, private sector and university for R&D and innovation
		18. Promoting international projects for the exchange of experience and know-how.
		20. Rearrangement of neighborhoods as rural and urban in metropolitan municipalities, preserving the village legal entity structure in rural neighborhoods
		22. Establishing and disseminating alternative models such as land banking and co-production in order to bring idle agricultural lands to production and solving the problem of transfer in agricultural lands by developing inheritance legislation
		24. Supporting women and youth entrepreneurship to ensure the sustainability of family business
		43. Eliminating the ownership problems experienced in the allocation and determination of the places to be moved beyond the forest boundary, by completing the registration of the forests whose cadastre has been finalized
	Strategic Plan of Ministry of Agriculture and Forestry (2019-2023)	A1: Raising welfare in rural areas, ensuring stable food supply by increasing yield and quality in agricultural production
		A7: Developing institutional capacity
		Strategy 1: Within the framework of the goal of further empowering women, re-evaluation of the legislation and making necessary improvements for effective implementation
		Strategy 3: Strengthening the economic position of women and developing economic and social policies to combat informality, particularly unpaid family work.
	National Rural Development Strategy (2021-2023)	Strategy 6: Increasing studies on the participation of women requiring special policies into economic life
		Priority 1.2 Diversification of the rural economy
		Priority 3.1 Development of physical infrastructure
		Priority 4.1 Development of human and social capital
		Priority 4.2 Strengthening poverty reduction efforts
	Priority 5.1 Improving the service delivery capacity of the public	
	Priority 5.2 Strengthening initiatives for local and rural development	



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT4: Advance Equitable Livelihoods	Green Deal Action Plan 2021	Target 5.4. Land consolidation activities
	National Strategy and Action Plan to Combat Desertification (2019-2030)	Strategic Goal 3: Reduce, adapt and manage the effects of drought to increase the resilience of fragile populations and ecosystems
AT5: Build Resilience to Vulnerabilities, Shocks & Stresses	Eleventh Development Plan (2019-2023)	405. Protection, effective use and management of agricultural lands will be ensured.
		406. Investments will be prioritized and maintained in order to expand irrigated areas, and efforts towards quality and quantity wise preservation and efficient use of water will be furthered.
		407. Plant production will be increased.
		408. Livestock farming will be developed.
		409. Production and exports will be increased in the aquaculture sector.
		412. In agricultural production, biodiversity in the field of local animal breed and seeds will be preserved and made sustainable.
		415. The contribution of forests to the economy will be increased through sustainable forest management.
	New Economy Program (2019-2021)	An early warning system that allows a healthy supply and yield forecasts for agricultural products will be established.
	3 rd Agriculture Forest Council -Main Actions by 2024	1. Establishing a Digital Value Chain from Field to Fork
		3. Transition to a region or basin-based management model in the area of agriculture and forestry
		6. Establishing the infrastructure to prevent food loss and waste
		8. Establishing 7 more heifer centers under the Breeding Heifer Production Center Project; consequently, increasing the total number to 32
		9. Building mass feeding houses and establishing a mulberry garden within the scope of Silkworm Production Basin Project
		11. Efficient use of meteorological information in every stage of production in agriculture and forestry
		12. Continuing to lease land to promote strategic production in foreign countries.
		14. Use of high technology and artificial intelligence applications in response to forest fires
		15. Diversification of non-wood forest products, afforestation of forest areas to increase added value and encouragement of agricultural forestry
		16. Establishing the necessary legal regulations in terms of fire safety in licensing of dwellings and workplaces in and around the forest
		17. Enhancing Cooperation among Public, Private Sector and University for R&D and Innovation
		18. Promoting international projects for the exchange of experience and know-how.
21. Enacting Water Law		
23. Using Soil and Water Resources within the Framework of Sustainable Management Principles		



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT5: Build Resilience to Vulnerabilities, Shocks & Stresses	3 rd Agriculture Forest Council -Main Actions by 2024	25. To conduct fight against desertification and erosion effectively and efficiently
		27. Completing the identification and restraint studies of pastures, highlands and winter quarters
		30. Increasing buffalo number and productivity
		34. Development and expansion of domestic and national seed and seedling sectors
		35. Conservation, development and commercialization of local (Ata) seed varieties
		37. Thanks to promoting the production and use of organic and organomineral fertilizers, reducing the import of chemical fertilizers and environmental pollution, spreading the biological and biotechnical control methodologies
		41. Completing the national forest inventory
		46. Prioritization of new irrigation investments and rehabilitation projects
	Strategic Plan of Ministry of Agriculture and Forestry (2019-2023)	A6: Conserving biodiversity and ensuring its sustainable management
		A7: Developing institutional capacity
	National Strategy and Action Plan to Combat Desertification (2019-2030)	Strategic Goal 1: Improving the conditions of affected and likely to be affected ecosystems, combating desertification / land degradation, promoting sustainable land management and Contributing to Land Degradation Neutrality (LDN)
		Strategic Goal 2: Improving the living conditions of the affected and likely to be affected population
		Strategic Goal 3: Reduce, adapt and manage the effects of drought to increase the resilience of fragile populations and ecosystems
		Strategic Goal 4: Contributing to global benefits through the effective implementation of the UNCCD
		Strategic Goal 5: Mobilize the necessary financial / non-financial resources to support the implementation of the contract, leading the bilateral, regional and global cooperation, share with other parties for creating an effective partnership between national and international actors
	National Basin Management Strategy (2014-2023)	Goal 1: Strengthening legal and institutional capacities for sustainable management of basins, ensuring coordination and cooperation between institutions and stakeholders.
		Goal 2: Sustainable management and use of water resources of the basins.
		Goal 3: Prevention of destruction and erosion in basin areas and natural resources, rehabilitation and sustainable use of degraded catchment areas.
		Goal 4: To protect and manage the biological diversity, natural and cultural landscape resource values of the basins and to ensure the sustainability of ecosystem services.
		Goal 5: To raise awareness of the people living in the basins, to increase the quality of life and welfare, and to reduce the pressure on natural resources.
		Goal 6: Integration, development and activation of prevention and struggle mechanisms against natural disasters and their damages in basin management.
Goal 7: To include the possible effects of climate change and adaptation to these effects, and to develop adaptation and combating mechanisms.		



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT5: Build Resilience to Vulnerabilities, Shocks & Stresses	Climate Change Action Plan (2011- 2023)	PURPOSE T1. Increase the sink capacity of the agriculture sector
		PURPOSE T2. Limitation of greenhouse gas emissions from agriculture sector
		PURPOSE T3. Develop information infrastructure and capacity in the agriculture sector
		PURPOSE O1. Increase the amount of carbon sequestered in forests
		PURPOSE O2. Reduce deforestation and forest damage
		PURPOSE O3. Limit the negative impact of land uses and changes such as forests, pastures, agriculture and settlements on climate change
		PURPOSE O4. Strengthen legal and institutional structure for combating climate change with regard to land use and forestry
		PURPOSE UT1. Integrating climate change adaptation into the agriculture and food security policies
		PURPOSE UT2. Developing and expanding R&D and scientific studies to identify the impacts of climate change on agriculture and to ensure adaptation to climate change
		PURPOSE UT3. Sustainable planning of water utilization in agriculture
		PURPOSE UT4. Protecting soil and agricultural biodiversity against the impacts of climate change
		PURPOSE UT5. Developing institutional capacity and inter-agency cooperation in Turkey on adaptation options in agriculture
		PURPOSE UO1. Integration of the climate change adaptation approach to ecosystem services, biodiversity and forestry policies
		PURPOSE UO2. Identifying and monitoring the impacts of climate change on biodiversity and ecosystem services
		PURPOSE A1. Ensure effective waste management
		PURPOSE US1. Integrating adaptation to the impacts of climate change into water resource management policies
		PURPOSE US2. Strengthening water resources management capacity, interagency cooperation and coordination with regard to adaptation to climate change
		PURPOSE US3. Develop and expand R&D and scientific studies to ensure adaptation to the impacts of climate change in water resources management
		PURPOSE US4. Integrated management of water resources and water basins for adaptation to climate change
		PURPOSE US5. Planning renewable energy resources taking into consideration the impacts of climate change and the sustainability of the ecosystem services oriented to increase resilience to climate change
PURPOSE UA1. Identifying threats and risks for management of natural disasters caused by climate change		
PURPOSE UA2. Strengthening response mechanisms for natural disasters due to climate change		



Action Track	Name of the Plan	Policy/Measure/Goal/ Action or Strategy in the Plan
AT5: Build Resilience to Vulnerabilities, Shocks & Stresses	National Rural Development Strategy (2021-2023)	Priority 2.1 Ensuring the sustainability of soil and water resources
		Priority 3.1 Development of physical infrastructure
	National Drought Strategy and Action Plan (2017-2023)	Purpose 1/H-1.1 To develop legislation on drought management.
		Purpose 1/H-1.2 To determine policy and to ensure national coordination and international cooperation regarding drought management.
		Purpose 2/H-2.1 Conducting research, planning and implementation studies in drought management
		Purpose 2/H-2.2 To coordinate and prioritize the drought-related investments and activities carried out by the relevant institutions and organizations.
		Purpose 2/H-2.3 To create a "National Drought Database" based on Geographic Information System.
		Purpose 2/H-2.4 Developing Agricultural Product Yield Insurance System
		Purpose 3/H-3.1 Organizing trainings to inform the society.
		Purpose 4/H-4.1 To determine the possible effects of climate change on drought through scientific research and modeling studies.
	Green Deal Action Plan 2021	Target 1.2. Continuing evaluation studies for a national carbon pricing mechanism
		Target 2.1. Development of green transformation of industry and circular economy in our country
		Target 2.3. Integrated pollution prevention and control studies within the scope of sustainable consumption and production
		Target 2.4. Improving the sustainable use of water in production and consumption and improvement of the reuse of waste water
		Target 2.5. Sustainable products Initiative harmonization studies
		Target 2.7. Reducing endocrine disrupting chemicals
		Target 5.1. Reducing the use of pesticides and anti-microbials
		Target 5.2. Improvement of organic agriculture
	National Water Plan 2019-2023	Target 5.3. Reducing the use of chemical fertilizers
		Target 7.2. Evaluation of the effects of climate change on terrestrial and marine areas and specific water resources through ecosystem-based approaches and practices
3. Protection and Improvement of water resources in terms of quantity, quality and ecosystems		
4. Supply-demand balance and water allocation		
5. Finance, budget and business		
7. Socio-economic analysis		
9. Water safety		



MAIN ACTIONS OF 3rd AGRICULTURE FORESTRY COUNCIL BY 2024

1	Establishing a Digital Value Chain from Field to Fork
2	Establishing and implementing an alternative support model with contractual production
3	Transition to a region or basin-based management model in the area of agriculture and forestry
4	Making legislative arrangements and put into practice for penalties to the deter of food fraudulence and adulteration
5	Preventing information pollution in food and increasing food literacy
6	Establishing the infrastructure to prevent food loss and waste
7	Encouraging the Consumption of Capri and Ovine Animals' Meat and Increasing its Market Share
8	Establishing 7 more heifer centers under the Breeding Heifer Production Center Project; consequently, increasing the total number to 32
9	Building mass feeding houses and establishing a mulberry garden within the scope of Silkworm Production Basin Project
10	Completion of branding infrastructure works for agriculture and forestry products
11	Efficient use of meteorological information in every stage of production in agriculture and forestry
12	Continuing to lease land to promote strategic production in foreign countries.
13	Increasing the production of fiber plants to be used for industrial purposes
14	Use of high technology and artificial intelligence applications in response to forest fires
15	Diversification of non-wood forest products, afforestation of forest areas to increase added value and encouragement of agricultural forestry
16	Establishing the necessary legal regulations in terms of fire safety in licensing of dwellings and workplaces in and around the forest
17	Enhancing Cooperation among Public, Private Sector and University for R&D and Innovation
18	Promoting international projects for the exchange of experience and know-how.
19	Evaluating all legislation on agriculture and forest with a holistic approach, establishing a simple legislative structure
20	Rearrangement of neighborhoods as rural and urban in metropolitan municipalities, preserving the village legal entity structure in rural neighborhoods
21	Enacting Water Law
22	Establishing and disseminating alternative models such as land banking and co-production in order to bring idle agricultural lands to production and solving the problem of transfer in agricultural lands by developing inheritance legislation
23	Using soil and water resources within the framework of sustainable management principles



MAIN ACTIONS OF 3rd AGRICULTURE FORESTRY COUNCIL BY 2024

24	Supporting women and youth entrepreneurship to ensure the sustainability of family business
25	To conduct fight against desertification and erosion effectively and efficiently
26	Uncovering our nature tourism potential and becoming an international brand in nature tourism
27	Completing the identification and restraint studies of pastures, highlands and winter quarters
28	Supporting R&D projects for the re-use of wastes in order to reach the zero waste goal
29	Development of licensed warehousing, dissemination of electronic product trade
30	Increasing buffalo number and productivity
31	Reaching international averages in calf mortality and fertility statistics
32	Increasing the share of sheep and ovine meat in red meat production by increasing the number of sheep and goats
33	Increasing alternative aquaculture species, production and productivity in aquaculture and hunting activities within the framework of sustainability principles
34	Development and expansion of domestic and national seed and seedling sectors
35	Conservation, development and commercialization of local (Ata) seed varieties
36	Increasing production and marketing opportunities with Medicinal and Aromatic Plants Action Plan
37	Thanks to promoting the production and use of organic and organomineral fertilizers, reducing the import of chemical fertilizers and environmental pollution, spreading the biological and biotechnical control methodologies
38	Conservation and breeding of our pet genetic resources
39	Increasing studies on determination, protection, improvement and dissemination of domestic genetic resources and biodiversity in the areas of agriculture and forestry, genetic resource database project
40	Production of Veterinary Biological Products and Pharmaceutical Active Ingredients by encouraging technology and R&D investments
41	Completing the national forest inventory
42	Making our country an international forest sapling production and marketing center.
43	Eliminating the ownership problems experienced in the allocation and determination of the places to be moved beyond the forest boundary, by completing the registration of the forests whose cadastre has been finalized
44	Preparation of land use plans and agricultural land use plans, completion of detailed soil surveys
45	Completion of land consolidation projects by ten years
46	Prioritization of new irrigation investments and rehabilitation projects



WATER COUNCIL DECLARATION

1	Water Efficiency Strategy Document and Watershed Based Water Efficiency Action Plans will be prepared.
2	The water loss rate, which is 35 percent in drinking water systems, will be reduced below 25 percent by municipalities. In addition, in order to provide sustainable water services, studies on full cost-based water and wastewater pricing will be started as of 2023, and social and equitable water tariffs that take care of low-income household groups will be implemented with tiered tariffs aiming to use water sparingly.
3	The utilized water will be brought to suitable quality and reused, especially in agricultural irrigation, water footprint will be determined on the basis of sector and watershed, and water efficiency practices will be expanded in the industry within the scope of the European Green Deal.
4	Necessary legislative arrangements will be made until 2023 in order to strengthen the watershed-based and holistic structuring in water management and to increase the efficiency of the watershed-scale management plans.
5	In order to protect, improve and ensure sustainable management of our water resources, watershed-scale management plans for 25 watersheds will be completed and put into effect, and watershed management plans will be complied with in all water-related activities, including sub-scale planning.
6	A Water Law will be put into effect, which will eliminate the fragmented structure in water management, eliminate the gaps in the existing legal structure, and harmonize with the legislation on water quality in the European Union environment and climate change chapter.
7	Sustainable, effective, efficient and holistic use of water; strategies and policies related to monitoring the conservation of water resources will be included in all national plans such as the Development Plan and the National Water Plan.
8	Drinking water treatment plants will be designed and operated by taking into account the characteristics of the water and its suitability for the region.
9	It will be ensured that water safety plans from the source to the tap are prepared and implemented.
10	The wastewater treatment plants will be designed in accordance with the River Watershed Management Plans, taking into account the recovery potential and the intended use of the receiving environment where it is discharged.
11	In order to protect the quality of our water resources, the transition to receiving environment-based discharge standards will be ensured, and the measures in the river watershed management plans will be implemented to improve the quantity and quality of our waters.
12	As of 2022, the budget and infrastructure deficiencies required for the protection and monitoring of our underground and surface water resources in terms of quality and quantity will be eliminated, and inter-agency coordination will be made effective in a way to prevent duplications.
13	The National Water Information System will be disseminated and the use of decision support systems in all water-related studies will be expanded by ensuring the standardization in obtaining and sharing data.



WATER COUNCIL DECLARATION

14	Climate change adaptation activities, which gained importance with the approval of the Paris Agreement in the Turkish Grand National Assembly, will gain momentum by analyzing the effects of climate change on water resources.
15	By transitioning from crisis management to risk management in flood and drought management, Flood and Drought Management plans in all watersheds in our country will be completed by 2023 and the implementation of the measures determined in these plans will be followed continuously.
16	Forecasting and early warning systems will be established for flood and drought disasters, and necessary precautions will be taken before these disasters.
17	Resistance to climate change will be increased through training and awareness activities on desertification, erosion, water and soil protection within the scope of climate change with the inclusion of all segments of the society in the process, starting from 2022. The effects of climate change will be evaluated as a priority in all studies.
18	Irrigation of economically irrigable lands with modern irrigation methods will be expanded.
19	New financing models including the private sector will be developed in irrigation projects.
20	The crop pattern will be determined according to the water potential of the watershed and the agriculture approach will be based on water.
21	The targets of water saving will be achieved by providing remote control and automation of irrigation facilities with digital technologies. Measures to reduce energy costs in irrigation will be increased.
22	Due to the fact that our country is in an active seismic belt, necessary legal regulations will be developed for the safe operation of dams.
23	In order to increase the water storage capacity of our country, the construction of dams will continue, and necess
24	Underground dams and groundwater artificial feeding structures will be planned and completed immediately.
25	Training/awareness-raising activities will be carried out in order to improve the water, meteorology and climate change literacy of all segments of the society starting from 2022.
26	The use of meteorological data in urban planning and agricultural activities will be increased in order to take precautionary measures against meteorological disasters due to climate change.
27	Nature-based solutions will be given priority, taking into account local knowledge and experience, in restoration applications in the upper watersheds.
28	It is ensured that R&D studies on water management will be supported and developed.





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