

REPUBLIC OF TURKEY

CLIMATE CHANGE ACTION PLAN 2011 - 2023



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2011 - 2023

Ankara, 2012

CLIMATE CHANGE ACTION PLAN

2011-2023

COORDINATED BY

The Ministry of Environment and Urbanization
General Directorate of Environmental Management
Climate Change Department

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The NCCAP Project Team
The Ministry of Environment and Urbanization, General Directorate of Environmental Management,
Climate Change Department, Policy and Strategy Development Division

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FOREWORD

Climate change and environment are not only ecological phenomena, they are also directly related with economy, energy, industrial investments, social life and law. Under the light of recent developments, climate change has an impact on all aspects of our lives including physical and natural environment. This situation becomes necessary that governments should increase their efforts to find solutions in these areas.

Global warming and climate change, that are affecting the whole world, have become important problems that our country should take the necessary precau-

tions too. Increasing the capacity to adapt to the impacts of climate change and to design and promptly implement required plans is the priority of our Ministry and all related institutions.

Policies and measures that are needed to ensure a sustainable development are being implemented in Turkey for a long time. In recent years, as climate change became more and more noticeable, matters related to energy, economy and ecology are started to be handled together. This is called the 3E (Energy-Economy-Ecology) theory that is defined as the most crucial development cri-



terion of the 21st century. In this regard, Turkey's main policies and measures focus on sectors such as energy, industry, transportation, agriculture, waste and forestry.

In a world that is technologically and economically developed, new economy and development concepts which are environment-friendly are developed. In this respect, minimizing the pressure on the nature and on use of natural resources, keeping energy and water use at minimum levels throughout the production-consumption chain and supporting the energy market through incentives on the use of new and environment-friendly sources of energy is the basis of the new development model for Turkey. Additionally, there are other things that we can do for competition and development. They are, hybrid cars, low fuel consuming and low emitting technologies, eco-buildings and eco-towns, and protection and improvement of forests; preparing a new administration structure that stands on transparency, accountability and participation; orienting subsidies and financial arrangements on eco-friendly research and development efforts and technologies have key roles in the environment of development.

A natural outcome is the need to integrate national and/or sectoral development strategies and climate change policies into institutional structures and legislation.

Turkey aspires to integrate its climate change policies into development policies; enhance the use of clean and renewable energy sources; participate actively in the international negotiations on climate change within the scope of its 'special circumstances', and in doing so, become a country that provides her

people with high living standards and welfare with a low carbon intensity. With this perspective, Turkey continues its march towards its set goals.

Within the scope of the Climate Change Action Plan, we are preparing a road map that covers all sectors and identifies our short, medium and long-term targets for combating climate change. Our aim in preparing this action plan that foresees year 2023, is to integrate Turkey's future development and environmental plans and to proceed seamlessly, and without losing pace.

Turkey's Ninth Development Plan (2007- 2013) states that 'Within the scope of Turkey's circumstances, a National Action Plan setting greenhouse gas emission decrease policies and measures with the participation of all related stakeholders will be prepared to fulfill her commitments under the UN Framework Convention on Climate Change.' Turkey, moving forward and fulfilling her commitments in line with this statement, showed her ambition and determination in this matter by completing the Climate Change Action Plan.

Becoming a country that can pass its heritage of civilization on to future generations is only possible by taking on leading roles in one's time.

In this regard, I believe that this valuable work, which was prepared by dedicated efforts, will provide a visionary perspective into Turkey's future; and I would like to thank all who participated in and supported this work.

Erdoğan BAYRAKTAR
Minister of Environment and Urbanization

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Ministry of Environment and Urbanization

ABBREVIATIONS

ARDSI	Agriculture and Rural Development Support Institution
BEP	Building Energy Performance
CAE	Chamber of Agriculture Engineers
CBCC	Coordination Board on Climate Change
CMB	Capital Markets Board
CoHE	Council of Higher Education
DA	Development Agencies
DEMP	Disaster and Emergency Management Presidency
DGCA	Directorate General of Civil Aviation
DGF	General Directorate of Forestry
DHMI	General Directorate of State Airports Authority
DLH	General Directorate of Railway, Port and Airport Constructions
EE	Energy Efficiency
EEC	Energy Efficiency Consultancy
EECB	Energy Efficiency Coordination Board
EMRA	Energy Market Regulatory Authority
ENAR	Energy Sector R&D Projects Support Programme
EPC	Energy Performance Certificate

EU	European Union
EUAS	Turkish Electricity Generation Company
GAP	Southeastern Anatolia Project Regional Development Administration
GDLRC	General Directorate of Land Registry and Cadastre
GDM	General Directorate of Meteorology
GDP	Gross Domestic Product
GDS	General Directorate of Security
GIS	Geographic Information System
GM	Greater Municipalities
HPP	Hydroelectric Power Plant
IPCC	Intergovernmental Panel on Climate Change
ISE	Istanbul Stock Exchange
IWMP	Integrated Waste Management Plan
KGM	General Directorate of Highways
KOSGEB	Small and Medium Scaled Enterprises Development Organization
LA	Local Authorities
LULUCF	Land Use, Land-Use Change and Forestry
MCT	Ministry of Culture and Tourism
MENR	Ministry of Energy and Natural Resources
MEU	Ministry of Environment and Urbanization
MEUA	Ministry for European Union Affairs

MFA	Ministry of Foreign Affairs
MFAL	Ministry of Food, Agriculture and Livestock
MFWW	Ministry of Forestry and Water Works
MIA	Ministry of Internal Affairs
MIGEM	General Directorate of Mining Affairs
MoCT	Ministry of Customs and Trade
MoD	Ministry of Development
MoE	Ministry of Economy
MoF	Ministry of Finance
MoH	Ministry of Health
MoNE	Ministry of National Education
MoTC	Ministry of Transportation, Maritime Affairs and Communication
MRV	Measurable, Reportable, Verifiable
MSIT	Ministry of Science, Industry and Technology
MTA	General Directorate of Mineral Research and Exploration
NAMA	Nationally Appropriate Mitigation Action
NCCAP	National Climate Change Action Plan
NGO	Non-Governmental Organization
PA	Privatization Administration
PPA	Public Procurement Authority
R&D	Research and Development

REDD+	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
RI	Research Institute
SCST	Supreme Council for Science and Technology
SHW	General Directorate of State Hydraulic Works
SME	Small and Medium Scaled Enterprises
SPA	Special Provincial Administration
TARMAK BİR	Turkish Association of Agricultural Machinery and Equipment Manufacturers
TBB	Union of Municipalities of Turkey
TCDD	Turkish State Railways
TEDAS	Turkish Electricity Distribution Corporation
TEİAS	Turkish Electricity Transmission Company
TEİEN	Technical Assistance for the Establishment of a Turkish Environmental Information Exchange Network
TEMSAN	Turkish Electromechanics Industry
TİNA	Technical Assistance to Transportation Infrastructure Needs Assessment for Turkey
TKİ	General Directorate of Turkish Coal
TNA	Technology Needs Assessment
TOBB	The Union of Chambers and Commodity Exchanges of Turkey
TOKİ	Housing Development Administration
TRT	Turkish Radio - Television Corporation
TSE	Turkish Standards Institute
TSFC	Turkish Sugar Factories Corporation

TTGV	Technology Development Foundation of Turkey
TTK	Turkish Hard Coal Institution
TUBA	Turkish Academy of Sciences
TUBITAK	The Scientific and Technological Research Council of Turkey
TUBITAK MRC	TUBITAK Marmara Research Center
TURKAK	Turkish Accreditation Agency
TurkDEX	Turkish Derivatives Exchange
TURKLIM	Port Operators Association of Turkey
TURKSTAT	Turkish Statistical Institute
TUSIAD	Turkish Industry and Business Association
UCTEA	Union of Chambers of Turkish Engineers and Architects
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
UoT	Undersecretariat of Treasury

SECTOR CODES

A	Waste Sector
B	Building Sector
E	Energy Sector
O	Land Use and Forestry Sector
S	Industry Sector
T	Agriculture Sector
U	Transportation Sector
UA	Adaptation - Natural Disaster Risk Management
UIS	Adaptation - Public Health
UO	Adaptation - Ecosystem Services, Biodiversity and Forestry
US	Adaptation - Management of Water Resources
UT	Adaptation - Agriculture Sector and Food Security
UYK	Adaptation - Crosscutting Issues
Y	Crosscutting Issues

CLIMATE CHANGE ACTION PLAN

THE VISION

National Climate Change Strategy for Turkey was approved by the Higher Planning Council and took effect in May 3rd 2010. The National Vision in this strategy is defined as follows:

“Turkey’s national vision within the scope of “climate change” is to become a country fully integrating climate change-related objectives into its development policies, disseminating energy efficiency, increasing the use of clean and renewable energy resources, actively participating in the efforts for tackling climate change within its “special circumstances”, and providing its citizens with a high quality of life and welfare with low-carbon intensity.”

STRATEGIC TARGETS

Basic Principles of the National Climate Change Strategy are defined as follows:

“Turkey’s primary objective within the scope of global combat against climate change is to participate in the global efforts that are carried out to prevent climate change, which is the common concern of humanity, and that are determined with common mind in cooperation with international parties in the light of objective and scientific findings, without compromising sustainable development

efforts, based on the principle of common but differentiated responsibilities and within the framework of the special circumstances of our country.”

In the Strategy Document, Turkey’s Strategic Targets within the scope of basic principles are listed as follows:

- to integrate policies and measures for mitigating and adapting to climate change into national development plans, consistent with the UNFCCC principle of “common but differentiated responsibilities” and its special circumstances,
- to contribute to the global greenhouse gas emission mitigation policies and measures, within its own capacity, by limiting the rate of growth of national greenhouse gas emissions, without disrupting its development program aligned with sustainable development principles,
- to increase national preparedness and capacity in order to avoid the adverse impacts of global climate change and to adapt to these impacts; to share emerging experiences and knowledge from such efforts with other countries in the region; and to develop bilateral and multilateral joint research projects for mitigation and adaptation,
- to comply with the design and implementation of global strategic objectives of mitigation, adaptation, technology transfer and finance that accounts for

responsibilities of the parties, and to take active role in international activities,

- to increase access to the financial resources required for undertaking mitigation and adaptation activities,
- to develop national research and development (R&D) and innovation capacities towards clean production and to establish national and international financial resources and incentive mechanisms aimed at increasing competitiveness and production in this area by taking into consideration our current technology and development levels,
- to facilitate climate change adaptation and mitigation activities by ensuring efficient and continuous coordination and decision making processes based on transparency, stakeholder participation, and a strong reliance on a science focus,
- to raise public awareness in support of changing consumption patterns in climatefriendly manner through joint efforts of all parties such as the public sector, private sector, universities and NGOs,
- to establish an integrated information management system in order to increase the flow and exchange of knowledge in national climate change efforts.

PURPOSES AND OBJECTIVES OF THE NCCAP

ENERGY

PURPOSE	OBJECTIVE
PURPOSE E1. Reducing energy intensity	OBJECTIVE E1.1. Reduce primary energy intensity by 10% compared to 2008 by 2015 as a result of implemented and planned policies and measures
	OBJECTIVE E1.2. Develop the capacity for energy efficiency by 2015
	OBJECTIVE E1.3. Support R&D activities on energy efficiency
	OBJECTIVE E1.4. Increase the amount of incentives given by MENR for energy efficiency applications by 100% until 2015
PURPOSE E2. Increase the share of clean energy in energy production and use	OBJECTIVE E2.1. Ensure that the share of renewable energy in electricity production is increased
	OBJECTIVE E2.2. Develop capacity by 2015 so as to increase utilization of renewable energy resources
	OBJECTIVE E2.3. Ensure technological development by 2020 for energy production from renewable energy resources
PURPOSE E3. Limit GHG emissions originating from use of coal in electricity production, by using clean coal technologies and taking efficiency-increasing measures	OBJECTIVE E3.1. Increase the average cycle efficiencies of existing coal-fired thermal power plants until 2023
PURPOSE E4. Reduce losses and illicit use in electricity distribution	OBJECTIVE E4.1. Reduce nationwide electricity distribution losses to 8% by 2023

BUILDING

PURPOSE	OBJECTIVE
PURPOSE B1. Increase energy efficiency in buildings	OBJECTIVE B1.1. Establish heat insulation and energy-efficient systems meeting standards in commercial and public buildings with usable areas larger than 10 thousand square meters and in at least 1 million residential buildings by 2023
	OBJECTIVE B1.2. Effective implementation of the Regulation on Energy Performance in Buildings (EPB) and other energy efficiency regulations until 2017
	OBJECTIVE B1.3. Develop instruments that will provide the necessary financial support with regard to energy efficiency, renewable energy and EPB until the end of 2013
	OBJECTIVE B1.4. Issuing "Energy Performance Certificates" to all buildings until 2017
	OBJECTIVE B1.5. Decrease annual energy consumption in the buildings and premises of public institutions by 10% until 2015 and by 20% until 2023
PURPOSE B2. Increase renewable energy use in buildings	OBJECTIVE B2.1. At least 20% of the annual energy demand of new buildings met via renewable energy resources as of 2017
PURPOSE B3. Limit greenhouse gas emissions originating from settlements	OBJECTIVE B3.1. Reduce greenhouse gas emissions in new settlements by at least 10% per settlement in comparison to existing settlements (which are selected as pilot and the greenhouse gas emissions of which are identified until 2015) until 2023

INDUSTRY

PURPOSE	OBJECTIVE
PURPOSE S1. Increase energy efficiency in the industry sector	OBJECTIVE S1.1. Making legal arrangements for energy efficiency and limitation of greenhouse gas emissions
	OBJECTIVE S1.2. Limiting GHG emissions originating from energy usage (including electrical energy share) in the industry sector
PURPOSE S2. Decrease the CO2 equivalent intensity per GDP produced in the industrial sector until 2023	OBJECTIVE S2.1. Developing the financial and technical infrastructure for limitation of GHG emissions
	OBJECTIVE S2.2. Develop and use new technologies for limitation of GHG emissions in the industry sector until 2023
PURPOSE S3. Strengthen the capacity of the industry sector for combating climate change	OBJECTIVE S3.1. Building the information infrastructure for limitation of GHG emissions in the industry sector until 2015

TRANSPORTATION

PURPOSE	OBJECTIVE
PURPOSE U1. Developing an intermodal transport system and ensuring balanced utilization of transport modes in freight and passenger transport	OBJECTIVE U1.1. Increasing the share of railroads in freight transportation (which was 5% in 2009) to 15% and in passenger transportation (which was 2% in 2009) to 10% by 2023
	OBJECTIVE U1.2. Increasing the share of seaways in cabotage freight transportation (which was 2.66% in ton-km in 2009) to 10%, and in passenger transportation (which was 0.37% in passenger-km in 2009) to 4% as of 2023
	OBJECTIVE U1.3. Decreasing the share of highways in freight transportation (which was 80.63% in ton-km in 2009) below 60%, and in passenger transport (which was 89.59 in passenger-km in 2009) to 72% as of 2023
	OBJECTIVE U1.4. Preparing and putting in practice the "Transportation Master Plan" until 2023
PURPOSE U2. Restructuring urban transportation in line with sustainable transport principles	OBJECTIVE U2.1. Limiting emission increase rate of individual vehicles in intracity transport
	OBJECTIVE U2.2. Developing the necessary legislation, institutional structure and guidance documents until the end of 2023 for implementation of sustainable transport planning in cities
PURPOSE U3. Dissemination of the use of alternative fuels and clean vehicle technologies in the transport sector	OBJECTIVE U3.1. Making legal arrangements and building capacity to increase use of alternative fuels and clean vehicles until 2023
	OBJECTIVE U3.2. Taking local measures to encourage use of alternative fuel and clean vehicles in urban transport until 2023
PURPOSE U4. Increasing efficiency in energy consumption of transportation sector	OBJECTIVE U4.1. Limiting the energy consumption in transport until 2023
PURPOSE U5. Developing the information infrastructure in the transport sector	OBJECTIVE U5.1. Building a well-organized, reliable and sustainable information infrastructure with transport and travel data including GHG emission data, until the end of 2016

WASTE

PURPOSE	OBJECTIVE
PURPOSE A1. Ensure Effective Waste Management	OBJECTIVE A1.1. Reduce the quantity of biodegradable wastes admitted to landfill sites, taking year 2005 as a basis, by 75% in weight till 2015, by 50% till 2018 and by 35% till 2025
	OBJECTIVE A1.2. Establish integrated solid waste disposal facilities across the country, and dispose 100% of municipal wastes in these facilities, until the end of 2023
	OBJECTIVE A1.3. Finalize Packaging Waste Management Plans
	OBJECTIVE A1.4. Establish the recycling facilities foreseen within the scope of the Solid Waste Master Plan with the EU-aligned Integrated Waste Management approach
	OBJECTIVE A1.5. Termination of uncontrolled disposal of wastes 100% by 2023

AGRICULTURE

PURPOSE	OBJECTIVE
PURPOSE T1. Increase the sink capacity of the agriculture sector	OBJECTIVE T1.1. Determine and increase the quantity of carbon stock captured in the soil
	OBJECTIVE T1.2. Identifying and increasing topsoil and subsoil biomass
PURPOSE T2. Limitation of greenhouse gas emissions from agriculture sector	OBJECTIVE T2.1. Identify the potential GHG emissions limitation in agriculture sector
	OBJECTIVE T2.2. Decrease the increase rate of GHG emissions originating from vegetal and animal production
PURPOSE T3. Develop information infrastructure and capacity in the agriculture sector	OBJECTIVE T3.1. Build the information infrastructure that will meet the needs of the agriculture sector in adapting to and combating climate change

LAND USE AND FORESTRY

PURPOSE	OBJECTIVE
PURPOSE O1. Increase the amount of carbon sequestered in forests	OBJECTIVE O1.1. Increase the amount of carbon sequestered in forests by 15% of the 2007 value by 2020 (14,500 Gg in 2007, 16,700 Gg in 2020)
PURPOSE O2. Reduce deforestation and forest damage	OBJECTIVE O2.1. Reduce deforestation and forest damage by 20% of the 2007 values by 2020
PURPOSE O3. Limit the negative impact of land uses and changes such as forests, pastures, agriculture and settlements on climate change	OBJECTIVE O3.1. Integrate the climate change factor in land use and land use changes management strategies by 2015
	OBJECTIVE O3.2. Increase the amount of sequestered carbon as a result of agricultural forestry activities by 10% of the 2007 values by 2020
	OBJECTIVE O3.3. Identify the amount of sequestered carbon in pastures and meadows in 2012, and increase carbon stock 3% by 2020
	OBJECTIVE O3.4. Identify the existing carbon stock in wetlands in 2012, and maintain the level until 2020
PURPOSE O4. Strengthen legal and institutional structure for combating climate change with regard to land use and forestry	OBJECTIVE O3.5. Identify the quantity of carbon stored in settlement areas in 2012, and increase stored carbon 3% by 2020 through green planting
	OBJECTIVE O4.1. Make necessary legal arrangements for combating climate change with regard to land use and forestry by the end of 2013
	OBJECTIVE O4.2. Strengthen institutional capacity in institutions involved in land use and forestry on climate change by 2014

CROSSCUTTING ISSUES

PURPOSE	OBJECTIVE
PURPOSE Y1. Establish necessary infrastructure for a robust emission inventory	OBJECTIVE Y1.1. Monitoring and reporting of greenhouse gas emissions from key sources using at least Tier 2 methodologies as of the beginning of 2016
PURPOSE Y2. Develop policy for environmental protection, and strengthening implementation capacity in consideration of climate change and within the framework of sustainable development principles	OBJECTIVE Y2.1. Strengthening the existing information base for low-carbon development on the basis of sustainable development principles as of 2015
PURPOSE Y3. More effective utilization of financial resources for combating and adaptation to climate change	OBJECTIVE Y3.1. Strengthening the capacity to access financial resources for combating and adaptation to climate change until the end of 2013, ensuring more effective use of new funding resources until 2020
PURPOSE Y4. Optimum usage of emission trading mechanisms that contribute to cost-effective limitation of greenhouse gas emissions	OBJECTIVE Y4.1. Carrying out negotiations to ensure Turkey's participation in the most advantageous way into the existing and new global and regional carbon markets until 2013
	OBJECTIVE Y4.2. Carry out studies to establish the carbon market in Turkey by 2015
PURPOSE Y5. Ensuring coordination in climate change combating and adaptation activities to increase effectiveness	OBJECTIVE Y5.1. Finalize legal arrangements on combating and adaptation to climate change until 2014
	OBJECTIVE Y5.2. Strengthen the institutional capacities of CBCC members with regard to combating climate change and adaptation until 2014
PURPOSE Y6. Carrying out Turkey's regional climate modeling studies and analyzing the effects of climate change	OBJECTIVE Y6.1. Developing analysis and impact assessment capacities until 2016 through climate observation, forecasting, and regional climate model studies
PURPOSE Y7. Develop R&D and innovation capacity for eco-efficiency with regard to combating climate change and adaptation	OBJECTIVE Y7.1. Strengthen R&D and Innovation capacity for clean production until 2014
PURPOSE Y8. Improve human resources with regard to combating climate change and adaptation to climate change	OBJECTIVE Y8.1. Inclusion of combating and adaptation to climate change in the academic programmes of universities as of end of 2012
PURPOSE Y9. Increase public awareness to change consumption patterns into climatefriendly manner	OBJECTIVE Y9.1. Make necessary arrangements in the education programmes until the end of 2012 so as to develop climate-friendly consumption patterns
	OBJECTIVE Y9.2. Organize public awareness raising campaigns for combating climate change until 2014

ADAPTATION

MANAGEMENT OF WATER RESOURCES	
PURPOSE	OBJECTIVE
PURPOSE US1. Integrating adaptation to the impacts of climate change into water resource management policies	OBJECTIVE US1.1. Ensure integration of adaptation to climate change into existing strategies, plans and legislation
PURPOSE US2. Strengthening water resources management capacity, interagency cooperation and coordination with regard to adaptation to climate change	OBJECTIVE US2.1. Increasing the institutional capacities of agencies and organizations that are authorized and related to management of water resources
	OBJECTIVE US2.2. Develop financing policies and practices
PURPOSE US3. Develop and expand R&D and scientific studies to ensure adaptation to the impacts of climate change in water resources management	OBJECTIVE US3.1. Strengthening existing systems and establishing new systems to monitor the effects of climate change
	OBJECTIVE US3.2. Identify the vulnerability of management of water resources and coastal zones to climate change, develop alternative adaptation actions, carry out periodical revisions based on monitoring results
PURPOSE US4. Integrated management of water resources and water basins for adaptation to climate change	OBJECTIVE US4.1. Planning basin-based development of water resources with a holistic approach that offers flexibility in meeting the changing consumption demands
	OBJECTIVE US4.2. Addressing urban water management from the perspective of 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	OBJECTIVE US5.1. Planning hydraulic and geothermal energy resources from climate change adaptation perspective
AGRICULTURE SECTOR AND FOOD SECURITY	
PURPOSE UT1. Integrating climate change adaptation into the agriculture and food security policies	OBJECTIVE UT1.1. Reviewing existing strategy and action plans as well as legal arrangements from a perspective of adaptation to climate change
	OBJECTIVE UT1.2. Reviewing signed protocols between institutions from a perspective of adaptation to 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	OBJECTIVE UT2.1. Developing and expanding R&D activities for effective crop, soil and water management
	OBJECTIVE UT2.2. Increasing the capacities and numbers of organizations carrying out R&D and scientific studies
	OBJECTIVE UT2.3. Developing a 'Soil and Land Database and Land Information System' taking into consideration the effects of climate change
	OBJECTIVE UT2.4. Conducting and monitoring disaster analysis for agricultural droughts
	OBJECTIVE UT2.5. Determining the socioeconomic impacts of climate change on the agriculture sector

AGRICULTURE SECTOR AND FOOD SECURITY	
PURPOSE	OBJECTIVE
PURPOSE UT3. Sustainable planning of water utilization in agriculture	OBJECTIVE UT3.1. Increasing the effectiveness of water management in agriculture
PURPOSE UT4. Protecting soil and agricultural biodiversity against the impacts of climate change	OBJECTIVE UT4.1. Protecting the physical, chemical and biological efficiency of soil against climate change impacts
	OBJECTIVE UT4.2. Protecting agricultural biological diversity and resources for adaptation to the impacts of climate change
	OBJECTIVE UT4.3. Completing land consolidation activities for the purpose of increasing agricultural efficiency in efforts to adapt to climate change
PURPOSE UT5. Developing institutional capacity and improving interagency cooperation in Turkey with regard to adaptation alternatives in agriculture	OBJECTIVE UT5.1. Strengthening interagency cooperation and developing the capacities of MFAL and its attached and affiliated organizations with regard to combating climate change and adaptation
	OBJECTIVE UT5.2. Increasing the awareness of the civil society on the effects of climate change on the agriculture sector and on the adaptation approaches

ECOSYSTEM SERVICES, BIODIVERSITY AND FORESTRY	
PURPOSE UO1. Integration of the climate change adaptation approach to ecosystem services, biodiversity and forestry policies	OBJECTIVE UO1.1. Reviewing the existing strategies in terms of adaptation to the impacts of climate change
PURPOSE UO2. Identifying and monitoring the impacts of climate change on biodiversity and ecosystem services	OBJECTIVE UO2.1. Identifying and monitoring the effects of climate change on the species in forest land
	OBJECTIVE UO2.2. Identifying the land use changes due to the impacts of climate change in forest land
	OBJECTIVE UO2.3. Monitoring the health of forest ecosystems
	OBJECTIVE UO2.4. Carrying out R&D activities oriented to identify and monitor the effects of climate changes in protected areas
	OBJECTIVE UO2.5. Taking into consideration the climate change adaptation activities in the socio-economic development of forest villagers, and thereby supporting rural development
	OBJECTIVE UO2.6. Identifying and monitoring the effects of climate change on the mountain, steppe, inland water, marine and coastal ecosystems and on the ecosystem services they provide, and developing measures for adaptation to climate change
	OBJECTIVE UO2.7. Integrating climate change adaptation into the marine and coastal zone management framework
	OBJECTIVE UO2.8. Protection of forests against fires

NATURAL DISASTER RISK MANAGEMENT	
PURPOSE UA1. Identifying threats and risks for management of natural disasters caused by climate change	OBJECTIVE UA1.1. Identifying risks of natural disasters caused by climate change, such as floods, overflows, avalanches, landslides etc
	OBJECTIVE UA1.2. Reviewing the legislation on natural disasters caused by climate change, and determining implementation principles
PURPOSE UA2. Strengthening response mechanisms for natural disasters caused by climate change	OBJECTIVE UA2.1. Strengthening the capacities of local public organizations with regard to responding to natural disasters caused by climate change, and reaching the level of being able to make field exercises
	OBJECTIVE UA2.2. Establishing a community-based disaster management in combating disaster risks that may arise due to climate change
	OBJECTIVE UA2.3. Continuing the training activities that will increase public awareness and participation with regard to the disaster and risk impacts that may arise due to climate change

PUBLIC HEALTH	
PURPOSE UİS1. Identifying the existing and future effects and risks of climate change on public health	OBJECTIVE UİS1.1. Researching the effects of extreme weather events on public health
	OBJECTIVE UİS1.2. Researching and monitoring the link between climate change, communicable diseases and health risks, and determining possible measures
PURPOSE UİS2. Developing the capacity to combat risks originating from climate change in the national healthcare system	OBJECTIVE UİS2.1. Developing emergency response action plans in risky areas, and supplying the necessary infrastructure
	OBJECTIVE UİS2.2. Strengthening the capacities of health sector organizations against health risks arising due to climate change

CROSSCUTTING ISSUES IN THE CONTEXT OF ADAPTATION TO CLIMATE CHANGE	
PURPOSE UYK1. Ensuring adaptation to climate change on cross-cutting issues	OBJECTIVE UYK1.1. Integration of adaptation to climate change into national development plans, programs and policies
	OBJECTIVE UYK1.2. Developing and putting in place information, monitoring and evaluation systems that support decision-making processes
	OBJECTIVE UYK1.3. Realizing and putting in practice the financial arrangements necessary for implementation of the National Climate Change Strategy at the national, regional and local level
	OBJECTIVE UYK1.4. Organizing training, awareness-raising and informative activities to develop the capacity to combat and adapt to climate change
	OBJECTIVE UYK1.5. Developing R&D capacity with regard to climate change adaptation

ENERGY SECTOR







PURPOSE E1. REDUCING ENERGY INTENSITY

OBJECTIVE E1.1. Reduce primary energy intensity by 10% compared to 2008 by 2015 as a result of implemented and planned policies and measures

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area E1.1.1. Collecting sectoral energy data, identifying and evaluating benchmarking indicators	E1.1.1.1. Establishing a database encompassing all sectors and organizations for calculation and follow-up of energy indicators on sub-sector basis, making evaluations and preparing a roadmap so as to keep the database up-to-date	2012-2013	Capacity building	Regularly updated energy database, periodically published benchmarking indicators	MENR	MoTC, EECB member organizations, TURKSTAT, MEU, KOSGEB Universities, EECs and Relevant Sector Associations
	E1.1.1.2. Evaluating benchmarking indicators for efficiency on the basis of sub-sectors based on the obtained data and identifying year-based energy efficiency objectives	2013-2016	Capacity building	Benchmarking indicators, energy efficiency objectives	MENR	EECB member organizations, KOSGEB, Universities, EECs and Relevant Sector Associations
Action Area E1.1.2. Implementation of the GHG emission management approach for the energy sector	E1.1.2.1. Studying the emission control scenarios in energy sector	2012-2014	Capacity building for carbon aware growth	Cost/benefit analyses, official announcement of optimum cost low emission scenario by MENR	MENR	MENR affiliated and related organizations, EMRA, Universities, Licensed Private Sector Investors, Professional chambers
	E1.1.2.2. Conducting a Technology Needs Assessment for GHG emissions control in the energy sector	2012-2014	Capacity building	Research reports, feasibility reports	MENR	MEU, MENR's affiliated and related organizations, MoD, Sector NGOs and Professional Chambers
	E1.1.2.3. Identifying the NAMA potentials on sub-sector basis and conducting an economic analysis	2012-2014		Identification of EE potential in sub sectors, Number of projects started within the scope of NAMAs	MENR	EECB Member organizations, Private Sector NGOs, KOSGEB
	E1.1.2.4. Preparing and implementing the Energy Efficiency Action Plan	2011-2012	Capacity building, Reduced energy imports, Increased competitiveness	Energy Efficiency Action Plan	MENR	EECB Member organizations and All other Public Organizations, KOSGEB, Private Sector NGOs
	E1.1.2.5. Conducting Cost/Benefit and emission impact analyses to achieve the objectives identified in strategy documents	2012-2015		Cost/benefit analysis reports	MENR	MoF, MoD, EECB Member organizations, Relevant NGOs
	E1.1.2.6. Identifying economic tools to reduce GHG emissions and increase energy efficiency and implementing them on pilot basis	2012-2015	Capacity building	Pilot projects on determined areas and sectors	MENR	KOSGEB, TTGV, Financial Institutions, All support program implementing organizations

OBJECTIVE E1.2. Develop the capacity for energy efficiency by 2015

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area E1.2.1. Delivering trainings and raising awareness on energy efficiency	E1.2.1.1. Reviewing the existing legislation so as to increase the efficiency of energy efficiency consultancy (EEC) companies, supporting EECs and increasing their numbers	2011-2012	Capacity development	Amendment to the Energy Efficiency Regulation, licensed Energy Efficiency Consultant Firms	MENR	MSIT, MEU, KOSGEB, NGOs, Private Sector Organizations, UCTEA
	E1.2.1.2. Evaluating the awareness-raising activities using the "energy efficiency awareness index" method and announcing the results	2011-2023	Decrease in environmental pollution, Increased public awareness	Awareness index study results, change in consumer behaviors, decrease in energy consumption	MENR	MoNE, DA, Municipalities, Relevant Chambers of UCTEA, Private Sector NGOs

OBJECTIVE E1.3. Support R&D activities on energy efficiency

Action Area E1.3.1. Increase financial resources allocated to R&D on energy efficiency by 100% of 2009 figures by 2015	E1.3.1.1 Developing a R&D strategy and establishing "Energy Sector R&D Projects Support Programme" (ENAR) guides	2011-2013	Technological development	R&D strategy, approval of new strategy by SCST, ratio of annual renewable energy resources project support to annual R&D support, ENAR guides	MENR	MoF, MSIT, SCST, TUBITAK, KOSGEB, Members of TUBITAK Technology Platforms, Universities, Private Sector Research Teams, Private Sector NGOs
	E1.3.1.2. Providing R&D and innovation support to energy efficiency technologies that are not yet transformed into products and services	2012-2023	Know-how, Technological development, New entrepreneurship and employment opportunities	Number of R&D and innovation projects supported Number of patents	MENR	MoF, MSIT, SCST, TUBITAK, KOSGEB, Members of TUBITAK Technology Platforms, Universities, Private Sector Research Teams, Private Sector NGOs
	E1.3.1.3. Supporting pilot projects for genuine new products, methods or designs developed based on R&D results	2013-2023	Technological development, know-how, new entrepreneurship areas and new employment opportunities	Number of authentic products, methods or designs adapted to production	MENR	MSIT, MoF, UoT, TUBITAK, KOSGEB, EUAS, TEIAS, Distribution companies, TSFC, TEMSAN, University institutes, TOBB, UCTEA, NGOs

OBJECTIVE E1.4. Increase the amount of incentives given by MENR for energy efficiency applications by 100% until 2015

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area E1.4.1. Promotion and encouragement of energy efficiency investments	E1.4.1.1. Informing the sectors on the existing funding mechanisms for enabling energy efficiency	2011-2013	Capacity building	Catalogue, up-to-date website	MENR	MoF, UoT, TTGV, KOSGEB, UCTEA, TOBB, Financial Institutions, All support program implementing organizations, Consumer Associations
	E1.4.1.2. Carrying out studies to increase existing energy efficiency supports	2012-2013	Capacity building	Revised regulations	MENR	MoF, EECB Member organizations, KOSGEB, EECs, Relevant NGOs

PURPOSE E2. INCREASE THE SHARE OF CLEAN ENERGY IN ENERGY PRODUCTION AND USE**OBJECTIVE E2.1. Ensure that the share of renewable energy in electricity production is increased**

Action Area E2.1.1. Utilization of hydroelectric energy potential and other renewable energy resources	E2.1.1.1. Utilizing entire technical and economic potential for hydroelectric energy on basin-basis, in consideration of economic, environmental and social conditions	2011-2023	Capacity building, effective energy and resource management	Increase in the amount of electricity production from HPPs	SHW	MENR, MEU, MFAL, GDM, EMRA, TBB
	E2.1.1.2. Launching pilot projects for pumped storage HPP technologies	2012-2015	New employment opportunities, energy security	Legal arrangements, development and realization of first pumped storage HPP project	MENR	SHW, EUAS, EMRA, Private Sector Producers
	E2.1.1.3. Taking an inventory of the existing solar collectors and conducting the cost/benefit analyses; making and putting into effect legislative arrangements to spread the use of solar energy taking into consideration of the environmental factors	2011-2014	New employment opportunities	Solar collector inventory of Turkey, Cost/benefit analyses, number of utilized solar collectors	MEU	MENR, MSIT, TUBITAK, TSI, GAP, TOBB

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
	E.2.1.1.4.Preparing the cost/benefit based solar energy roadmap	2012-2015	Capacity building, effective energy and resource management	Cost/benefit analysis	MENR	
	E.2.1.1.5 Developing a roadmap and developing a finance model for offshore wind energy	2011-2012	New employment opportunities, capacity building, effective energy and resource management	Financing models, research conclusions	MENR	MoTC, EUAS, EMRA
	E2.1.1.6. Building the necessary infrastructure so as to increase wind energy capacity and ensure good management	2011-2015		ensuring energy quality, more energy transfer and resource utilization	TEIAS	MENR, MoD, UT, EMRA
	E2.1.1.7. Reviewing the legislation on utilization of geothermal energy, and exploring opportunities for financial support	2011-2013		number of reviewed legislations	MTA	MENR, UoT, MIGEM, EMRA, Municipalities
	E2.1.1.8. Stepping up new researches on bio-fuels in view of energy contribution	2011-2013	New employment opportunities, technological development	Biomass road map	GTHB	MENR, Universities, Oil Seeds Producers and Cooperatives, Bio-fuel Producers, Liquid Fuel Sector Companies
	E2.1.1.9. Studying the technical and economic feasibility of utilization of biomass resources in existing coal plants	2011-2013	New employment opportunities, technological development, rural development, reduction of air pollution	Feasibility study final report	EUAS	MENR, MFAL, TUBITAK
OBJECTIVE E2.2 Develop capacity by 2015 so as to increase utilization of renewable energy resources						
Action Area E2.2.1. Inform and raise awareness of target groups on RES and climate change	E2.2.1.1. Supporting NGOs and local governments for development of RES projects	2011-2015	Decrease in local environmental pollution, raised public awareness	Project final reports, Number of projects for RES	DA	NGOs, Municipalities, Donor Organizations
	E2.2.1.2 Make legal arrangements for certification of renewable energy systems under 500 kW	2011-2015	Increase in added value for products and services using renewable energy	Legal arrangements, RES labels	EMRA	MENR, Producers

OBJECTIVE E2.3. Ensure technological development by 2020 for energy production from renewable energy resources

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area E2.3.1. Developing and supporting R&D activities for renewable energy resources	E2.3.1.1. Conducting Technology Needs Assessment on renewable energy resources	2011-2014	Technological development	Technology needs analysis report	MENR	MSIT, MoF, UoT, TUBITAK, KOSGEB, EUAS, TEIAS, Distribution Companies, TSFC, TEMSAN, University Institutes, TTGV, TOBB, UCTEA, NGOs
	E2.3.1.2. Encouraging transfer of R&D results to production through economic instruments, and preparing the cost/benefit analyses	2011-2020	Technological development, new entrepreneurship areas and new employment opportunities	Cost/benefit analysis reports for R&D incentives	MENR	SCST, MSIT, MoF, KOSGEB, TTGV Universities, Private Sector Research Teams, TUBITAK Members of Technology Platforms, Sector Associations
	E2.3.1.3. Increasing the number of research and product projects carried out at universities or in technology development zones with regard to renewable energy and clean technologies for use of new technologies	2012-2016	Technological development, know-how, employment	Number of integrated projects and domestic products for RES	MENR	MSIT, MOF, MoD, TUBITAK, DA, University Institutes, Technology Development Zones
	E2.3.1.4. Making necessary legislative arrangements for product development so as to promote increased coordination between research organizations, provide financing facilities, and develop pre-competition cooperation activities	2012-2014		Publication of legislation in the Official Gazette	MENR	MSIT, MOF, MoD, TUBITAK, DA, University Institutes, Technology Development Zones
	E2.3.1.5. Setting up a Post-Project Support and Coordination Unit, which will ensure follow-up of projects and technology development and RES incubation zones in specific areas after support, so as to support domestic industry	2012-2015	New employment opportunities, know-how, technology, domestic equipment	Public-Private Sector cooperation initiatives and incubators	MENR	MSIT, MOF, MoD, EUAS, TUBITAK, KOSGEB, TTGV, TSFC, TEMSAN, DA, University Institutes, TOBB, Private Sector
	E2.3.1.6. Taking additional measures encouraging the use of electricity from solar and other renewable energy resources produced from small facilities below 500 kW, and making legislative arrangements on this matter	2011-2014	Technological development, capacity building	R&D results	MENR	EMRA, RI, Private Distribution Companies and Entrepreneurs
	E.2.3.1.7 Realising hybrid projects for efficient use of wind energy	2011-2016	Technological development, capacity development	Project results	MENR	Universities, RI

PURPOSE E3. LIMIT GHG EMISSIONS ORIGINATING FROM USE OF COAL IN ELECTRICITY PRODUCTION, BY USING CLEAN COAL TECHNOLOGIES AND TAKING EFFICIENCY-INCREASING MEASURES
OBJECTIVE E3.1. Increase the average cycle efficiencies of existing coal-fired thermal power plants until 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area E3.1.1. Rehabilitation of existing lignite power plants and disseminating the use of clean coal technologies	E3.1.1.1. Continuing maintenance, improvement and modernization works in existing electricity generation plants in order to increase efficiency and production capacity by using new technologies	2011-2020	Energy supply security, high quality energy, employment	Completion of improvement activities in power plants	EUAS	MENR, TKI, TTK, MTA, TUBITAK, PA, Private Sector Investors, Universities
	E3.1.1.2. Seeking clean technology usage, costs and implementation opportunities in existing power plants	2011-2014	New employment opportunities	Due diligence analysis containing cost/benefit analyses	EUAS	MENR, TKI, TTK, TUBITAK, PA, Private Thermal Power Plants, Universities
Action Area E3.1.2. Using clean coal technologies in new coal-fired power plants	E3.1.2.1. Engaging local actors (universities, organized industrial zones, Development Agencies, etc.) to ensure that clean coal technologies are used in small-reserve local power plants	2011-2023	New employment opportunities, know-how, technology	Establishment of Regional Coal Research Centres	MENR	MOF, TKI, EUAS, TTK, MTA, TUBITAK, Universities, Private Sector Delegates
	E3.1.2.2. Identifying the technical criteria for utilization of clean coal technologies in new power plants using domestic lignite, and taking measures to promote the implementation	2011-2015	Reduction of environmental pollution, improvement of air quality	Making legal arrangements regarding technical criteria for clean coal applications	MENR	MEU, TKI, EMRA, TUBITAK, TTK, MTA, TUSIAD, NGOs, Private Sector
Action Area E3.1.3. Promoting use of cogeneration and regional heating systems	E3.1.3.1. Ensuring full alignment with EU cogeneration regulations	2011-2014	Alignment with the EU	Publication of cogeneration regulation in Official Gazette	MENR	EMRA, TUBITAK, MEUA, Sectoral NGOs, Private Sector
	E3.1.3.2. Making known the incentives given for spreading high-efficiency cogeneration/tri-generation and regional heating practices	2011-2015	Raising Public awareness	Introductory guide	MENR	MoD, UoT, TOKI, EMRA, Municipalities, Sectoral NGOs, Private Sector
	E3.1.3.3. Making legal arrangements for disseminating utilization of residual heat, and carrying out information activities	2011-2015	Capacity building	Increase in residual heat utilization	MENR	EMRA, TUBITAK, Municipalities, Sectoral NGOs, Private Sector

PURPOSE E4. REDUCE LOSSES AND ILLICIT USE IN ELECTRICITY DISTRIBUTION

OBJECTIVE E4.1. Reduce nationwide electricity distribution losses to 8% by 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area E4.1.1. Improving technical infrastructure and preventing illicit use	E4.1.1.1. Taking necessary supportive measures to rehabilitate and strengthen distribution networks and move towards "Smart Grid" applications	2011-2016	Increase in economic life of coal reserves, decrease in imports	Specified reduction objectives on loss/illicit use achieved	MENR, EMRA	TEDAS, PA, LA, Private Distribution Companies
	E4.1.1.2. Increasing inspections to prevent illicit electricity use, and conducting activities on this issue	2011-2016	Rational utilization of resources, getting unrecorded energy consumption under record	Amount of reduction in illicit energy use	MENR, EMRA	Electricity Distribution Companies

BUILDING SECTOR







PURPOSE B1. INCREASE ENERGY EFFICIENCY IN BUILDINGS

OBJECTIVE B1.1. Establish heat insulation and energy-efficient systems meeting standards in commercial and public buildings with usable areas larger than 10 thousand square meters and in at least 1 million residential buildings by 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area B1.1.1. Identifying energy efficiency potential and priorities in order to ensure heat insulation and energy-efficient systems in buildings	B1.1.1.1. Preparing a database containing energy consumption data for building subsectors, and developing benchmarking indicators	2011-2014	Capacity building	Database, benchmarking indicators	MENR	MEU, MoF, MIA, MoNE, TURKSTAT, TOKI, PSA, Municipalities
	B1.1.1.2. Identifying the technical specifications of model buildings set forth for building typologies	2011-2017	Capacity building	Model Building technical specifications	MEU	MENR, MOF, MIA, TURKSTAT, LA
	B1.1.1.3. Identifying short, medium and long-term targets for ensuring energy efficiency in buildings by comparing existing buildings against model buildings	2011-2018	Capacity building	Benchmarking indicators, report on energy efficiency objectives in the buildings	MEU	TOKI, LG, NGOs, Professional Chambers
	B1.1.1.4 Developing action plan to increase energy efficiency in existing buildings	2011-2014		Action Plan on Energy Efficiency in the Buildings	MEU	MoF, MIA, MENR, LA, TOKI, NGOs, Relevant Professional Chambers, Private Sector Organizations
	B1.1.1.5. Finalizing the cost-benefit analyses of measures taken to ensure energy efficiency	2011-2014		Energy Efficiency Measures Cost-Benefit Analysis Report	MEU	MSIT, MoCT, Relevant Associations, Relevant Professional Chambers, Material Producers and Sellers, Private Sector Organizations
	B1.1.1.6. Assessing the building materials and technologies available on the market in terms of energy efficiency	2011-2014	Increased competitiveness	Market analysis report	MEU	MENR, MSIT, MoCT, TSE, TURKAK, TUBITAK, Universities, Relevant Associations, Relevant Professional Chambers, Material Producers and Seller, Private Sector Organizations
	B1.1.1.7 Identifying R&D priorities and areas to be supported for development of building materials and technologies to increase energy efficiency	2011-2014		R&D Needs Assessment Report, list of research areas to be promoted for energy efficient technologies and products	MEU	MENR, MSIT, MoCT, MoD, TURKAK, TSE, TUBITAK, Universities, Relevant Associations, Relevant Professional Chambers, Material Producers and Sellers, Private Sector Organizations

OBJECTIVE B1.2. Effective implementation of the Regulation on Energy Performance in Buildings (BEP) and other energy –efficiency regulations until 2017

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area B1.2.1. Improving and strengthening the BEP Regulation to ensure use of heat insulation and efficient energy systems in buildings	B1.2.1.1. Reviewing and, if necessary, revising the minimum requirements and criteria related to building technical systems specified in the BEP Regulations	2011 -2014		Proposal package for improvement of technical building systems and criteria provided for in current legislation, cost/benefit analysis reports for suggested technical system modifications, publication of required regulation amendments in the Official Gazette	MEU	MENR, MIA, TSE, Universities, Sectoral Associations, Professional Chambers
	B1.2.1.2. Analyzing 25% threshold specified in the BEP Regulation for improvements in the modification of existing buildings, and preparing a technical report including cost/benefit analyses for improvement conditions for existing buildings	2011 -2014	Improved life quality, decrease in energy consumption costs per household	Technical report containing cost/benefit analysis	MEU	MENR, MIA, TSE, Universities, Sectoral Associations, Professional Chambers
	B1.2.1.3. Identifying and making the necessary changes in the related legal arrangements to support the implementation of the BEP Regulation (Property Ownership Law, Municipalities Law, Building Inspection Regulation etc.)	2011-2023		Publication of the amendments in other laws and regulations made in line with BEP Regulation in the Official Gazette	MEU	MENR, MoF, MSIT, MoCT, MIA, TSE, Universities, Sectoral Associations, Professional Chambers
	B1.2.1.4. Conducting a technical assessment including cost/benefit analyses to upgrade Energy Performance Certificate (EPC) classification ranges (TS 825 – lowering the U values of building components per years), and ensuring coordination in revising the BEP and TS 825	2011-2023		Technical report containing cost/benefit analysis, publication of revised BEP Regulation in the Official Gazette	MEU	TSE, MENR, TUBITAK, Universities, Sectoral Associations, Professional Chambers
	B1.2.1.5. Establishing the “Integrated Building Design Approach” and “Zero-Emission (Sustainable) Building” criteria; integrating them into the BEP Regulation if deemed necessary	2012-2015		Technical report/guide containing Integrated Building Design Approach and Sustainable Building Criteria, publication of revised BEP Regulation in Official Gazette	MEU	MENR, TSE, TUBITAK, Sectoral Associations, Professional Chambers

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area B1.2.2. Increasing the capacity of MEU regarding the BEP Regulation and other energy efficiency applications	B1.2.2.1. Conducting a needs analysis to develop the institutional capacity of MEU	2011-2012	Capacity building	Institutional capacity and needs report	MEU	
	B1.2.2.2. Training the MEU personnel as implementers and trainers in BEP Regulation applications, measures and equipment for energy efficiency in buildings	2011-2012		Number of trainings delivered to MEU personnel	MEU	MENR, TUBITAK, Universities, Professional Chambers, Sectoral NGOs, International Organizations
	B1.2.2.3. Assigning and training a team to supervise the regulated EPCs	2011 and onwards	Increased confidence in EPC in real estate market	Technical infrastructure established, number of trainings, number of survey experts	MEU	MENR, TSE, TUBITAK, Universities, Sectoral Associations, Professional Chambers
Action Area B1.2.3. Increasing the capacity of other relevant organizations regarding the implementation of the BEP Regulation and other energy efficiency applications	B1.2.3.1. Training the sector practitioners of the BEP Regulation	2011-2023	Capacity building	Number of trainees	MEU	MENR, LA, TBB, Universities, MMO, Sectoral NGOs, Professional Chambers, IEC firms, Building Inspection Firms, EEC firms
	B1.2.3.2. Authorising EECs and increasing their capacities in terms of Energy Performance Contract practices and building energy efficiency studies	2011- 2023	Capacity building	Number of designated EECs, number of energy performance contracts in buildings	MENR	MEU, UCTEA, EECs, Organizations designated/licensed for EE services
	B1.2.3.3. Organizing periodical trainings to increase the competence of MEU provincial directorates, municipalities, building inspection companies and chambers with regard to building inspections	2011-2023	Increased confidence in EPC in real estate market, acceleration of EE building transformation	Number of trainings organized for the building inspection personnel of Provincial Directorates of the MEU, municipalities, building inspection companies and professional chambers, and the number of participants	MEU	MENR, UCTEA, Universities, Sectoral NGOs, Relevant sector participants
	B1.2.3.4. Making legislative amendments, if deemed necessary, to increase the effectiveness of the building inspection system	2011-2013		Effective inspection system, Amendment of Building Inspection Regulation and related legislation and publication in Official Gazette	MEU	
	B1.2.3.5. Increasing effectiveness of Building Energy Management system standardization; aligning the relevant legislation (EE Law and regulations) with the Energy Management Standard (16001 EN-ISO 50001) and implementing it in commercial and residential buildings	2011 -2015	Increase in green employment opportunities	Amendment of EE Regulation and publication in Official Gazette, at least 100 commercial and public buildings with 16001 EN-ISO 50001 certificates	MENR	MEU, TSE, UCTEA, EECs

OBJECTIVE B1.3. Develop instruments that will provide the necessary financial support with regard to energy efficiency, renewable energy and BEP until the end of 2013

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area B1.3.1. Providing necessary financing with regard to energy efficiency, renewable energy and BEP in order to increase energy efficiency in buildings	B1.3.1.1. Ensuring coordination to build dialog and cooperation with national and international financial organizations	2011-2023	Better channelling of international funds for EE and RES	Alternative finance models, cooperation protocols	UoT	MEU, MENR, MoF, MoD, Financial Organizations, Private Sector Organizations, EECs
	B1.3.1.2. Researching, promoting and disseminating finance models that encourage investments necessary for energy efficiency measures in buildings	2011 -2015		Website for announcement of finance models, funds, benefits and requirements	MENR	MoF, UoT, TBB, UCTEA, Financial Organizations , Private Sector Organizations, EECs, Consumer Associations

OBJECTIVE B1.4. Issuing “Energy Performance Certificates” to all buildings until 2017

Action Area B1.4.1. Strengthening necessary infrastructure to issue “Energy Performance Certificates” to all buildings	B1.4.1.1. Monitoring and registering the certificates to be given to existing and new buildings by MEU, inspecting the implementation of the BEP Regulation and other energy efficiency practices through random inspections	2011 -2017		Number of registered EPCs, number of inspections	MEU	MENR, Professional Chambers, EECs
	B1.4.1.2. Developing a method for periodic inspection of the mechanic systems of buildings (central heating systems, HVAC systems), making designations for inspections and carrying out inspections	2011 -2017		Publication of related Communiqué in Official Gazette, number of licensed/designated inspection firms/inspectors, number of inspections	MEU	Professional Chambers, private audit/inspection companies, EECs

OBJECTIVE B1.5. Decrease annual energy consumption in the buildings and premises of public institutions by 10% until 2015 and by 20% until 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area B1.5.1. Reducing the annual energy consumption of the buildings and premises of public institutions	B1.5.1.1 Building databases for public buildings, identifying the buildings with highest energy consumption.	2011 - 2013	Improvement in public information system	Building and Energy Database for Public Buildings	MENR	MEU, MIA, MoF, TOKI, TURKSTAT, LA, Public Institutions and Organizations
	B1.5.1.2. Ensuring coordination for gradually issuing EPCs for all public buildings	2011 - 2017	Improvement in public information system	Issuing EPCs for top 100, 1,000, 10,000 energy consuming buildings gradually	MEU	MENR, TOKI, Public Institutions and Organizations, EECs
	B1.5.1.3. Issuing a Prime Ministry Circular for determination of threshold values for EPC for old and new buildings, determination of an energy efficiency improvement strategy for public buildings based on such EPC threshold value and ensuring necessary allocation	2011 -2018	Improvement in public information system	Strategy and Plan for Improvement of EE in Public Buildings, Prime Ministry Circular	MEU	MIA, MoD, TOKI, LA, Public Institutions and Organizations
	B1.5.1.4. Commissioning public institutions to carry out energy surveys, determining the necessary budget for improvements, preparing feasibility reports and submitting them to the MoF and MoD	2011 -2015		Survey reports, feasibility reports	All public institutions	MENR, MEU, MoD
	B1.5.1.5. Carrying out preliminary works and studies for making amendments in the Public Procurement Law so as to improve public buildings within the framework of Energy Performance Contracts of EECs	2011 -2012	Saving in operational budgets of public buildings	Suggestions for modifications on Public Procurement Law	MoF	MENR, MEU, PPA
	B1.5.1.6. Carrying out preparatory works for implementation of the Green Procurement Programme to ensure purchase of more efficient equipment, vehicle and buildings in public institutions	2011 -2013	Decrease in public expenditure, market transformation for EE devices	Amendment of Public Procurement Law and publication thereof in the Official Gazette	MoF	MENR, MIA, PPA, TOKI, LA, Public Institutions and Organizations
	B1.5.1.7. Appointing energy managers for public buildings consuming 250 toe or more energy or that are larger than 10 thousand sqm, so as to increase the effectiveness of energy management practice in public buildings	2011 -2011	Savings in operational budgets of public buildings	Number of appointed energy managers, number of public buildings with an Energy Management Standard Certificate	MENR	Public Institutions and Organizations, Professional Chambers, EECs

PURPOSE B2. INCREASE RENEWABLE ENERGY USE IN BUILDINGS

OBJECTIVE B2.1. At least 20% of the annual energy demand of new buildings met via renewable energy resources as of 2017

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area B2.1.1. Promoting use of renewable energy in buildings	B2.1.1.1. Developing a feasibility report format to assess the cost effectiveness of renewable energy in buildings	2011 -2014		Implementation of feasibility format, publication of related communiquéé in the Official Gazette	MENR	MEU, EMRA
	B2.1.1.2. Making new arrangements to ensure use of renewable energy in buildings, including the following: <ul style="list-style-type: none"> ■ Introducing maximum energy demand and maximum carbon dioxide emission limitation for buildings, and encouraging use of renewable energy resources in this scope, ■ Imposing administrative sanctions on buildings exceeding the maximum CO₂ emission values, ■ Encouraging the use of heat insulation and efficient equipments and systems, ■ Seeking sustainability as a condition for licensing commercial buildings larger than 10.000 m² and detached luxury residences and integrated residences, and spreading the practice gradually to other buildings, ■ Encouraging and spreading in situ energy production; encouraging and spreading use of renewable energy resources and systems such as air, soil or water-source heat pumps, cogeneration and micro cogeneration in order to meet the heating, cooling, ventilation, sanitary hot water, electricity and lighting needs of buildings either fully or partially 	2011 -2015	New employment opportunities, clean environment, conservation of energy resources, decrease in external dependency in energy	Publication of new legal arrangements in the Official Gazette, number of buildings providing at least 20% of their energy needs from RES	MENR	MEU, EMRA, TEDAS and Private distribution companies, Sectoral NGOs
Action Area B2.1.2. Spreading in situ energy production in housing estates	B2.1.2.1. Implementing zone heating, cogeneration and/or micro-cogeneration applications to meet the energy demands of buildings for heating, cooling and other energy purposes in new housing estates	2011 -2014		Zone heating and cogeneration and/or micro-cogeneration applications in housing estates	TOKI	MEU, MENR, MSIT, MoCT, EMRA, TUBITAK, UCTEA, Universities, Private Sector Organizations, Design and building inspection firms

PURPOSE B3. LIMIT GREENHOUSE GAS EMISSIONS ORIGINATING FROM SETTLEMENTS

OBJECTIVE B3.1. Reduce greenhouse gas emissions in new settlements by at least 10% per settlement in comparison to existing settlements (which are selected as pilot and the greenhouse gas emissions of which are identified until 2015) until 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area B3.1.1. Identifying the effect of land use on greenhouse gas emissions on settlement basis (identifying the holistic effects of all relevant sectors on settlement basis)	B3.1.1.1. Creating databases in relevant sectors for increasing energy efficiency in buildings in selected pilot cities/regions, conducting analyses to determine holistic effects	2011-2014	Effective use of public investment, energy and water resources, comprehensive administrative system	Database, analysis report	MEU	MIA, MoTC, MENR, TURKSTAT, TOKI, LA, TBB, Universities, Relevant NGOs
	B3.1.2.1. Developing energy-efficient and climate-sensitive planning and settlement principles and criteria for different climatic zones; preparing a guide for effective implementation of sustainable urban plans	2011-2014	Capacity building, increase in life quality, sustainable settlements, increase in employment opportunities	Publication of sustainable urban settlement guide and delivering them municipalities	MEU	MoTC, MIA, MoD, Provincial Bank, LA, Universities, Relevant NGOs
Action Area B3.1.2. Developing policies and legal arrangements for energy-efficient and climate-sensitive settlement/ building, and implementing them through pilot projects	B3.1.2.2. Developing and implementing urban settlement plans covering sustainability elements such as land use, ecology, transportation, water management, gray water, green/white roofs etc, using lifecycle cost evaluation methods, within the framework of pilot projects	2011-2014	Sustainable settlements, ensuring effectiveness/ efficiency in material, water, land and energy use, increase in life quality	Sustainable urban settlement plans for pilot zones, number of new model settlements/ districts/building complexes/ neighbourhood units developed/constructed by means of national and international energy efficiency methods	MEU	TOKI, TBB, Provincial Bank, Municipalities, Universities, Relevant NGOs, Professional Chambers
	B3.1.2.3. Identifying principles and procedures for energy-efficient, climate-sensitive, sustainable urban settlement planning and, using the results of pilot projects, transferring the outputs to the physical development planning legislation so as to put sustainable urban plans into practice	2015-2016	Efficiency in material, water, land use, increase in level of health, prosperity and life quality, sustainable settlements	Publication of legal arrangements regarding sustainable urban settlement in Official Gazette	MEU	TBB, LA, Universities, NGOs, Professional Chambers
	B3.1.2.4. Preparing action plan for combating and adaptation to climate change within the scope of three pilot municipalities that can be models with aspects such as population, economic activity etc, also taking into consideration the potential to be affected by climate change, and presenting them to other municipalities	2012-2014		Action plan for combating and adaptation to climate change within the scope of three pilot municipalities and contribution of stakeholders, climate change action plan introduction and preparation seminars for all greater cities and their central municipalities	Pilot Municipalities	MEU, TBB, Universities, Relevant NGOs
	B3.1.2.5. Preparation of physical development plans in the form of climate-sensitive settlement plans by local governments	2013-2015	Effective use of public resources (decrease in the number of demolished/ reconstructed buildings due to wrong planning during initial investment and after investment)	Number of local administrations preparing sustainable settlement plans	LA	MEU, Provincial Bank, Universities, UCTEA's Relevant Professional Chambers

INDUSTRY SECTOR







PURPOSE S1. INCREASE ENERGY EFFICIENCY IN THE INDUSTRY SECTOR

OBJECTIVE S1.1. Making legal arrangements for energy efficiency and limitation of greenhouse gas emissions

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area S1.1.1. Revising existing legislation and making new legal arrangements	S1.1.1.1. Ensuring coordination between the legislations issued by different authorities with regard to limitation of greenhouse gas (GHG) emissions and increasing energy efficiency	2011-2016	Alignment with the EU	Publication of revised regulation in Official Gazette	MEU	CBCC Members, Sector Associations, NGOs
	S1.1.1.2. Making necessary legal arrangements for energy efficiency and limitation of GHG emissions	2011-2016	Alignment with the EU	Publication of new regulation in Official Gazette	MENR, MEU	MSIT, Sector Associations, NGOs

OBJECTIVE S1.2. Limiting GHG emissions originating from energy usage (including electrical energy share) in the industry sector

Action Area S1.2.1. Incentivizing, spreading and registering energy efficiency investments in the industry sector	S1.2.1.1. Developing, spreading and registering Efficiency Enhancing Projects in the industry sector	2011-2012	Improvement of competitiveness	Number of supported projects	MENR	MSIT, EECB Members, NGOs
	S1.2.1.2. Developing voluntary collaborations related to energy efficiency	2011-2016	Improvement of competitiveness, Dissemination of international funds	Declarations, cooperation agreements	MENR	MSIT
	S1.2.1.3. Exploring financing models for transforming energy efficiency projects into investment	2011–2023	Decreased foreign dependency in energy, increased improvement of competitiveness	Research reports	UoT	MENR, MSIT, EECB Members, MoD, KOSGEB
Action Area S1.2.2. Increasing energy efficiency in SMEs	S1.2.2.1. Providing SME's with information, training and consultancy support on energy efficiency and limitation of GHG emissions	2011–2016	Capacity building, Improvement of competitiveness	Training materials and website, study guides, good practices guide, number of supported SMEs, Number of beneficiaries	KOSGEB	MSIT, MENR, MoD, TOBB, NGOs
	S1.2.2.2. Supporting implementation of energy efficiency by developing financing models for SMEs	2012–2023	Improvement of competitiveness	New financing models, increased funding possibilities	KOSGEB	MSIT, MENR, UoT, Financial institutions
	S1.2.2.3. Developing Efficiency-Enhancing Projects and voluntary agreement supports for SMEs	2011–2023	Capacity development, improvement of competitiveness	Number of supported SMEs	KOSGEB	MENR, MSIT, MoD, Relevant NGOs

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area S1.2.3. Increasing energy efficiency in energy intensive sectors	S1.2.3.1. Making national and international comparisons on energy efficiency by conducting energy studies	2011–2014	Improvement of competitiveness	Study reports, comparison reports	MENR	MSIT, MEU, MoD, TUSIAD, TOBB, TMMOB, NGOs, Private Sector Organizations
	S1.2.3.2. Developing and implementing Demonstration projects that have high energy efficiency	2012–2016	Improvement of competitiveness	Demonstration Projects	Private Sector Organizations	MSIT, MEU, MENR, MoD, KOSGEB, TUSIAD, TOBB, NGOs
	S1.2.3.3. Preparing a guide for industrial sectors in the area of technology transfer on energy-efficiency and good practices	2011–2016	Improvement of competitiveness	Technology transfer guide	MSIT	MEU, MENR, MoD, KOSGEB, TUBITAK, TOBB, TUSIAD, UCTEA, TTGV, NGOs, Private Sector Organizations
	S1.2.3.4 Identifying energy saving potential and sectoral energy efficiency targets in energy-intensive sectors	2011–2016	Improvement of competitiveness	Average specific energy consumption in energy-intensive sectors	MENR	MoF, MSIT, MEU, MoD, TUBITAK, TOBB, TUSIAD, NGOs, Private Sector Organizations
	S1.2.3.5. Integrating support of investment projects that have high energy saving potential into development plans	2014–2016	Improvement of competitiveness	Available financing possibilities in the market	MoD	MEU, MENR, TUBITAK, TUSIAD, TOBB, NGOs, Private Sector Organizations

PURPOSE S2. DECREASE THE CO₂ EQUIVALENT INTENSITY PER GDP PRODUCED IN THE INDUSTRIAL SECTOR UNTIL 2023
OBJECTIVE S2.1. Developing the financial and technical infrastructure for limitation of GHG emissions

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area S2.1.1. Promoting voluntary agreements for reducing the intensity of greenhouse gas emissions	S2.1.1.1. Concluding voluntary agreements on limitation of GHG emissions with relevant sectors	2011–2014	Improvement of competitiveness, Alignment with the EU	Implementation methods and flow charts, Declarations, cooperation agreements	MEU	MSIT, MENR, MoD, KOSGEB, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S2.1.1.2. Exploring access to financial instruments required for limiting GHG emissions	2012–2014	Improvement of competitiveness, capacity building	Cost/benefit analyses, research reports	UoT	MSIT, MENR, MEU, MoD, KOSGEB
	S2.1.1.3. Supporting the development of projects containing technological improvements under voluntary agreements and sharing the project results with the public	2013–2018	Improvement of competitiveness, alignment with the EU, information society, new employment opportunities	Seminars, conferences	MSIT	MEU, MENR, MoD, KOSGEB, TSE, TUSIAD, TOBB, UCTEA, TTGV, NGOs, Private Sector Organizations
Action Area S2.1.2. Support transition to low-carbon intensity in the industrial sub-sectors	S2.1.2.1. Including topics on transition to low-carbon intensity in the strategy documents of sectors	2014–2016	Capacity building, alignment with the EU	Action plans	MSIT	MEU, MENR, MoD, KOSGEB, TUBITAK, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S2.1.2.2. Conducting studies on low-carbon intensity in industry at existing and future incubation and technology centres	2012–2014	Improvement of competitiveness, macroeconomic stability, new employment opportunities	Number of active organizations in technology development zones and new employment opportunities	MSIT	MEU, MENR, MoD, KOSGEB, TUBITAK, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S2.1.2.3. Conducting studies on developing financing models for transition to low-carbon development	2011–2013	New employment opportunities, Improvement of competitiveness	Cost/benefit analyses, necessary arrangements for financial models	MoD, UoT	MoF, MSIT, MEU, MENR, MFAL, KOSGEB

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area S2.1.3. Reducing the carbon footprint in enterprises and products (with priority given to devices specified in Article 7 of the Energy Efficiency Law)	S2.1.3.1. Calculating carbon footprint of products and enterprises in the industry sector, and developing an action plan for reducing the carbon footprint	2011-2015	Improvement of competitiveness, capacity development, alignment with the EU, policy-making capacity	Increased number of enterprises calculating their carbon footprints, number of products with carbon footprint	Private Sector Organizations	MEU, MENR, MSIT, KOSGEB, TSE, TUSIAD, TOBB, UCTEA, NGOs
OBJECTIVE S2.2. Develop and use new technologies for limitation of GHG in the industry sector until 2023						
Action Area S2.2.1. Support R&D and technology transfer activities on low GHG emission technologies in the industry sector	S2.2.1.1. Conducting a Technology Needs Assessment (TNA) on limitation of GHG emissions in the industry sector	2012-2014	Capacity building	Sector-based TNA reports, using outputs under UNFCCC	MSIT	MEU, MENR, MoD, KOSGEB, TUBITAK, TUSIAD, TOBB, TTGV, UCTEA, NGOs, Private Sector Organizations
	S2.2.1.2. studying for determination of climate change under the scope of priority areas in the industry-related R&D supports given by the MSIT	2012-2014	Improvement of competitiveness	Number of projects on climate change and support sizes	MSIT	MEU, MENR, MoD, KOSGEB, TUBITAK, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S2.2.1.3. Sharing with the public the good practice examples for low-GHG emission technologies in the industry sector	2014-2018	Improvement of competitiveness	Increased rate of good practice examples, conferences, seminars	MSIT	MEU, MENR, MoD, KOSGEB, TUBITAK, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations

PURPOSE S3. STRENGTHEN THE CAPACITY OF THE INDUSTRY SECTOR FOR COMBATING CLIMATE CHANGE

OBJECTIVE S3.1. Building the information infrastructure for limitation of GHG emissions in the industry sector until 2015

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area S3.1.1. Providing the sector with technical support on renewable energy, energy efficiency, clean production and combating climate change	S3.1.1.1. Developing guidebooks on combating climate change and organizing congresses/seminars/workshops in the industrial sub-sectors	2014-2020	Capacity building	Guidebooks, congresses, seminars, workshops	MSIT	MEU, MENR, MoD, KOSGEB, TSE, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S3.1.1.2. Providing information for industrial sectors	2011-2020	Capacity building	Number of activities	MSIT	MEU, MENR, MoD, KOSGEB, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
Action Area S3.1.2. Strengthen the capacity for developing energy management systems	S3.1.2.1. Preparing guidance documents and organizing training seminars on the ISO 50001/EN 16001 Energy Management Standard	2011-2015	Capacity building	Number of seminars and attendees, guidance documents	TSE	MSIT, MEU, MENR, MoD, KOSGEB, TURKSTAT, DA, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S3.1.2.2. Training of sectoral experts on energy management systems	2012-2014	New employment opportunities	Addition to Energy Manager training	MENR	MSIT, MEU, MoD, KOSGEB, TURKSTAT, DA, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S3.1.2.3. Promoting and disseminating the supports provided to SMEs within the scope of the existing regulation	2012-2014	Improvement of competitiveness	Amount of annual support	KOSGEB	MSIT, MEU, MENR, MoD, TSE, Private Sector Organizations
	S3.1.2.4. Reporting the effect of energy management results on limitation of GHG	2013-2015		Addition to annual reports	MENR	MSIT, MEU, MoD, TURKSTAT, TSE, KOSGEB, TUSIAD, TOBB, UCTEA, NGOs, Private Sector Organizations
	S3.1.2.5. Designating energy managers in all enterprises above 1000 TOE	2011-2015	New employment opportunities	Increased number of energy managers	MENR	MSIT, MEU, UCTEA, NGOs, Private Sector Organizations
	S3.1.2.6. Establishing the Industry Climate Change Technology Platform	2013-2014	Capacity building	Establishment of the Platform	TOBB	MEU, MENR, MSIT, MoD, TURKSTAT, KOSGEB, TUSIAD, UCTEA, NGOs, Private Sector Organizations

TRANSPORTATION SECTOR







PURPOSE U1. DEVELOPING AN INTERMODAL TRANSPORT SYSTEM AND ENSURING BALANCED UTILIZATION OF TRANSPORT MODES IN FREIGHT AND PASSENGER TRANSPORT
OBJECTIVE U1.1. Increasing the share of railroads in freight transportation (which was 5% in 2009) to 15% and in passenger transportation (which was 2% in 2009) to 10% by 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U1.1.1. Improving the infrastructure and superstructure of railroads	U1.1.1.1 Renewing the existing railroad network, raising its standards and completing its electrification and signalling	2011-2023	Decrease in dependence on foreign resources (oil)	New line ratio defined	TCDD	MoF, MoTC, MoD, MoE, UoT
	U1.1.1.2. Constructing 10,000 km high-speed train railroad lines and 5,000 km conventional railroad lines until 2023	2011-2023	Decrease in dependence on foreign resources (oil), Decrease in traffic density on highways	Completion of planned length of lines	MoTC, TCDD	MoF, MoD, MoE, UoT
	U1.1.1.3. Conducting feasibility studies on core network "extensions" determined in TINA studies	2012-2014	Decrease in dependence on foreign resources (oil)	Feasibility reports	MoTC, TCDD	MoD
	U1.1.1.4. Renewing the existing rolling and running stock park	2012-2023	Decrease in traffic density on highways, Increase in efficiency and safety	Activation of new running stock and rolling stock	TCDD	MoD, MoE, UoT
Action Area U1.1.2. Developing combined transportation and increasing the effectiveness of the role of railroads in passenger and freight transportation	U1.1.2.1. Increasing the number of logistic centres	2011-2014	Decrease in traffic density on highways	Number of logistic centres	TCDD	MoTC, MoD, MoE, UoT
	U1.1.2.2. Constructing junction lines to strengthen connection and integration of railroads with ports and organized industrial zones	2014-2023	Decrease in traffic density on highways	Connections and junction lines	MoTC, TCDD	MoD, MoE, UoT
	U1.1.2.3. Planning new railroad investment projects in a complementary to airways, ports and highways	2014-2023	Decrease in dependence on foreign resources (oil)	Increased use of railroads	MoTC	MoD, UoT, DHMI, TCDD, KGM, DGCA

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U1.1.3. Increasing the passenger transport service quality in railways	U1.1.3.1. Implementing operational approaches that shortens journey time and ensures delivery of prompt and comfortable services	2012-2016	Decrease in traffic density on highways	Guidelines for good operational practices, in-service personnel training, performance evaluation guides, increase in number of passengers	TCDD	MoTC, MoD
	U1.1.3.2. Improving information and online purchase services regarding tariffs, train schedules and ticket sales	2012-2014	Decrease in traffic density on highways, Economic gains	User-friendly website, increase in informative materials and methods	TCDD	MoD
	U1.1.3.3. Building alternative transport lines enabling passenger transport to railway main stations in greater cities	2014-2023	Decrease in traffic density	Investments and arrangements for alternative transport lines	GM	MoD
OBJECTIVE U1.2. Increasing the share of seaways in cabotage freight transportation (which was 2.66% in ton-km in 2009) to 10%, and in passenger transportation (which was 0.37% in passenger-km in 2009) to 4% as of 2023						
Action Area U1.2.1. Improving the maritime transport infrastructure	U1.2.1.1 Improving technology, infrastructure and standards in existing ports	2014-2016	Decrease in traffic density on highways	Advanced technology and infrastructure investments in ports	MoTC	MEU, MoD, DLH, TURKLIM
	U1.2.1.2. Construction of new ports to the locations identified within the scope of the Transportation Master Plan based on the Transportation Shore Structures Master Plan, with the build-operate-transfer (BOT) model	2014-2016	Decrease in traffic density on highways	Maps showing new port locations, increasing the share of private sector in investments	MoTC	MEU, MoD, PA
Action Area U1.2.2. Renewing and improving the fleet used in maritime transportation	U1.2.2.1. Strengthening the marine trade fleet with new ships, new machinery and equipment, and increasing the number of ships	2014-2016	Decrease in traffic density on highways	New ships purchased for the trade marine fleet, modifications in machinery, increase in number of ships	MoTC	MoD
	U1.2.2.2. Increasing the number of ro-ro ships in lines where there is demand, for use in freight, passenger and vehicle transportation	2014-2016	Decrease in passenger, freight and vehicle density on highways	Increased number of ro-ro ships, increased share of maritime transportation	MoTC	MoD
	U1.2.2.3. Implementing modern operation techniques in ports	2014-2016	Decrease in passenger, freight and vehicle density on highways	In-service trainings on state of the art operation techniques, operation directives	MoTC	MoC, TCDD, TURKLIM

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/Coordinating Organization	Relevant Organizations
Action Area U1.2.3. Developing the infrastructure of seaways in line with the combined transportation approach, and integrating maritime transport with other modes	U1.2.3.1 Establishing combined and intermodal transportation infrastructure, and building transfer/transshipment terminals between modes	2015-2023	Decrease in passenger, freight and vehicle density on highways	Connection and new transfer terminals	MoTC	MoD, MoE, TCDD, KGM, DGCA, DHMI
Action Area U1.2.4. Supporting maritime transport	U1.2.4.1. Supporting cabotage transportation by developing tax incentives	2012-2014	Decrease in passenger, freight and vehicle density on highways	Arrangements including incentive measures	MoTC	MoF
OBJECTIVE U1.3. Decreasing the share of highways in freight transportation (which was 80.63% in ton-km in 2009) below 60%, and in passenger transport (which was 89.59 in passenger-km in 2009) to 72% as of 2023						
Action Area U1.3.1. Adopting the intermodal corridor approach in highway planning	U1.3.1.1. Preparing integrated route plans by conducting social, environmental and economic analyses, so as to support combined transport	2011-2023	Decrease in dependency to foreign resources (oil), Decrease in traffic density on highways	Regulations, guidelines, trainings	MoTC	MoD, KGM, TCDD
Action Area U1.3.2. Identifying suitable economic instruments to shift the intense freight and passenger traffic on highways to different transport modes	U1.3.2.1. Conducting demand elasticity researches on taxes, pricing and fines	2012-2023	Decrease in dependency to foreign resources (oil), Decrease in passenger, freight and vehicle density on highways	Final reports, cost/benefit analyses	MoTC	MIA, MoF, MoD, KGM, TCDD, TUBITAK, Municipalities, Universities, Private sector organizations, NGOs
	U1.3.2.2. Increasing the effectiveness of audits and fines concerning over-capacity loading and minimum transport prices in passenger and freight transportation	2015-2016	Decrease in passenger, freight and vehicle density on highways, Decrease in dependence on to foreign resources (oil), Alignment with the EU	Arrangements on regulating fines, increased number of auditors	MoTC	MoF, MIA, DGCA, KGM, Private sector organizations, NGOs

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U1.3.3. Making use of the developments in the information and communication technologies and smart transport systems in highways	U1.3.3.1. Conducting R&D studies to develop smart transport systems	2012-2016	Improvement of national industrial and technological capacity	R&D final reports	MoTC	MoD, KGM, TUBITAK, Universities Private sector organizations
	U1.3.3.2. Establishment of Main Traffic Management System Centre	2014-2018	Decrease in traffic accidents and cost of lost time in traffic	Commercialization of new technologies	MoTC	MIA, Provincial Directorates of Security (Traffic), Municipalities
OBJECTIVE U1.4. Preparing and putting in practice the “Transportation Master Plan” until 2023						
Action Area U1.4.1. Carrying out the works for preparation of the “Transportation Master Plan”	U1.4.1.1. Making forward-looking projections for the transportation sector by calculating the GHG emission limitation options, mitigation potentials and costs	2011-2023	Building capacity for low carbon growth	Results of cost/benefit analyses	MoTC	MEU, MoTC affiliated and related organizations, Universities, Private Sector
	U1.4.1.2. Integrating purposes and objectives of low-carbon economy into the Transportation Master Plan	2013-2023	Capacity building	Integrated Transportation Master Plan	MoTC	MoD, Private sector organizations, Universities
	U1.4.1.3. Preparing the “Transportation Master Plan”	2013-2023	Alignment with the EU	Approved Transportation Master Plan, economic analyses	MoTC	MoF, MIA, MSB, MSIT, MoCT, MCT, MFAL, MENR, MEU, MoD, MoTC affiliated and related organizations, Municipalities, NGOs, Universities

PURPOSE U2. RESTRUCTURING URBAN TRANSPORTATION IN LINE WITH SUSTAINABLE TRANSPORT PRINCIPLES

OBJECTIVE U2.1. Limiting emission increase rate of individual vehicles in intracity transport

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U2.1.1. Developing and improving public transport services	U2.1.1.1 Delivering in-service training to sector employees so as to increase service quality	2012-2016	Improvement of access/ transportation possibilities for all segments of the society	In-service trainings, operation guides, customer satisfaction metering and monitoring system	Municipalities	NGOs, Consumer Unions
	U2.1.1.2. Making necessary investments and operational arrangements for urban highway, seaway, railway and rail system transportation	2014-2016	Improvement of access/ transportation possibilities for all segments of the society	Assessment report, feasibility studies	MoTC, Municipalities	MoD, TCDD, NGOs, Administration for Disabled People
	U2.1.1.3 Integrating mass transport systems with each other and other urban transport modes	2013-2016	Improvement of public services, Improvement of access/ transportation possibilities for all segments of the society, Less traffic jams	Integrated public transport plan, increase in use of public transport	Municipalities	MoTC, MoD, TCDD, NGOs, Private Sector, Administration for Disabled People
	U2.1.1.4 Arranging the ticket system in public transport in a way that will increase number of users	2013-2016	Less traffic jams	Cost/benefit analyses for price arrangements, common ticket and card applications, public information, legal arrangements	Municipalities	MoTC, MoD, TCDD, NGOs, Private Sector Consumer Unions
	U2.1.1.5. Ensuring that all new development proposals such as housing or business areas, are located on the main public transport routes that can provide effective public transportation services	2014-2016	Improvement of access/ transportation possibilities for all segments of the society	Guidelines	Municipalities	MoTC, MEU, TOKI

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U2.1.2. Development and improvement of bicycle and pedestrian transport	U2.1.2.1. Establishing citywide bicycle road networks (bicycle roads or lines), bicycle parking areas, smart bicycle/ bicycle stations	2014-2016	Improvement of access/ transportation possibilities for all segments of the society	Increased bicycle road network, increased capacities of bicycle parking areas	Municipalities	NGOs
	U2.1.2.2. Creating automobile-free pedestrian ways and areas in city centres, ensuring pedestrians can reach everywhere within the urban road network	2014-2016	Improvement of access/ transportation possibilities for all segments of the society	Automobile-free pedestrian ways and areas in city centres, easy-to-use urban road network for pedestrians	Municipalities	MIA, Administration for Disabled People, NGOs
	U2.1.2.3. Implementing urban planning approaches to turn pedestrian and bicycle trips into attractive alternatives	2014-2016	Improvement of access/ transportation possibilities for all segments of the society, Alignment with the EU	Standards and guidelines for public transport, bicycle and pedestrian access in planning and design	Municipalities	MEU, MoD, Administration for Disabled People, Universities, NGOs
	U2.1.2.4. Promoting the "Slow city" (Slowcity) concept, implementing practices in this line	2014-2020	Realization of sustainable city concept and applications	Increase in the number cities getting "Slow city" certificate	Municipalities	MEU, NGOs
Action Area U2.1.3. Implementing travel demand side management techniques that discourage use of automobiles in travels to city centre	U2.1.3.1. Effective supervision of on-road vehicle parking in urban centres, using existing parking lot capacity for short-duration parking, implementing deterrent pricing policies and installing smart parking lot systems	2014-2020	Decrease of the cost of time loss in traffic	Directive on operation principles and procedures for commercial parking lots in urban centres, legislative rearrangement on roadside parking, increase in parking prices	Municipalities	MEU, GDS, NGOs
	U2.1.3.2. Evaluating the practices for limiting automobile entrance to city centers	2015-2020	Additional income for local administrations	Assessment report	Municipalities	NGOs
Action Area U2.1.4. Making arrangements and inspections to reduce vehicle density in traffic	U2.1.4.1. Ensuring that taxis wait only at taxi stops, and imposing sanctions and inspections on commercial vehicles travelling idly in traffic in the city	2013-2014	Reduced cost of time loss in traffic	Regulation for inspections and sanctions for commercial vehicles	GDS	Municipalities, NGOs
	U2.1.4.2. Making arrangements so that heavy goods vehicles can enter the city only between specific hours, within the scope of intracity logistics	2013-2014	Reduced cost of time loss in traffic	Legal arrangements	Municipalities	GDS

OBJECTIVE U2.2. Developing the necessary legislation, institutional structure and guidance documents until the end of 2023 for implementation of sustainable transport planning in cities

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U2.2.1. Reviewing and restructuring the existing legislation	U2.2.1.1. Preparing and putting in practice the Urban Transport Law and regulations	2012-2014	Application of sustainable transportation approaches in cities	Legal arrangements	MIA, MoTC	MEU, MoD, BB, GDS, NGOs, Municipalities
	U2.2.1.2. Making legislative arrangement that will make it mandatory to prepare and approve urban transport plans as integrated with zoning plans and environmental plans	2012-2014	Improvement of life quality, Efficient use of resources	Legal arrangements	MoTC (Regulations on transport plan), MEU (Regulations on zoning plans)	MoD, DA, Governorships, Municipalities, NGOs
	U2.2.1.3. Making legislative arrangement that will make traffic impact assessment mandatory for all plan changes, by amending the "Regulation on Principles of Plan Changes"	2012-2014	Prevention of noise and air pollution arising from traffic intensity	Legal arrangements	MEU	MoTC, MIA, MoD, NGOs, Municipalities
	U2.2.1.4. Including bicycle road plan and pedestrian plan in the Transportation Master Plan and Zoning Plans by making amendments in the relevant regulations	2012-2014	Contribution to human health	Legal arrangements	MoTC (Regulations on transport plan), MEU (Regulations on zoning plans)	MIA, MoD, Municipalities, NGOs
	U2.2.1.5. Reviewing and revising the "Regulation on Principles and Procedures to Increase Energy Efficiency in Transport" to include measures on pedestrian transport, in view of suggestions aiming at speeding up traffic flow and the feasibility of the transport master plan	2011-2015	Application of sustainable transportation approaches in cities	Amendments to the regulations	MoTC	MEU, MENR Municipalities, NGOs

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U2.2.2. Institutional restructuring for urban transport	U2.2.2.1. Establishing an Urban Transport Unit that makes, steers and supervises policies for sustainable urban transport planning and management, and that has responsibility at the national level	2012-2016	Application of sustainable transportation approaches in cities	Establishment of envisaged institutional structure	MIA, MEU	MoTC, MoD, Municipalities, NGOs, Universities
	U2.2.2.2. Preparation of the Urban Transport Strategy at the national level by the Urban Transport Unit together with an independent committee composed of relevant public and private sector representatives, local governments, scientists and experts	2013-2023	Application of sustainable transportation approaches in cities	Urban Transport Strategy Document	MIA, MEU	MoTC, MoD, NGOs, Universities
Action Area U2.2.3. Preparing guidance documents that will guide urban transport practices	U2.2.3.1. Preparing guides to be distributed to all local governments on transport planning, rail system investment planning, travel demand management, obstacle-free/universal design for pedestrian transport	2013-2023	Application of sustainable transportation approaches in cities, Efficient use of public resources	Guidance documents	MoTC	MIA, MEU, MoD, NGOs, Municipalities, Universities

PURPOSE U3. DISSEMINATION OF THE USE OF ALTERNATIVE FUELS AND CLEAN VEHICLE TECHNOLOGIES IN THE TRANSPORT SECTOR

OBJECTIVE U3.1. Making legal arrangements and building capacity to increase use of alternative fuels and clean vehicles until 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U3.1.1. Making regulations on limitation of CO ₂ emissions in new automobiles, foreign-flagged freight and passenger ships	U3.1.1.1. Integrating into national legislation the EU Directive 443/2009/EC on "Reduction of CO ₂ Emissions from light-duty vehicles"	2012-2015	Alignment with the EU	Legal arrangements	MSIT, MoCT	MEU, MoF, MoTC
	U3.1.1.2. Integrating into national legislation the EU Directive 2009/33/EC on the "promotion of clean and energy-efficient road transport vehicles" which stipulates sanctions to ensure preference of vehicles with the lowest emission and highest energy efficiency in the purchase of public transport vehicles	2012-2014	Application of sustainable transportation approaches in cities	Legal arrangements	MEU, Relevant public institutions and organizations	MoF, MoTC, MIA, MSIT, MoCT, MoD, Municipalities, NGOs
	U3.1.1.3. Making the legal arrangements that will make it mandatory to use low-sulphuric fuel for freight and passenger ships visiting our ports	2012-2014	Alignment with the EU, Reduced sea pollution	Legal arrangements	MoTC	MoF, MEU, MFA
Action Area U3.1.2. Developing a taxing and pricing system based on limiting greenhouse gas emissions in motor vehicles	U3.1.2.1. Examining examples of low-toll passage practices and surveying their feasibility for Turkey	2013-2014	Technological development, Capacity development	Study report	KGM	MoTC, TUBITAK, Universities
	U3.1.2.2. Initiating studies on regulations in the taxing system to reduce GHG emissions from motor vehicles	2020-2023	Reduced air pollution	Legal arrangements	MoF	MoTC, MSIT, MoCT, NGOs
	U3.1.2.3. Offering low-toll passage opportunities to vehicles with low GHG emission in motorway and bridge toll fees	2015-2020	Reduced air pollution	Implementation of differentiated tariffs	KGM	MoF, MoTC, MEU, NGOs
	U3.1.2.4. Promoting alternative fuels and clean vehicles by making arrangements in the tax legislation within the framework of currently implemented economic programme and budget policies	2020-2023	Alignment with the EU, Promotion of the technology development national capacity	Legal arrangements	MoF	MoTC, MSIT, MoCT, MoD, TUBITAK, Universities, NGOs, Private sector organizations
	U3.1.2.5. Developing incentive methods and mechanisms to encourage vehicle fleets owned by public agencies, organizations and private companies to create fleets with clean fuel and clean vehicle technologies	2020-2023	Achieving sustainable development objectives, Improving public health	Increase in the number of vehicles using alternative fuel and clean vehicle	MoTC, MoF, MSIT, MoCT	All public and private sector organizations with vehicle fleets

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U3.1.3. Developing the capacity of the transportation sector to combat climate change	U3.1.3.1. Setting up a platform where all sector stakeholders can work together on limitation of GHG emission increase in the transportation sector and adaptation of the transport infrastructure to the impacts of climate change	2012-2013	Improving coordination in planning	Protocol on Platform Partnership	MoTC	MoD, all relevant sector actors
Action Area U3.1.4. Making legislative arrangements for our international airways and seaways with regard to emissions trading	U3.1.4.1. Making legal arrangements for monitoring GHG emissions from international air and sea transportation and creating a registry system; increasing the capacities of relevant public organizations	2012-2014	Alignment with the EU, Airways and seaways prepared for emission trading system	Legal arrangements, effective and recorded civil aviation and maritime sector reports and calculations	MEU	MoTC, DGCA, DHMI
	U3.1.4.2. Informing and increasing calculation capacities of maritime and airline companies engaged in international transportation about developments regarding emissions trading originating from international transportation within the scope of the IMO and ICAO	2012-2014	Capacity development, Economic gains	Calculation guides, training seminars	MoTC	MEU, DGCA, Chamber of Shipping and representatives of relevant sectors
OBJECTIVE U3.2. Taking local measures to encourage use of alternative fuel and clean vehicles in urban transport until 2023						
Action Area U3.2.1. Increasing the use of alternative fuel and clean vehicle technologies in public transportation	U3.2.1.1. Determining and putting into practice the strategy of bus and minibus fleets with regard to vehicles with low-carbon emissions	2015-2023	Development of new technologies	Increase in the number of vehicles using clean fuel in public transport busses and minibuses	Municipalities	MoTC, MEU, MoF, MENR, MoD, Private sector organizations
	U3.2.1.2. Adopting and putting into practice the strategy to introduce age limit for public transport vehicles	2015-2023	Improvement of service quality	Legal arrangements on withdrawal of old vehicles from traffic, in the Official Gazette	Municipalities	MoTC
Action Area U3.2.2. Encouraging use of clean fuel and clean vehicle technologies by private automobile users and commercial fleets in urban transportation	U3.2.2.1. Establishing charging stations for electric automobiles in cities	2015-2023	Decrease in dependence on foreign resources (oil)	Charging stations for electric automobiles	Municipalities	MoTC, MEU, MSIT, MoCT, MENR
	U3.2.2.2. Offering free or low-priced parking areas to clean fuel and clean vehicle users in urban centres	2015-2023	Decrease in dependence on foreign resources (oil)	Legislative arrangement	Municipalities	

PURPOSE U4. INCREASING EFFICIENCY IN ENERGY CONSUMPTION OF TRANSPORTATION SECTOR

OBJECTIVE U4.1. Limiting the energy consumption in transport until 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U4.1.1. Spreading use of vehicles with high energy efficiency in land, sea, air transport	U4.1.1.1. Supporting R&D studies on clean fuel and vehicle technologies in the production of land, sea, air vehicles that have high energy efficiency	2012-2023	Innovation and competitiveness	R&D projects final reports	MoTC	MSIT, MoCT, MENR, TUBITAK, Municipalities, Universities, NGOs
	U4.1.1.2 Creating incentive mechanisms in production of land, sea, air vehicles that have high energy efficiency, supporting investments	2012-2023	Innovation and competitiveness	Legal arrangements	MoTC, MoF, MSIT, MoCT	Public institutions and Private Sector
Action Area U4.1.2. Decreasing the demand to travel in the city by widespread use of information and communication technologies	U4.1.2.1. Spreading the existing practices which allow electronic payment of taxes, fines and bank payments, etc.	2012-2020	Decreasing travel demand	Widespread promotion of the practices	Prime Ministry	MoTC, MENR, other related public institutions, Private sector organizations
	U4.1.2.2. Including strategies and objectives on holding meetings via video conference methods in public workplaces in the strategic plans of public institutions	2013-2020	Decreasing travel demand	Revised strategies, providing technical equipment for video conferences	Public institutions, Private sector organizations	MoTC, MENR
	U4.1.2.3. Giving information and trainings and encouraging the academics on increasing distance learning opportunities in universities via "smart classroom" practices	2014-2020	Decreasing travel demand	Assessment and needs reports	Universities	CoHE
Action Area U4.1.3. Developing and implementing climate-sensitive urbanization and transport strategies with high energy efficiency	U4.1.4.1. Preparing and implementing a climate-sensitive urban transport strategy with high energy efficiency by selecting pilot cities	2013-2018	Application of sustainable transportation approaches in cities	Starting model practices in pilot cities, sharing the results nationwide	MoTC, MIA	MEU, Municipalities, Universities, NGOs
	U4.1.4.2. Supporting R&D on "Smart Transport Systems" and "Traffic Management" practices, and establishing Smart Transport System Centres	2013-2015	Increase in sector efficiency	R&D final reports, transport corridors using Smart Transport System	MoTC, KGM, Municipalities	TUBITAK, Universities, NGOs
	U4.1.4.3. Identifying the impacts of smart transport, super/sub structures in the city, OGS and OKS on limiting GHG emissions	2014-2018		Evaluation reports	MoTC, Municipalities	MIA, KGM, DG Local Administration, Universities

PURPOSE U5. DEVELOPING THE INFORMATION INFRASTRUCTURE IN THE TRANSPORT SECTOR**OBJECTIVE U5.1. Building a well-organized, reliable and sustainable information infrastructure with transport and travel data including GHG emission data, until the end of 2016**

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area U5.1.1. Strengthening the information infrastructure for freight and passenger transport	U5.1.1.1. Making surveys to establish transport databases in urban transport at the local level, and developing codes that will enable collecting comparative data	2011-2014		Transport and Travel Survey results report	Local Authorities	TurkStat, Provincial Directorates of Security, Private sector organizations
	U5.1.1.2. Collecting, computerizing, monitoring and evaluating real and reliable transport data in passenger and cargo transportation in all sectors by building the necessary infrastructure	2011-2016		Periodically updated data base	MoTC, MENR, DHMI	MEU, MoTC affiliated and related organizations, TurkStat, DGCA, KGM, EMRA, Maritime Trade Organization Airline companies, relevant NGOs, Private sector organizations
	U5.1.1.3. Conducting research and creating statistical data on use of alternative fuels in passenger and freight transportation	2011-2016		Periodically published statistical reports, monitoring system, periodically published statistical reports	MENR	MoTC, KGM, EMRA
	U5.1.1.4. Limiting GHG emissions by using Warm Mix Asphalt instead of Bitumen Hot Mix in road covering	2011-2016		Periodically updated data base	MoTC, KGM, Municipalities	MEU, TUBITAK, TurkStat, Universities
	U5.1.1.5. Keeping data and statistics on emission data of all vehicles used in passenger and freight transportation, developing strategies to limit emissions	2011-2016		Periodically updating statistical reports	MoTC	MSIT, MoCT, TCDD, DHMI, DGCA, KGM
	U5.1.1.6. Examining all transport lines in terms of GHG emissions and ensuring the data is recorded as Measurable, Reportable and Verifiable	2012-2016		Periodically updating statistical reports, with MRV data	MoTC	MSIT, MoCT, TCDD, DHMI, DGCA, KGM

WASTE SECTOR







PURPOSE A1. ENSURE EFFECTIVE WASTE MANAGEMENT

OBJECTIVE A1.1. Reduce the quantity of biodegradable wastes admitted to landfill sites, taking year 2005 as a basis, by 75% in weight till 2015, by 50% till 2018 and by 35% till 2025

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area A1.1.1. Preparation and implementation of Integrated Waste Management Plans (IWMP) by Municipalities/ Municipality Unions	A1.1.1.1. Taking an inventory of park-garden and organic wastes, carrying out recycling activities, and integrating them into IWMP	2011-2020	Reduction of biodegradable waste amount, ensuring sustainability, protection of natural resources, alignment with the EU	Inventory report of organic wastes and wastes from parks, gardens, disposal report of organic wastes and wastes from parks, gardens	Municipalities, Municipality Unions	MEU
	A1.1.1.2. Optimizing the solid waste collection, transportation and disposal system to minimize distances, setting up transfer stations to regions where the distance for transporting wastes to the disposal facility and the transportation conditions are not favourable, and incorporating them into the IWMP	2013-2020	Human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Waste collection and transportation route optimization study results, number of transfer stations	Municipalities, Municipality Unions	MEU
Action Area A1.1.2. Strengthening the institutional structure of Waste Management Unions	A1.1.2.1. Assigning sufficient number of personnel for effective implementation of the IWMP	2011-2020	Human health, employment ensuring sustainability	Number personnel designated to waste management, rate of achieving IWMP objectives	Municipalities, Municipality Unions	MIA
	A1.1.2.2. Giving trainings and purchasing machinery-equipment to strengthen technical capacity (personnel and technological infrastructure) for effective implementation of the IWMP	2011-2020	Ensuring sustainability, protection of natural resources	Number of annual activity reports, procured machineries and equipments, trainings provided to personnel	Municipalities, Municipality Unions	MEU , Private Sector Organizations, Designated organizations
Action Area A1.1.3. Developing institutional capacity for monitoring and supervision of IWMP practices	A1.1.3.1. Integration of the data and information system that will be developed to ensure effective monitoring and supervision of IWMP practices into the Environmental Information System (EIS)	2013-2016	Alignment with the EU	Development of software system, operation of EIS in a sustainable manner, regular reporting of verifiable data as of 2018	MEU	
	A1.1.3.2. Establishing an effective monitoring and supervision mechanism for management of wastes	2011-2016	Establishment of an efficient inspection mechanism, a smoothly operating waste management system	Monitoring and inspection reports	MEU	Municipalities, Municipality Unions, Private Sector Organizations
	A1.1.3.3. Increasing the number and capacity of the technical personnel that will be assigned to monitor and inspect waste management activities	2011-2020	Effective implementation of legislation alignment studies	Increasing number and capacity of technical personnel	MEU	Universities, Private Sector Organizations, Designated organizations

OBJECTIVE A1.2. Establish integrated solid waste disposal facilities across the country, and dispose 100% of municipal wastes in these facilities, until the end of 2023

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area A1.2.1. Developing the capacity of solid waste disposal facilities via waste management in conformity with national legislation and the EU acquis	A1.2.1.1. Making the landfill site operation plan in accordance with the provisions of the Regulation on Landfills	2011-2017	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Operation plans in conformity with the legislation	Municipalities, Municipality Unions	MEU
	A1.2.1.2. Providing hands-on operational training to the technical personnel working at landfills	2011-2020	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Number of trainings, number of personnel with training certificates	MEU	Municipalities, Municipality Unions, Universities, Private Sector Organizations
Action Area A1.2.2. Utilization of the landfill gas	A1.2.2.1. Calculating the landfill gas created on the site, and assessing the necessary systems with a feasibility study	2011-2017	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Landfill gas management plan, application investments	Municipalities, Municipality Unions	MEU
	A1.2.2.2. Collecting the landfill gas (biogas) created in the suitable sections of the covered areas of landfill sites and ensuring their use in energy generation	2013-2020	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Number of active gas collection and flaring systems in landfill areas	Municipalities, Municipality Unions	MEU
	A1.2.2.3. Examining and comparing thermal disposal technologies and other disposal technologies in view of greenhouse gases in greater cities, and including them in feasibility reports	2015-2020	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Greenhouse gas emission benchmarking reports regarding disposal methods	Greater City Municipalities	MEU

OBJECTIVE A1.3. Finalize Packaging Waste Management Plans

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area A1.3.1. Effective implementation of source-separated collection of wastes	A1.3.1.1. Conducting R&D studies for source-separated waste collection practices	2011-2023	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	R&D reports	MEU	Municipalities, Designated organizations, Marketers, Licensed Packaging Waste Collection and Sorting Facilities, Recycling Facilities and NGOs
	A1.3.1.2. Carrying out training, promotion and awareness-raising activities on source-separated waste collection, within the framework of a plan	2011-2020	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Training materials and trainings, publicity and awareness campaigns, number of trained persons	MEU, Municipalities, Municipality Unions, Designated organizations	Designated organizations, Marketers, Licensed Packaging Waste Collection and Sorting Facilities, Recycling Facilities and NGOs
	A1.3.1.3. Developing an effective monitoring and inspection mechanism for waste management	2011-2023	Capacity development	Work program and reporting guidelines for monitoring and inspection system, monitoring and inspection reports, number of firms being monitored and inspected	MEU	Municipalities, Designated organizations, Marketers, Licensed Packaging Waste Collection and Sorting Facilities, Recycling Facilities and NGOs

OBJECTIVE A1.4. Establish the recycling facilities foreseen within the scope of the Solid Waste Master Plan with the EU-aligned Integrated Waste Management approach

Action Area A1.4.1. Increasing the number of compost and biomethanisation plants	A1.4.1.1. Establishing compost and biomethanization facilities across Turkey for organic wastes, parks-gardens and marketplaces wastes, vegetal and animal wastes, etc.	2013-2023	Reduction in the amount of stored biodegradable waste	Number of installed facilities	Municipalities, Municipality Unions, SPA	MEU, MFAL, Sector related to waste, NGOs
	A1.4.1.2. Conducting studies to generate renewable energy from all waste sources (i.e. domestic wastes and other municipal wastes) that have an energy value	2011-2020	New employment opportunities, technological development	Waste-to-energy potential analysis report	Municipalities, Municipality Unions	MoF, MEU, MENR, MFAL
	A1.4.1.3. Ensuring that local governments benefit from incentives for implementation of waste management systems	2013-2023		Number of municipalities receiving incentives	Municipalities, Municipality Unions	MEU

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area A1.4.2. Supporting the waste reduction policy	A1.4.2.1. Making necessary arrangements for active operation of recycling facilities for waste reduction	2011-2020	Human health, contribution to the economy	Legal arrangements	MEU	Municipalities, Municipality Unions, NGOs
	A1.4.2.2. Increasing the effectiveness of economic instruments based on the polluter pays principle (determining domestic solid waste disposal tariffs in accordance with the regulations)	2011-2014	Human health, contribution to the economy	Number of municipalities collecting disposal fee	Municipalities, Municipality Unions	MoF, MEU, Court of Accounts
	A1.4.2.3. Organizing campaigns and public awareness-raising activities regarding waste minimization	2011-2020	Protection of human health, contribution to the economy, protection of natural resources	Number of campaigns, seminars and advertorial programs	Municipalities, NGOs	MEU
OBJECTIVE A1.5. Termination of uncontrolled disposal of wastes 100% by 2023						
Action Area A1.5.1. Rehabilitation of uncontrolled waste sites	A1.5.1.1. Preparing and implementing the rehabilitation projects (landfill leachate and landfill gas management, etc.)	2016-2020	Protection of human health, contribution to the economy, ensuring sustainability, protection of natural resources, alignment with the EU	Rehabilitation projects	Municipalities, Municipality Unions	MEU
	A1.5.1.2. Establishing an effective monitoring and inspection mechanism for rehabilitation of uncontrolled waste sites	2016-2020	Capacity development	Work program and reporting guides for monitoring and inspection system, monitoring and inspection reports, number of inspected and monitored wild landfill areas	MEU	Governorships, Municipalities, Municipality Unions

AGRICULTURE SECTOR







PURPOSE T1. INCREASE THE SINK CAPACITY OF THE AGRICULTURE SECTOR

OBJECTIVE T1.1. Determine and increase the quantity of carbon stock captured in the soil

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area T1.1.1. Disseminating sustainable agriculture techniques that also take into consideration adaptation to climate change	T 1.1.1.1. Determining the carbon stock captured in the soil through sampling method	2012-2014	Management and protection of natural resources	Maps for retained amount of carbon in soil	MFAL	MEU
	T 1.1.1.2. Developing the Land Parcel Identification System	2011-2014	Improvement in natural resources management	GIS related to parcels, database	MFAL	MEU, GDLRC Governorships
	T 1.1.1.3. Effective control and prevention of stubble burning and burning of other produce wastes, and encouraging techniques for ploughing on stubble	2012-2023	Improvement in natural resources management, economic gains	Reports and sanctions for stubble-burning cases, legal arrangements to prevent stubble-burning	MFAL	SPA, Farmer Unions
	T 1.1.1.4. Identifying appropriate crop rotation according to regions and training the farmers	2012-2023	Economic gains, healthy and sustainable food production	Trainings given to farmers Increase in organic substance contents of the soil	MFAL	Governorships, CAE, Water-user organizations
	T 1.1.1.5. Improving use of organic and green fertilizer, exploring and spreading use of vegetal wastes as green fertilizer	2012-2023	Improvement in natural resources management, sustainable food production, economic gains	Increasing use of organic fertilizer, assessment and research reports	MFAL	Governorships, CAE, Water-user organizations
	T 1.1.1.6. Spreading use of technical devices used on low tillage or no-tillage farming, increasing R&D studies	2011-2023	Improvement in natural resources management, energy saving	Reports on organic substance content of soil, energy saving	MFAL	Governorships, Universities, CAE

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area T1.1.2. Increasing the effectiveness of soil management	T 1.1.2.1. Preparing and presenting to users up-to-date soil maps at international standards	2012-2016	Improvement in natural resources management, economic gains	Soil database and related maps	MFAL	MEU, Governorships, Universities
	T 1.1.2.2. Preparing and publishing Turkey's erosion risk map	2012-2014	Protection of soil and water resources	Erosion risk map	MFAL	MEU, Governorships, Universities
	T 1.1.2.3. Preparing and publishing Turkey's coastal areas erosion risk map	2012-2014	Protection of soil and water resources	Maps of risky areas	MEU	MFAL, SPA, Universities
	T 1.1.2.4. Monitoring soil pollution and land deteriorations	2012-2023	Protection of soil and water resources	Inventory of soil problems, up-to-date soil maps	MFAL	MEU, TURKSTAT, Governorships, Universities
Action Area T1.1.3. Increasing the effectiveness of pasture management	T 1.1.3.1. Completing "Pasture Information System"	2011-2018	Improvement in natural resources management, economic gains, healthy and sustainable food production	Completed "Pasture Information System"	MFAL	MEU, Governorships
	T 1.1.3.2. Establishing an effective pasture management system	2013-2018	Sustainable natural resource management, healthy production of animal source food	Related legal arrangements, pasture management plans integrated with in-forest pasture management plans	MFAL	MEU, DGF, Governorships, CAE, Farmers
	T 1.1.3.3. Monitoring pasture capacities and efficiency, identifying and implementing alternatives that will help water balance and increase productivity in pastures	2012-2023	Sustainable use of natural resources, healthy production of animal source food	Periodic reports published, alternatives developed to increase productivity	MFAL	MEU, Governorships

OBJECTIVE T1.2. Identifying and increasing topsoil and subsoil biomass

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area T1.2.1. Completing the irrigation infrastructure	T 1.2.1.1. Mapping planted agricultural lands in accordance with the ages and types of planted trees, thereby determining the subsoil and topsoil biomass	2011-2013		Maps of planted agricultural products	MFAL	MEU, Governorships, CAE
	T 1.2.1.2. Enabling irrigation in economically irrigable lands in line with existing ecosystem	2011-2020	Increasing agriculture production potential	Increased irrigated areas	SHW	MFAL, Governorships, Water-user organizations
	T 1.2.1.3. Expanding the agricultural support programme for "Modernization of Infield Irrigation Systems "	2011-2015	Sustainable use of soil and water resources, protection of water ways and wetlands	Investments in pressurized irrigation systems for infield irrigation, decreased in-parcel erosion	MFAL	SHW, Governorships, Water-user organizations, Ziraat Bank
	T 1.2.1.4. Making necessary legal and technical arrangements so that water is charged based on the amount of water used rather than the size of land irrigated	2012-2023	Sustainable use of soil and water resources	Publication of legal arrangement in Official Gazette, technical guidelines	SHW	MFAL, SPA, Water-user organizations, Ziraat Bank, Cooperatives
	T 1.2.1.5. Training members of irrigation unions and co-ops and increasing financing resources so as to spread use of pressure irrigation system	2012-2023	Improvement in natural resources management, economic gains, energy saving	Training seminars	MFAL	SHW, Governorships, Water user organizations
	T 1.2.1.6. Building a structure under which services oriented to spreading pressure irrigation can be executed under MFAL	2012-2020	Sustainable and environmentally friendly use of soil and water resources	Start of operation of the established unit	MFAL	
	T 1.2.1.7. Completing works for transition to closed pipe systems	2012-2020	Economic gains, protection of natural resources	Closed pipe systems	MFAL	SHW, Governorships
Action Area T1.2.2. Improving agricultural infrastructure	T 1.2.2.1 Making legislative arrangements to prevent division of farmlands and completing land consolidation works	2012-2020	Improvement in agricultural infrastructure, energy savings, economic gains	Increasing average parcel size	MFAL	MoF, SHW, Governorships
	T 1.2.2.2. Completing infield development services	2012-2023	Economic gains	Increasing soil fertility, records of land consolidations	MFAL	SHW, Governorships
	T 1.2.2.3. Establishing a banking system for agricultural lands	2012-2015	Increasing competitiveness, energy saving	Establishment of land banking system, increase in sizes of farming enterprises	MFAL	MoF, MoD, SHW, BRSA, Governorships

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area T1.2.3. Enabling management of vegetative production	T 1.2.3.1. Planning agricultural production on the basis of agricultural basins, and channelling agricultural supports in line with these plans	2011-2023	Effective use of natural resources, economic gains	Agricultural production plans, related legal arrangements	MFAL	MoF, MoD, UoT, SHW, Governorships
	T 1.2.3.2. Establishing "Domestic Organic Seed Bank"	2012-2023	Effective use of natural resources, prevention of environmental pollution, economic gains	"Domestic Organic Seed Bank"	MFAL	MoF, MoD, UoT, DGF
	T 1.2.3.3. Carrying out necessary supporting, monitoring and evaluation activities to increase, spread and protect perennial cultivation where suitable and necessary	2011-2023	Effective use of natural resources, economic gains	Mapping of perennial tree plantation areas, monitoring system	MFAL	MEU, Governorates, CAE
	T 1.2.3.4. Developing environment-friendly methods in combating disease and pests, training farmers to disseminate their use	2011-2023	Effective use of natural resources, prevention of environmental pollution, economic gains	Numbers of provided trainings and trained farmers	MFAL	MoD
	T 1.2.3.5. Building the legal and institutional structure for management of natural meadows and other non-use areas, and preparing action plans to vegetate these areas	2013-2023	Improvement of natural resources, economic gains	Related legal arrangement, action plans	MFAL	MoD
	T 1.2.3.6. Disseminating precision agriculture techniques	2012-2020	Sustainable use of natural resources, decreasing agricultural inputs, energy saving	Seminars for farmers	MFAL	MEU, Governorships, Universities

PURPOSE T2. LIMITATION OF GREENHOUSE GAS EMISSIONS FROM AGRICULTURE SECTOR

OBJECTIVE T2.1. Identify the potential GHG emissions limitation in agriculture sector

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area T2.1.1. Identifying and assessing the options for GHG emissions limitation in agriculture sector	T 2.1.1.1. Identifying the emission sources and sink capacities in the agriculture sector	2012-2014	Capacity development	Periodical assessment reports	MFAL	MEU, TURKSTAT
	T 2.1.1.2. Identifying emission limitation alternatives in the agriculture sector and calculating their costs	2012-2015		Emission limitation potential and cost	MFAL	MEU, DGF

OBJECTIVE T2.2. Decrease the increase rate of GHG emissions originating from vegetal and animal production

Action Area T2.2.1. Limiting GHG emissions originating from vegetative production	T 2.2.1.1. Preparing Turkey's fertilizer consumption inventory, spreading analysis-based fertilizer use	2013-2023	Decreasing energy use in agriculture, healthier food production	Fertilizer consumption inventory, needs analysis report, trainings to the technical personnel, new laboratory equipments	MFAL	TURKSTAT, Governorships, Farmer Unions, Farmers, CAE
	T 2.2.1.2 Strengthening the infrastructure of Soil and Fertilizer Analysis Labs	2013-2023	Increasing effectiveness in analyses, healthier food production	Trainings to the technical personnel, new laboratory equipments	MFAL	MoD, Governorships, Universities
	T 2.2.1.3. Increasing utilization of animal-sourced fertilizer and training farmers on this subject	2013-2023	Decreasing energy use in agriculture, healthier food production	Farmer trainings regarding fertilizer usage	MFAL	Governorships, Farmer Unions, Farmers, CAE
	T 2.2.1.4. Integrated planning with "Turkey Agriculture Basins Production and Support Project" for rice production areas and establishing support mechanisms for implementation	2013-2023	Environmental gains	Rice cultivation shifted to proper rice fields, trainings, training materials	MFAL	Governorships

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area T2.2.2. Limiting GHG emissions from animal production	T 2.2.2.1. Establishing the necessary support/ incentive programme to spread pasture-based animal husbandry	2013-2023	Food security	Periodical publications on sustainable pasture management	MFAL	MEU, DGF Governorships
	T 2.2.2.2. Identifying feed ratios and training farmers to reduce methane gas from enteric fermentation	2013-2023	Prevention of environmental pollution	Report on correct feed rations, trainings for farmers	MFAL	TUBITAK, Universities
	T 2.2.2.3. Identifying measures to ensure animal production with high genetic performance for meat and milk production	2012-2014	Food security	Legal arrangements	MFAL	MoD
	T 2.2.2.4. Preparing training programmes for management and use of animal-sourced fertilizers and establishment of biogas production facilities	2012-2023	Prevention of environmental pollution, economic gains, renewable energy generation	Farmer training programs	MFAL	MENR, Livestock cooperatives
Action Area T 2.2.3. Limiting GHG emissions originating from energy consumption in agriculture	T 2.2.3.1. Making legal arrangements to balance electricity production by ensuring that electro-pumped irrigations are done in the hours during which nationwide energy consumption is at the lowest	2012-2018	Economic gains, decreasing environmental pollution	Legal arrangement, farmer training programs, utilization of required technologies	MFAL	MENR, EMRA, GAP, Governorships, Universities
	T 2.2.3.2. Exploring on regional basis the opportunities for using renewable energy in agriculture	2012-2023	Economic gains, decreasing air pollution	Installation of renewable energy generation systems	MFAL	MSIT, MENR, GAP, DA, Universities
	T 2.2.3.3. Preparing production plans to minimize distances between crop cultivation areas and markets, and ensuring integration thereof with basin-based production planning project	2012-2023	Energy gain, economic gains, decreasing air pollution	Production plans	MFAL	Producer unions
	T 2.2.3.4. Providing mechanisms and financing facilities that will encourage use of high-tech engines with low fuel consumption	2012-2014	Economic gains, decreasing environmental pollution	Financing opportunities for farmers	MFAL	MSIT, TarmakBir

PURPOSE T3. DEVELOP INFORMATION INFRASTRUCTURE AND CAPACITY IN THE AGRICULTURE SECTOR

OBJECTIVE T3.1. Build the information infrastructure that will meet the needs of the agriculture sector in adapting to and combating climate change

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area T3.1.1. Building the infrastructure and capacity for monitoring and evaluating the impacts of climate change	T 3.1.1.1. Conducting and recording phenological observations to monitor the impacts of climate change	2011-2013	Contributions on sustainable food production	Principles and guidelines regarding the observations, records and publications on phenological observation results	MFAL	MEU, GDM
	T 3.1.1.2. Completing the "Agriculture Information System" that includes all existing and planned agricultural inventories	2012-2013	Improvement in natural resources management, economic gains on agriculture sector	Complete and up-to-date database	MFAL	All ministries, Local Administrations, NGOs
	T 3.1.1.3. Identifying and monitoring the carbon content in soil	2012-2023		Carbon content monitoring network	MFAL	MEU, DGF
	T 3.1.1.4. Developing institutional capacity with regard to combating climate change in the agriculture sector	2012-2023		Organizational infrastructure with clear job and authority descriptions	MFAL	MEU, DGF

LAND USE and FORESTRY SECTOR



Bolu - Turkey





PURPOSE 01. INCREASE THE AMOUNT OF CARBON SEQUESTERED IN FORESTS

OBJECTIVE 01.1. Increase the amount of carbon sequestered in forests by 15% of the 2007 value by 2020 (14,500 Gg in 2007, 16,700 Gg in 2020)

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area 01.1.1. Identifying carbon sequestration opportunities in forestry sector	01.1.1.1. Identifying the carbon sequestration potential in forests and making the relevant cost analyses	2012-2015	Cost optimization	Potential sinks report	DGF	MEU, MFAL
	01.1.1.2. Establishing a afforestation monitoring system and integrating it to the Forest Inventory and Monitoring System	2011-2013	Increasing capacity and effectiveness	Integrated monitoring system	MEU	DGF
	01.1.1.3. Identifying the carbon sequestration potentials of the maquis and steppes lands, which spread across wide areas in Turkey	2011-2014	Eco-system services	Assessment report	DGF	MEU
	01.1.1.4. Identifying the industrial plantation areas for wood production, and the production capacities of these areas as well as the tree species to be used	2011-2014	Added value to forestry sector	Assessment report	DGF	MEU
	01.1.1.5. Making an assessment to estimate the greenhouse gas removal potential that may arise in LULUCF reporting of the Kyoto Protocol	2011-2012		Assessment report	DGF	MEU, MFAL, TURKSTAT
	01.1.1.6. Identifying the potential of forestry activities to benefit from UNFCCC and KP instruments (carbon markets, REDD+ etc.), and their respective carbon sequestration potential	2011-2012	Potential benefits from voluntary carbon markets	Assessment report	DGF	MEU
	01.1.1.7. Evaluating the results of the 2008–2012 afforestation Action Plan in terms of carbon sequestration, preparing and implementing a new action plan for 2013 and beyond	2012-2013	Erosion control, new employment opportunities for forest villagers	Assessment report, Afforestation Action Plan(2013-2017)	MEU	DGF
	01.1.1.8. Making an assessment on keeping records of the sectors and utilization areas where the cut timber is transferred and used	2013-2020	Sectoral benefits	Registration system	MSIT, MFAL	DGF
	01.1.1.9. Ensuring that energy forestry activities are science based, and determining the potential for energy forestry in our country	2011-2016	Increasing renewable energy resources	Assessment report or final report	DGF	Universities
	01.1.1.10. Developing and implementing models on carbon cycle and sinks	2012-2015		Usable models	DGF	MFAL, TUBITAK, Universities

PURPOSE 02. REDUCE DEFORESTATION AND FOREST DAMAGE

OBJECTIVE 02.1. Reduce deforestation and forest damage by 20% of the 2007 values by 2020

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area 02.1.1. Increasing technical precautions in combating forest damage	02.1.1.1 Effectuate a system or arrangement that will ensure rapid coordination between DGF and GDM with regard to various forestry activities (cutting, fires, winds etc)	2011-2013	Sustainable management of natural resources	Meteorological data system able to provide forest-oriented services	DGF	MEU, GDM
	02.1.1.2 Collecting meteorological data in forest areas and publishing them regularly	2013-2020	Protection of forest areas	Regular publishing	GDM	DGF
	02.1.1.3 Including risk preparation/prevention necessary for combating forest fires occurring due to climate change within the scope of local/regional planning activities	2011-2020	Better forest products and Eco-system services, Improved forest fire fighting capabilities	Needs assessment report for more effective fire fighting	DGF	MEU
	02.1.1.4. Establishing a monitoring system that will facilitate and guide combat against forest damage; integrating it to the proposed Forest Inventory and Monitoring System	2011-2013	Information based decision making	Integrated monitoring systems	DGF	Forestry Research Directorates
	0202.1.1.5. Developing new methods and techniques to increase effectiveness in combating disease and pest damage	2011-2023	Healthier forest eco-systems, better forest products and eco-system services	Needs analysis report	DGF	Forestry Research Directorates, Universities
Action Area 02.1.2. Ensuring public training, awareness rising on climate change and protection of forests, and public participation in the management of natural resources	02.1.2.1. Educating forest villagers on the importance of forests and protection of forests in combating climate change	2011-2020	Increasing knowledge level of forest villagers	Training programs	DGF	MFWW
	02.1.2.2. Delivering training and awareness raising activities for forest villages, especially among women, on ensuring heat insulation and economical use of energy	2011-2020	Increased rural life quality	Training activities in villages	DGF	MFWW, MEU, MFAL

PURPOSE 03. LIMIT THE NEGATIVE IMPACT OF LAND USES AND CHANGES SUCH AS FORESTS, PASTURES, AGRICULTURE AND SETTLEMENTS ON CLIMATE CHANGE
OBJECTIVE 03.1. Integrate the climate change factor in land use and land use changes management strategies by 2015

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area 03.1.1. Conduct studies on detection of land use and changes in land use	03.1.1.1. Submitting research projects on the assessment of the impact of forests and other land uses on water quality, quantity and regime to TUBITAK	2011-2015	R&D capacity development	Project final reports, at least 2 projects on this subject	MFAL, DGF	Universities, public institutions and organizations
	03.1.1.2. Developing a decision support mechanism for classification of land use in accordance with IPCC standards, and for monitoring the changes	2011-2015	Improved land management	Base maps, regularly updated maps	DGF	MFWW, MFAL
	03.1.1.3. Revising the legal arrangements on preventing misuse of absolute and irrigated farming areas, and conducting other technical studies	2011-2015	Protection of agricultural lands	Preparation of relevant maps	MFAL	MFWW, SPA
	03.1.1.4. Revising the national information systems monitoring the changes in land use types, and the compiled data; comparing them to the data required within the scope of international processes (UNFCCC, UNCCD, UNCBD etc.) and identifying the new data required; collecting and recording these data, and entering them in a GIS-based database	2012-2023		Regularly updated GIS based database	DGF (For forest areas), MFAL (For agricultural lands), Municipalities (In municipal borders)	MFWW, Universities
	03.1.1.5. Developing carbon sequestration factors for required locations in Turkey in accordance with land use types; preparing guidelines to enable calculation of GHG emission inventory using the Tier-2 method; and ensuring the necessary capacity building	2012-2014	Capacity building	National sink factors, calculation guidelines, seminars for municipalities	DGF (For forest areas), MFAL (For agricultural lands), Municipalities (In municipal borders)	TURKSTAT

OBJECTIVE 03.2. Increase the amount of sequestered carbon as a result of agricultural forestry activities by 10% of the 2007 values by 2020

Action Area 03.2.1. Increasing the amount of sequestered carbon as a result of agricultural forestry activities	03.2.1.1. Encouraging energy forestry in lands that are not ecologically or economically suitable for agricultural use	2013-2020	High socio-economic gain	Physical development	DGF	MFWW, Universities
	03.2.1.2. Preparing the necessary technical and administrative guideline to increase the number of short-rotation coppice enterprises	2013-2020	High socio-economic gain	Technical and administrative directive	DGF	MFWW, Universities

OBJECTIVE 03.3. Identify the amount of sequestered carbon in pastures and meadows in 2012, and increase carbon stock 3% by 2020

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area 03.3.1. Accelerate pasture improvement activities within the scope of combating climate change	03.3.1.1. Preparing and implementing an action plan on the rehabilitation of pasture areas in forests	2011-2017	Healthy animal sourced food production	Action plan, pasture improvement projects	DGF	MFAL, MFWW
	03.3.1.2. Conducting preliminary evaluation studies that take into consideration the biodiversity, wildlife, hydrology and carbon sequestration role of afforestation or forest improvement activities in external or marginal pasture lands or in the clearings inside forests	2011-2015	Conservation of bio-diversity	Related legal arrangement	DGF, MFAL	MFWW

OBJECTIVE 03.4. Identify the existing carbon stock in wetlands in 2012, and maintain the level until 2020

Action Area 03.4.1. Speeding up efforts to combat erosion, sedimentation and deforestation	03.4.1.1. Identifying the existing carbon stock in wetlands	2011-2013		Carbon stock of wetlands	MFAL	MFWW, DGF, SHW
	03.4.1.2. Establishing a desertification monitoring and evaluation system based on climate monitoring and modelling studies, long-distance images and data obtained in situ	2012-2015	Consolidating land management	Periodically published monitoring and assessment reports	DGF	MFWW, MFAL, DGF, Universities
	03.4.1.3. Carrying out basin rehabilitation studies with a participatory approach to prevent erosion and sedimentation and to ensure sustainable use in basins and water resources	2012-2015	Protection of water resources	Assessment reports, water basin protection and management plans	MFWW	MFAL, MENR, MoTC, MSIT, MoCT SHW, DGF, EMRA, TUBITAK, Universities
	03.4.1.4. Conducting an evaluation study to quantify and prevent carbon loss through erosion and sedimentation	2013-2015		Study final report	MFAL, MFWW, DGF, SHW	MEU, TUBITAK, Universities, NGOs
Action Area 03.4.2. Take measures for protection and improvement of wetlands	03.4.2.1. Making necessary changes in legislation to prevent wetland drainage	2011-2014	Conservation of natural resources and bio-diversity	Related legal arrangement	SHW	MFWW, MFAL, Municipalities
	03.4.2.2. Increase the number of studies to restore dried wetlands into wetlands	2011-2015	Increase in economic assets	Projects, areas converted back to wetlands	SHW	MFWW, MFAL, Municipalities
	03.4.2.3. Installing a monitoring system for wetlands and protected areas, and integrating it to Land Inventory and Monitoring System	2011-2015	Protection of natural resources	Integrated wetland monitoring system	MFWW	MFAL, SHW
	03.4.2.4. Finalising management plans for identification and improvement of the current situations of all wetlands	2011-2020	Conservation of natural resources and bio-diversity	Wetland development plans	MFWW	MFAL, SHW
	03.4.2.5. Conducting the necessary scientific and technical studies to put new areas, which are underrepresented in the national protected areas system and which are important in terms of carbon sequestration and adaptation, under protection by giving priority to sea and coastal areas and rivers	2011-2014	Information based decision making, Protection of natural resources	Scientific and technical research final reports	MFWW	MFAL, Universities

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area 03.4.3. Conducting studies for the protection of peat lands located inside or adjacent to wetlands	03.4.3.1. Taking necessary legal measures to eliminate excessive turf use in sapling planting	2011-2015	Protection of natural resources	Related legal arrangement	DGF	MFWW
	03.4.3.2. Strengthening the protection statuses of peatlands in consideration of their high carbon sequestration characteristics	2011-2015	Protection of natural resources	Publication of the list of peat lands given protection status in the Official Gazette	MFWW	
	03.4.3.3. Making legal arrangements to restrict turf production to keep at 2012 levels	2011-2013	Protection of natural resources	Related legal arrangement	MFWW	MFAL, DGF, SHW
OBJECTIVE 03.5. Identify the quantity of carbon stored in settlement areas in 2012, and increase stored carbon 3% by 2020 through green planting						
Action Area 03.5.1. Increasing the carbon stocks by supporting projects that take into account ecological approaches and recycling in urban design and landscaping	03.5.1.1. Identifying the sequestered carbon in settlement areas	2011-2015		Calculation method, inventory	MFAL	MEU, MFWW, Universities, Municipalities
	03.5.1.2. Increasing the capacity of local governments to prepare and implement projects on the protection and development of urban forests and other green areas	2011-2015	Positive impact on air quality, increase in urban life quality	City forest development projects	DGF, Municipalities	MEU, MFWW, MIA, SHW, TBB, Universities,
	03.5.1.3. Making necessary legal arrangements to ensure inclusion of ecologic elements in stream improvement activities undertaken by municipalities	2011-2015	Increase in urban life quality	Related legal arrangement	Municipalities	MEU, MFWW, Universities
	03.5.1.4. Preventing channelling in order to increase water quality and carbon sequestration in streams where risk of flooding is not high, and supporting practices that encourage restoration of streams with botanical elements	2011-2015	Increase in urban life quality	Stream restoration projects	Municipalities	MEU, MFWW, Universities
	03.5.1.5. Promoting settlement practices that infiltrates rainwater to soil, such as roof gardens and permeable coatings, and rainwater recycling systems	2011-2013	Increase in urban life quality	Preparation and publication of technical guides	Municipalities	MEU, MFWW, Universities

PURPOSE 04. STRENGTHEN LEGAL AND INSTITUTIONAL STRUCTURE FOR COMBATING CLIMATE CHANGE WITH REGARD TO LAND USE AND FORESTRY
OBJECTIVE 04.1. Make necessary legal arrangements for combating climate change with regard to land use and forestry by the end of 2013

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area 04.1.1. Making and implementing the necessary legal arrangements on combating climate change in the Law no. 6831 on Forests	04.1.1.1. Changing the definition of forests in the legislation, in line with the criteria set forth in the LULUCF definition	2011-2015		Related legal arrangements	MFWW	DGF, Universities
	04.1.1.2. Adding the "purpose" clause which includes combating climate change among main purposes, in the Law no. 6831 on Forests	2011-2014		Publication of the amendment in Official Gazette	MFWW	DGF, Universities
	04.1.1.3. Making necessary amendments related to carbon markets in the forest legislation	2011-2015		Publication of the amendment in the Official Gazette	MFWW	DGF, Universities
Action Area 04.1.2. Strengthening the existing legal structure related to combating climate change	04.1.2.1. Evaluating the role of the private afforestation policy in combating climate change; making necessary legal arrangements to solve the problems encountered in private afforestation practices outside of forests areas and to encourage private afforestation	2011-2014	Increase in life quality	Related legal arrangement	MFWW	DGF
	04.1.2.2. Reviewing the legislation regulating the allocation of forest areas to non-forestry operations; revising the legal arrangements that may cause harm to forest areas	2011-2014	Protection of natural resources	Publication of the amendments in the Official Gazette	MFWW	DGF
	04.1.2.3. Including the norms that will guide working on river basin basis in the legislation	2011-2015	Protection of natural resources	Publication of the amendment in the Official Gazette	MFWW	DGF
	04.1.2.4. Finalizing the activities on integration of climate change to forest management plans	2011-2015	Capacity development	Publication of the amendment in the Official Gazette	MFWW	DGF
	04.1.2.5. Reviewing the legislation regulating various land uses (pasture, forest, settlement, wetlands, etc) within the context of their relation to greenhouse gas emissions and sinks , and developing an effective system on monitoring, audits and enforcement	2011-2015	Capacity development	Publication of the amendment in the Official Gazette	MFWW	MFAL, DGF
	04.1.2.6. Eliminating the gaps in the legislation to prevent the conflict of authorities between units with regard to the operation and management of research and gene preservation forests	2011-2015	Protection of natural resources	Publication of the amendment in the Official Gazette	MFWW	DGF

OBJECTIVE 04.2. Strengthen institutional capacity in institutions involved in land use and forestry on climate change by 2014

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area 04.2.1. Strengthening the institutional capacity on climate change in institutions related to land use and forestry	04.2.1.1. Restructuring the Climate Change and Bio-Energy Working Group established under the DGF to include other relevant groups (water, biodiversity etc.)	2011-2014	Capacity development	Establishment of a unit responsible for eco-system services	DGF	
	04.2.1.2. Assessing the training needs of the new unit and all the forestry organization with regard to adaptation to climate change, carbon sequestration and Eco-system services; developing and implementing capacity-building programmes	2011-2015	Capacity building	Training needs assessment report, training materials	DGF	Forest Provincial Organization
	04.2.1.3. Establishing a techno park focusing on forestry, and ensuring that forestry is included in the scope of existing techno parks	2011-2015	Improvement of R&D capacity	Legal arrangement on techno parks	DGF	MFWW, Universities

CROSSCUTTING ISSUES







PURPOSE Y1. ESTABLISH NECESSARY INFRASTRUCTURE FOR A ROBUST EMISSION INVENTORY

OBJECTIVE Y1.1. Monitoring and reporting of greenhouse gas emissions from key sources using at least Tier 2 methodologies as of the beginning of 2016

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y1.1.1. Developing systems for data collection, recording, reporting and monitoring of greenhouse gas emissions in conformity with the Kyoto Protocol and the UNFCCC	Y1.1.1.1. Monitoring and reporting of greenhouse gas emissions in all sectors	2012-2016	Capacity building	Annual greenhouse gas emission report	MEU	CBCC members, MENR, TURKSTAT, TSE, UCTEA, TTGV, Private Sector Organizations, NGOs
	Y1.1.1.2. Periodic evaluation of sector based greenhouse gas inventories by CBCC member organizations	2012-2016		Periodic evaluation report	MEU	CBCC members, MENR, TURKSTAT, KOSGEB, TSE, NGOs, Private Sector Organizations
Action Area Y1.1.2. Strengthening cooperation in preparation of greenhouse gas emission inventory	Y1.1.2.1. Establishing infrastructure for generating, collecting and registering measurable, verifiable and reportable data in a database, for monitoring and assessment of greenhouse gas emissions in all sectors	2012-2014	Capacity building	Greenhouse gas emission database	MEU	CBCC members, TURKSTAT
	Y1.1.2.2. Making legal arrangements for monitoring greenhouse gas emissions and emission inventory, to: <ul style="list-style-type: none"> ■ identifying focal points for national inventory in all institutions and building an information network for reporting ■ defining the duties and responsibilities of the private sector ■ making arrangements in the legislation on confidentiality of information ■ and clarifying the effective dates of each of the above 	2011-2012	Capacity building	Publish relevant legal arrangements in the Official Gazette	MEU	CBCC member organizations, Private Sector Organizations, Public Institutions

PURPOSE Y2. DEVELOP POLICY FOR ENVIRONMENTAL PROTECTION, AND STRENGTHENING ENFORCEMENT CAPACITY IN CONSIDERATION OF CLIMATE CHANGE AND WITHIN THE FRAMEWORK OF SUSTAINABLE DEVELOPMENT PRINCIPLES
OBJECTIVE Y2.1. Strengthening the existing information base for low-carbon development on the basis of sustainable development principles as of 2015

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y2.1.1. Determining cost curves of GHG emission limitation options in sectors	Y2.1.1.1. Identifying GHG emission control potentials and cost curves at the national level by evaluating sectoral greenhouse gas emission data and processes, identifying cost-effective greenhouse gas control methods for all sectors	2011-2013	Efficient use of resources, Information based decision making	Cost curves	MEU	CBCC member organizations
	Y2.1.1.2. Preparing the sectoral projections until 2020 for all greenhouse gas emission sources	2012-2013		Sectoral emission projections	CBCC member organizations	
	Y2.1.1.3. Conducting cost/benefit analyses in greenhouse gas emitting sectors	2011-2014		Cost-benefit analysis reports	MoD	CBCC member organizations
	Y2.1.1.4. Conducting impact analyses to evaluate the economic, social and environmental impacts of sectoral low-carbon development strategies	2013-2015		Impact analysis reports	MEU	CBCC member organizations
	Y2.1.1.5. Conducting the regulatory impact assessment and sectoral impact assessment for the entire acquis under relevant sectoral chapters that must be transposed for the alignment with the EU that can be associated with combating climate change	2011-2016	Alignment with the EU	Impact Assessment Reports	CBCC member organizations	MEUA, MoD, relevant Private Sector Organizations
	Y2.1.1.6. Assessing the climate change in terms of competitiveness and identifying the priority sectors to be affected	2011-2013	Improvement of competitiveness	Evaluation reports	MoE	CBCC member organizations, relevant Private Sector Organizations
Action Area Y2.1.2. Developing mechanisms for monitoring and assessment to track indicators related to combating climate change	Y2.1.2.1. Revising and determining necessary legal arrangements for mandatory monitoring and reporting of GHG emissions for all investments to be made	2012-2014	Information based decision making	Amendments made in the EIA and Environmental Permits Regulations	MEU	
	Y2.1.2.2. Building a national system for monitoring, registering and evaluating the plans, programmes, strategies and projects for limitation of greenhouse gas emissions	2011-2014	Information based decision making	Reporting and impact assessment guides	MEU	CBCC member organizations, TURKSTAT, TSE, Private Sector Organizations
	Y2.1.2.3. Monitoring and evaluating the effect of sectoral economic instruments on the limitation of greenhouse gas emissions	2015-2020	Information based decision making	Periodical Monitoring and Evaluation reports	MEU	CBCC member organizations

PURPOSE Y3. MORE EFFECTIVE UTILIZATION OF FINANCIAL RESOURCES FOR COMBATING AND ADAPTATION TO CLIMATE CHANGE
OBJECTIVE Y3.1. Strengthening the capacity to access financial resources for combating and adaptation to climate change until the end of 2013, ensuring more effective use of new funding resources until 2020

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y3.1.1. Increasing the capacity of institutions, mainly SMEs and municipalities, to access funding resources for climate change combating and adaptation actions, allocating funds to this end for public institutions from the public budget	Y3.1.1.1. Training experts to enable project development in the quality and detail level required for access to international funding resources	2011-2013	New employment opportunities	Training materials, Training seminars, Number of experts raised	MEU	KOSGEB, Municipalities, Unions of Municipalities, Banks
	Y3.1.1.2. Identifying NAMAs that can benefit from financial resources other than carbon markets	2011-2013	New employment opportunities	NAMA projects	CBCC members	
	Y3.1.1.3. Pursuing projects on limiting GHG emissions and adaptation to climate change in public investment programming	2013- 2023	Contribution to sustainable development	Number of supported projects	MoD	Relevant public agencies and organizations

PURPOSE Y4. OPTIMUM USAGE OF EMISSION TRADING MECHANISMS THAT CONTRIBUTE TO COST-EFFECTIVE LIMITATION OF GREENHOUSE GAS EMISSIONS
OBJECTIVE Y4.1. Carrying out negotiations to ensure Turkey's participation in the most advantageous way into the existing and new global and regional carbon markets until 2013

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y4.1.1. Conducting necessary analyses for integration into carbon markets	Y4.1.1.1. Carrying out negotiations for Turkey's participation in the new mechanisms in the most advantageous way (as host country) after 2012, exploring opportunities for bilateral cooperation agreements with countries	2011-2015	Increase in financial resources	Turkey's share from the carbon market	MEU, MFA	CBCC members, Carbon Markets Working Group
	Y4.1.1.2. Developing the NAMA portfolio for Turkey that will be benefiting from carbon markets	2011-2015	Increase in financial resources, Increase in employment	Number of NAMAs developed and funded every year	MEU	CBCC members, Carbon Markets Working Group

OBJECTIVE Y4.2. Carry out studies to establish the carbon market in Turkey by 2015

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y4.2.1. Analyzing sectoral carbon reduction potentials and making legal and institutional arrangements for establishment of the National Carbon Market	Y4.2.1.1. Identifying key sectors for the carbon markets, identifying the greenhouse gas emission reduction potential in these sectors	2012-2015	Creation of economic value	Carbon reduction potential	MEU	CBCC members, Carbon Markets Working Group
	Y4.2.1.2. Make legislative arrangements to enable public institutions regulatory and supervisory role in the emission trading system	2011-2015	Capacity development	Publication of legal arrangement in the Official Gazette	MEU	CBCC members, Carbon Markets Working Group, CMB, Istanbul Gold Exchange, ISE, TurkDEX, Takasbank
	Y4.2.1.3. Developing the existing structure and building new structures to enable carbon assets to be traded with maximum economic value and have their values increased	2011-2013	Creation of new financial resources	Completing institutional structuring, delivering training to personnel, increase in the market value of Turkey's carbon assets	MEU	CBCC members, Carbon Markets Working Group, CMB, Istanbul Gold Exchange, ISE, TurkDEX, Takasbank
	Y4.2.1.4 Begin infrastructure development for establishment of the National Emission Trading System	2014-2015	Creation of economic value	Evaluation reports, impact analysis reports	MEU	CBCC members, Carbon Markets Working Group, CMB, Istanbul Gold Exchange, ISE, TurkDEX, Takasbank
	Y4.2.1.5. Making legal arrangements for certification of carbon emission reduction originating from phase-out activities of substances that deplete the ozone layer and their disposal	2012-2013	Creation of economic value	Publication of legal arrangement in the Official Gazette, number of carbon certificates	MEU	Relevant Certification Companies
Action Area Y4.2.2. Increasing public awareness in terms of carbon markets	Y4.2.2.1. Carrying out activities to increase awareness in carbon markets in Turkey	2011 and onwards	Creation of new financial resources	Promotional materials, Promotional activities	MEU	CBCC members, Carbon Markets Working Group
	Y4.2.2.2. Providing support to stakeholders necessary to identify, develop, market and manage carbon projects	2011-2013	Capacity building	Training of stakeholders, identified carbon projects, number of firms and projects entering the carbon market	MEU	CBCC members, Carbon Markets Working Group

PURPOSE Y5. ENSURING COORDINATION IN CLIMATE CHANGE COMBATING AND ADAPTATION ACTIVITIES TO INCREASE EFFECTIVENESS
OBJECTIVE Y5.1. Finalize legal arrangements on combating and adaptation to climate change until 2014

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y5.1.1. Incorporating provisions on combating and adaptation to climate change in the relevant legislation	Y5.1.1.1. Reviewing the existing legislation in terms of combating climate change and adaptation and making the necessary amendments	2013-2014	Utilization of sustainable resources	Publication of legal arrangement in the Official Gazette	MEU	CBCC members
	Y5.1.1.2. Making legal arrangements to define coordination-related role and responsibilities of the Ministry of Environment and Urban Planning with regards to climate change	2012-2013	Effective use of resources in public sector	Publication of legal arrangement in the Official Gazette	MEU	CBCC members
	Y5.1.1.3. Defining in the laws on establishment of CBCC members and/or relevant public institutions the roles and responsibilities related to combating climate change and adaptation	2012-2013	Effective use of resources in public sector	Publication of modified legislation in the Official Gazette	CBCC member organizations	Associated and affiliated Organizations of CBCC members
Action Area Y5.1.2. Creating an M&E mechanism for NCCAP	Y5.1.2.1. Making a legal arrangement defining the procedures, roles and responsibilities with regard to monitoring and evaluation of the implementation of NCCAP	2012-2023	Capacity development	Publication of legal arrangement in the Official Gazette	MEU	CBCC members
	Y5.1.2.2. Periodically monitoring and evaluating the implementation of NCCAP, revising if necessary	2012-2023	Capacity development	NCCAP monitoring and evaluation report	MEU	CBCC members

OBJECTIVE Y5.2. Strengthen the institutional capacities of CBCC members with regard to combating climate change and adaptation until 2014

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y5.2.1. Increasing the capacities of CBCC members with regard to combating and adaptation to climate change	Y5.2.1.1. Establishing units on climate change within CBCC members and their affiliated and associated organizations	2011-2012	Capacity building	Number of new units under public institutions that are CBCC members and their associated and affiliated organizations	CBCC members	Associated and affiliated Organizations of CBCC members
	Y5.2.1.2. Identifying the training needs of CBCC members on climate change, developing and implementing capacity-building programmes	2011-2014	Capacity building	Training Requirements Evaluation Report, training materials, trainings	CBCC members	MEU
	Y5.2.1.3. Ensuring continuity of delegation members participating in UNFCCC meetings, ensuring integration of new delegates into the process	2012-2014	Capacity building	Training materials and trainings, negotiation teams	CBCC members	MEU

PURPOSE Y6. CARRYING OUT TURKEY'S REGIONAL CLIMATE MODELING STUDIES AND ANALYZING THE EFFECTS OF CLIMATE CHANGE
OBJECTIVE Y6.1. Developing analysis and impact assessment capacities until 2016 through climate observation, forecasting, and regional climate model studies

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y6.1.1. Developing the climate observation capacity	Y6.1.1.1. Expanding the meteorological observation capacity, strengthening it in terms of equipment and human resources	2011-2014		Results of meteorological observations in new areas published	GDM	
	Y6.1.1.2. Collecting data for creating continuous and periodic climatologic observation series, quality control and archiving in the database	2011-2023		Up-to-date, comprehensive database	GDM	
Action Area Y6.1.2. Carrying out regional climate model studies	Y6.1.2.1. Using different regional climate models to generate Turkey's future climate scenarios	2011-2020		Climate scenarios obtained for different climate models	GDM	TUBITAK, Universities
	Y6.1.2.2. Producing regional climate scenarios for different emission scenarios	2011-2020		Regional climate projections made for Turkey according to different emission scenarios	GDM	TUBITAK, Universities
	Y6.1.2.3. Sharing the results of the regional climate model studies with relevant organizations, to serve as inputs in research and planning activities	2011-2020	Preventing negative effects of disasters and climate change	Final reports of regional climate model studies published and disseminated	GDM	

PURPOSE Y7. DEVELOP R&D AND INNOVATION CAPACITY FOR ECO-EFFICIENCY WITH REGARD TO COMBATING CLIMATE CHANGE AND ADAPTATION
OBJECTIVE Y7.1. Strengthen R&D and Innovation capacity for clean production until 2014

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y7.1.1. Integrating combating climate change into the national R&D strategies	Y7.1.1.1. Approving and putting in practice the R&D strategies determined for energy, water and food security issues by SCST and supporting related projects	2011-2016	Improvement in competitiveness, new employment opportunities, increase in exports	R&D strategy on energy, water and food security subjects, number of supported projects	TUBITAK	SCST members
	Y7.1.1.2. Identifying sector based R&D needs with regard to climate change, and preparing strategies in identified areas	2011-2016	Improvement of R&D capacity	Report on R&D needs areas and rationales, relevant SCST decision	Relevant sectors and organizations	CBCC members, TTGV
	Y7.1.1.3. Monitoring the conformity of the R&D strategies to be identified with regard to combating climate change and adaptation to climate change with current R&D strategies	2012-2020	Effective utilization of public resources	Monitoring and Evaluation reports	TUBITAK	SCST and CBCC members
Action Area Y7.1.2. Supporting R&D studies on combating climate change	Y7.1.2.1. Developing a financial mechanism under the responsibility of Ministry of Forestry and Water Works to support R&D studies on combating climate change and adaptation to climate change	2013-2014	Improvement of R&D capacity	DG Forest R&D support mechanism enabled, increase in the number of supported projects	DGF	MoF, MoD, Private Sector Organizations
	Y7.1.2.2 Identifying funding needs for R&D in all sectors	2011-2012	Improvement of R&D capacity	R&D financial support resources	Relevant Organizations	CBCC members, other organizations providing R&D support
	Y7.1.2.3. Building international cooperation to develop new technologies on combating climate change and adaptation to climate change	2011-2020	Improvement of R&D capacity	Number of projects run via international cooperation	TUBITAK	CBCC members
	Y7.1.2.4. Strengthening the research and technology development capacities of universities and research centres with regard to combating climate change and adaptation to climate change, establishing new research centres	2014-2015	Improvement of R&D capacity	Research centres	TUBITAK	CBCC members, other organizations providing R&D support
	Y7.1.2.5. Establishing an "Eco-efficiency Centre" to provide information, training and consulting services to producers and consumers	2011-2014	Efficient use of resources	Eco-efficiency centre starting operation	MSIT, MoCT	CBCC members, MENR, MoF, MoD, KOSGEB, TTGV

PURPOSE Y8. IMPROVE HUMAN RESOURCES WITH REGARD TO COMBATING CLIMATE CHANGE AND ADAPTATION TO CLIMATE CHANGE
OBJECTIVE Y8.1. Inclusion of combating and adaptation to climate change in the academic programmes of universities as of end of 2012

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y8.1.1. Inclusion of topics on combating and adaptation to climate change in the university curricula, mainly in engineering, law, international relations, economy and natural sciences departments	Y8.1.1.1. Identifying the need for academicians in universities on climate change, and strengthening the academic faculty	2011-2020	Development in human resources, new working areas, increase in green employment	Number of academics	CoHE	MEU, MoD, SCST, TUBA, TOBB, Universities
	Y8.1.1.2. Creating undergraduate and graduate programmes on climate change in relevant departments	2011-2013	Improvement of human resources, new working areas, increase in green employment, Improvement in competitiveness	Graduate programmes opened on climate change, number of theses written, number of courses opened on climate change	CoHE	Universities
Action Area Y8.1.2. Developing programmes for intermediate staff in technical education institutions	Y8.1.2.1. Including the topics on adaptation to climate change and techniques and technologies for greenhouse gas management such as energy efficiency, energy saving, effective building design and applications in the curriculum of vocational high schools	2012-2012	Increase in green employment	Revised course programs	MoNE	MEU, Public institutions

PURPOSE Y9. INCREASE PUBLIC AWARENESS TO CHANGE CONSUMPTION INTO CLIMATE-FRIENDLY PATTERNS**OBJECTIVE Y9.1. Make necessary arrangements in the education programmes until the end of 2012 so as to develop climate-friendly consumption patterns**

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y9.1.1. Including topics related to combating and adaptation to climate change in formal education programmes	Y9.1.1.1. Integrating topics such as consumption habits, energy efficiency, climate change etc in the curricula of preschool education	2011-2013	Contribution to sustainable development, reduction in environmental pollution, increase in quality of life	Revised course programs, training materials	MoNE	CBCC members, NGOs, media
Action Area Y9.1.2. Adding new modules to personal car driving training	Y9.1.2.1. Instructing on eco-driving techniques within the training scope	2011-2023	Capacity building	Addition of foreseen topics in education programmes	MoNE	MoTC, Universities, Private Sector Organizations

OBJECTIVE Y9.2. Organize public awareness raising campaigns for combating climate change until 2014

Action Area	Actions	Time Period	Co-Benefits	Outputs and Performance Indicators	Responsible/ Coordinating Organization	Relevant Organizations
Action Area Y9.2.1. Raising public awareness on the role of individuals with regard to climate change and creating reliable information channels to change consumption patterns	Y9.2.1.1. Increasing the capacities of public relations and public information units of relevant CCCB members	2012-2013	Capacity development	Training programs	MEU	CBCC members
	Y9.2.1.2. Developing a campaign strategy with the participation of all stakeholders for public communication and awareness-raising campaigns on climate change	2011-2012	Capacity development	Public communication and awareness-raising strategy	MEU	CBCC members, MoNE, TRT, Municipalities, Unions of municipalities, Media organizations, NGOs, Private Sector Organizations
	Y9.2.1.3. Organizing awareness-raising campaigns with the participation of the media, NGOs and community leaders, in line with the public communication and awareness-raising strategy	2011-2023	Contribution to sustainable development	Training materials, training programs, conferences, seminars, audio and visual media programs	MEU	CBCC members, TRT, other Media organizations, NGOs, Union of Municipalities, Private Sector Societies and Unions
	Y9.2.1.4. Including issues of combating climate change and adaptation to climate change within priority support areas and supporting the awareness-raising activities of local NGOs and local governments	2012-2020	Contribution to sustainable development	Number of supported projects of NGOs and municipalities	CBCC members	MIA, DA, Municipalities and NGOs
	Y9.2.1.5. Raising public awareness on emission limitation and climate adaptation matters within the framework of the social responsibility activities of the private sector	2012-2020	Contribution to sustainable development	Social responsibilities projects	Private sector societies and unions	MEU
Action Area Y9.2.2. Building the infrastructure to enable public institutions to share the information on greenhouse gas emission with the public	Y9.2.2.1. Tracking the carbon foot prints of the activities of public institutions, issuing periodical reports thereof and sharing them with the public	2014-2020	Capacity building	Carbon foot print reports	MEU	All public institutions

ADAPTATION TO CLIMATE CHANGE







MANAGEMENT OF WATER RESOURCES

PURPOSE US1. INTEGRATING ADAPTATION TO THE IMPACTS OF CLIMATE CHANGE INTO WATER RESOURCE MANAGEMENT POLICIES

OBJECTIVE US1.1. Ensure integration of adaptation to climate change into existing strategies, plans and legislation

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
US1.1.1. Incorporating measures to tackle the impact of climate change on water resources in the Development Plans and Programmes	2011-2013	Development of plans and programmes including the measures	MoD	Relevant public institutions and organizations
US1.1.2. Establishing an institution for holistic management of water resources, which will have sole responsibility on underground and surface water allocation and quality	2011-2013	Making the institutional arrangements	Prime Ministry	MENR, MFAL, MFWW, MoD, SHW, GAP, MTA, Provincial Bank, Municipalities
US1.1.3. Identifying the gaps, overlapping or contradictory aspects in duties, powers and responsibilities of authorised/relevant institutions present in the water legislation with regard to combating climate change and making the necessary revisions	2011-2013	Entering into force of the water law	MFWW, SHW	
US1.1.4. Revising institutional and sectoral strategy plans (industry, agriculture, energy, tourism, urban, drinking water) of organizations involved in water management with the scope of combating climate change	2011-2013	Inclusion of impacts of climate change in sector strategies	MFWW	MENR, MSIT, MEU, MoCT, MFAL, MCT, SHW, Provincial Bank, LA
US1.1.5. Revising the Industry Strategy Document of Turkey in terms of water efficiency practices in the industry	2014-2020	Increased water efficiency	MSIT	MoD, TTGV, TOBB
US1.1.6. Identifying economic instruments, in accordance with water utilization purposes, in consideration of socioeconomic conditions and the principles of user pays- polluter pays so as to ensure effective and efficient utilization of water	2011-2015	Economical use of water	MoD	MFAL, MoF, MFWW, SHW, LA
US1.1.7. Orientation of water user organizations by relevant institutions within the framework of irrigation businesses taking into account the impacts of climate change	2011-2013	Improvement of local capacity	SHW	SPA, LA, NGOs
US1.1.8. Orienting KÖY-DES service areas to irrigation services	2011-2013	Strengthening practices at local level	Governorships	SPA

PURPOSE US2. STRENGTHENING WATER RESOURCES MANAGEMENT CAPACITY, INTERAGENCY COOPERATION AND COORDINATION WITH REGARD TO ADAPTATION TO CLIMATE CHANGE				
OBJECTIVE US2.1. Increasing the institutional capacities of agencies and organizations that are authorized and related to management of water resources				
Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
US2.1.1. Strengthening the capacity of the Water Quality Management Steering Committee	2011-2015	Alignment with the EU acquis	MFWW	MIA, MFA, MoH, MFAL, MSIT, MENR, MCT, MoD, MEUA
US2.1.2. Building water quality observation and assessment capacity, establishing a database and strengthening institutional structure	2011-2015	Ensuring sustainability for the management of water resources	MFWW	MoH, MFAL, MEU, MENR, SHW
US2.1.3. Strengthening the capacities of relevant institutions to enable conducting detailed surveys to identify water potentials, utilization purposes, consumptions and classifications	2011-2015	Ensuring sustainability for the management of water resources	MFWW, SHW	MFAL, MEU, SPA, LA
US2.1.4. Training and informing irrigation unions and farmers about conscious and sufficient water use	2011-2013	Improvement of local capacity	Governorships (Provincial Directorates of MFAL)	SPA, LA, Unions, Cooperatives, NGOs
OBJECTIVE US2.2. Develop financing policies and practices				
US2.2.1. Continuing planning of closed system irrigation investments in necessary and suitable locations, with national and international funds	2011-2013	Advanced sprinkling and drop-irrigation infrastructure	SHW	MFAL, Water User Organizations
US2.2.2. Giving incentives to promote private investments regarding irrigation (construction and operation of facilities)	2012-2014	An effective incentive mechanism	SHW	MoF, MoD, MoE, UoT, TOBB
US2.2.3. Promoting via economic instruments the treatment of waste water for its use in agriculture and industry sectors	2011-2020	Adaptation to increased water demand, rising prices of alternative natural water resources, and merging clean production technologies	MoD	MoF, MoE, UoT, TOBB
US2.2.4. Promoting manufacturing and use of household and industrial equipment with low water consumption	2014-2020	Increased market share of low water consuming equipment	MSIT	MoF, TOBB
US2.2.5. Supporting projects aiming at recycling of process and cooling waters in priority sectors with high water consumption; increasing pilot implementations	2011-2014	Amount of water saved	MSIT	MoD, TTGV, TOBB
US2.2.6. Preparing "sectoral eco-efficiency (clean production)" guides for water efficiency in the industry, promoting pilot practices	2012-2014	Guides	MSIT	TTGV, TOBB

PURPOSE US3. DEVELOP AND EXPAND R&D AND SCIENTIFIC STUDIES TO ENSURE ADAPTATION TO THE IMPACTS OF CLIMATE CHANGE IN WATER RESOURCES MANAGEMENT**OBJECTIVE US3.1. Strengthening existing systems and establishing new systems to monitor the effects of climate change**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
US3.1.1. Developing hydrological drought studies	2014-2020	Hydrological drought assessment system	SHW	MFAL, MFWW, GDM
US3.1.2. Conducting research and evaluations so as to integrate the impacts of climate change into water resource planning activities	2011-2015	Impact assessment reports	MFWW, SHW	MFAL, SPA
US3.1.3. Making projections of sectoral water demand in basins taking climate scenarios into account	2011-2020	Projections taking into account the climate change scenarios	TUBITAK	GDM, SHW, Universities, RI

OBJECTIVE US3.2. Identify the vulnerability of management of water resources and shores to climate change, develop alternative adaptation actions, carry out periodical revisions based on monitoring results

US3.2.1. Identifying hydrological, social, economic and environmental vulnerabilities in river basins and subbasins (including natural disasters), developing and implementing adaptation actions	2011-2020	Basin action plans	MFWW, SHW	MFAL, MoD, DEMP, LA, SPA, DA
US3.2.2. Identifying the vulnerability of underground water resources to climate change, developing and implementing adaptation actions	2011-2020	Impact assessment reports	MFWW, SHW	LA, SPA, DA, Irrigation Unions
US3.2.3. Identifying the vulnerability risks (including natural disasters) of shores (including banks of rivers, natural and man-made lakes) to climate change, developing and implementing adaptation actions	2011-2015	Vulnerability reports, adaptation action plans	MEU, MFWW	MFAL, MoTC, LA
US3.2.4. Formulating, developing and disseminating innovative alternative solution that increase adaptation capacity to climate change	2011-2015	Innovative solution models	MFWW	MEU, MSIT, MFAL, SHW, TUBITAK, TTGV

PURPOSE US4. INTEGRATED MANAGEMENT OF WATER RESOURCES AND WATER BASINS FOR ADAPTATION TO CLIMATE CHANGE**OBJECTIVE US4.1. Planning basin-based development of water resources with a holistic approach that offers flexibility in meeting the changing consumption demands**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
US4.1.1. Developing Integrated River Basin Management plans taking into account ecosystem services and impacts of climate change	2012-2020	Adaptation to climate in management of water resources	MFWW, SHW	MFAL, DGF, SHW, LA
US4.1.2. Taking the impacts of climate change into consideration in existing and planned "Basin Protection Action Plans" and "Maps of Protected Areas", and making the necessary revisions	2012-2020	Increased efficiency in water basin protection	MFWW	MEU, SHW
US4.1.3. Stepping up erosion and sedimentation control projects in all basins, especially in dam and pond basins	2012-2020	Increasing effective water storage opportunities	SHW	DGF, GM
US4.1.4. Preventing illicit use of underground water resources in basins, and raising public awareness on this matter	2012-2023	Awareness raising activities, protection of water resources	SHW	MFAL, MoNE, LA, NGOs

OBJECTIVE US4.2. Addressing urban water management from the perspective of adaptation to climate change

US4.2.1. Planning scale enlargement in management of metropolitan areas (big cities, greater city municipalities) taking into consideration of climate change	2012-2023	Climate-adapted urban management	MoD	MoD MEU, LA
US4.2.2. Ensuring integrated water management and planning in settlements	2011-2023	Rational management of water resources in settlements	SHW	MEU, MFWW, LA, Local organizations of the ministries
US4.2.3. Separating sewage and rainwater collection systems in settlements	2011-2020	Efficient use of water resources in the cities	LA	MEU, MFWW, SHW, Provincial Bank
US4.2.4. Reuse of water collected and treated in settlements	2011-2020	Efficient use of water resources in the cities	LA	MEU, MFWW, SHW, Provincial Bank
US4.2.5. Developing a pricing policy taking of socioeconomic conditions into consideration so as to increase efficient water use in cities, making legislative arrangements	2011-2020	Efficient use of water resources in the cities	LA	MEU, MFWW, Provincial Bank
US4.2.6. Identifying water losses and illicit water use in cities and taking measures to reduce the loss-illicit use rate, expanding the SCADA system nationwide	2011-2023	Considerable reduction in water losses	LA	MEU, MFWW, Provincial Bank, Governorships, Local organizations of the ministries
US4.2.7. Ensuring that the consumers are provided with potable water	2011-2023	Efficient water consumption	LA	MEU, MFWW, Provincial Bank, Governorships, Local organizations of the ministries

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

OBJECTIVE US5.1. Planning hydraulic and geothermal energy resources from climate change adaptation perspective

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
US5.1.1. Taking the impacts of climate change in addition to environmental, economic and socio-cultural impacts into consideration in site selection and planning of HPPs	2011-2015	Inclusion of climate change parameters among site selection and planning criteria	SHW	MENR, MFWW, MEU, GDM, EMRA, TUBITAK, Universities, TOBB
US5.1.2. Reviewing the Law no. 5686 on Geothermal Resources and Natural Mineral Waters in line with the impacts of climate change and the adaptation approach	2011-2015	Prevention of loss of surface water quality	MTA	Governorships, SPA, Provincial Bank, LA

AGRICULTURE SECTOR AND FOOD SECURITY

PURPOSE UT1. INTEGRATING CLIMATE CHANGE ADAPTATION INTO THE AGRICULTURE AND FOOD SECURITY POLICIES

OBJECTIVE UT1.1. Reviewing existing strategy and action plans as well as legal arrangements from a perspective of adaptation to climate change

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UT1.1.1. Reviewing the Rural Development Strategy and Plan in line with the Climate Change Strategy and Action Plan	2012-2013	Revised plan and strategy	MFAL	MFWW, MoD
UT1.1.2. Integration of the impacts of climate change into the "Strategy and Action Plan for Combating Agricultural Drought" in terms of water resources, food security, natural disaster risks, ecosystem services and human health	2011-2015	Integrated strategy and plan	MFAL	MFWW, LA, SPA, Governorships
UT1.1.3. Reviewing existing legal to ensure adaptation to climate change, and preparing new legislation	2011-2015	Revision of relevant legislation, preparation of new legislation	MFAL	MFWW, MEU, SHW, GDM
UT1.1.4. Integrating producer support activities (including agricultural basins production and support model) into climate change adaptation strategies	2012-2013	Revision of relevant strategies	MFAL	MoD

OBJECTIVE UT1.2. Reviewing signed protocols between institutions from a perspective of adaptation to climate change

UT1.2.1. Revising the Afforestation Cooperation protocol signed between MFWW, SHW and DGF within the framework of climatic impacts	2011-2012	Revised cooperation protocol	DGF	SHW, MFWW
UT1.2.2. Revising the Afforestation Protocol under the Action Plan for Combating Erosion between MEFU and MFAL, within the context of the impacts of climate change	2011-2012	Revised cooperation protocol	MFAL	MFWW

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
OBJECTIVE UT2.1. Developing and expanding R&D activities for effective crop, soil and water management

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UT2.1.1. Conducting analysis on the impacts of climate change on the agriculture sector	2013-2015	Impact analysis reports	MFAL	TUBITAK, Universities, RI
UT2.1.2. Carrying out research and applications to ensure adaptation of plants to climate change, with the help of new possibilities offered by biotechnology and the existing genetic diversity	2011-2015	Model practices	MFAL	TUBITAK, Universities, RI
UT2.1.3. Identifying and monitoring the possible changes in agricultural yield, production and area information due to climate change,	2011-2015	Complete and up to date database	MFAL	TUBITAK, Universities, RI
UT2.1.4. Reassessment of the local value and efficiency of genetic diversity existing within cultivate crops in terms of livelihoods of farmer, within the context of adaptation to climate change	2011-2015	Model practices	MFAL	TUBITAK, Universities, RI

OBJECTIVE UT2.2. Increasing the capacities and numbers of organizations carrying out R&D and scientific studies

UT2.2.1. Developing the capacities of research institutes and other scientific institutions under MFAL, modernizing laboratory infrastructures	2011-2015	2011-2015 Modern and adequate laboratory network	MFAL	
UT2.2.2. Establishing climate change research centres in vulnerable regions	2011-2015	Establishment of research centres	MFAL	MoD, SHW, GAP, RI
UT2.2.3. Updating all the data collected by Agricultural Drought Crisis Centre on land assets, water resources and climate and incorporating it into the climate change information management system	2011-2015	Up to date data	MFAL	SPA, Governorships
UT2.2.4. Improving the capacity in crop production estimation studies carried out by using climate, land use and vegetation density data for the purpose monitoring the impacts of drought	2011-2015	Improved technical infrastructure and human resources	MFAL	

OBJECTIVE UT2.3. Developing a 'Soil and Land Database and Land Information System' taking into consideration the effects of climate change				
Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UT2.3.1. Addressing climate change impacts in existing Soil and Land Database and Land Information System studies	2011-2013	Complete and up to date data base	MFAL	MFWW, MEU
UT2.3.2. Completing soil survey, inventory and mapping studies while taking the effects of climate change into consideration	2011-2015	Soil inventory and maps	MFAL	MFWW, MEU
UT2.3.3. Carrying out activities for building a Drought and Flood Information System	2011-2015	Complete and up to date information management system	MFAL, SHW, GDM	MFWW, MEU
UT2.3.4. Reviewing the national information systems monitoring the changes in land use types and the compiled data, and identifying, collecting, recording and registering into the database any new data required within the framework of international processes	2011-2013	Complete and up to date data base	DGF	MFAL, MFWW, MEU
OBJECTIVE UT2.4. Conducting and monitoring disaster analysis for agricultural droughts				
UT2.4.1. Including agricultural drought in disaster management activities and making the necessary analyses	2013-2014	Defining agricultural drought as a disaster	MFAL	DEMP
UT2.4.2. Strengthening the capacities of provincial drought crisis centres, and developing crisis management plans	2011-2013	Crisis plans established in provinces	MFAL	Governorships, SPA
OBJECTIVE UT2.5. Determining the socioeconomic impacts of climate change on the agriculture sector				
UT2.5.1. Identifying the disparities between poverty levels in agricultural basins	2012-2015	Assessment report	MFAL	TURKSTAT
UT2.5.2. Delivering training on agricultural production techniques for adapting to the effects of climate change to women farmers and/or incorporating these trainings into the already existing training activities	2011-2015	Training of female farmers	MFAL	Governorships, SPA
UT2.5.3. Identifying with priority the economic, social and environmental effects in regions that will be more heavily affected from agricultural drought due to climate change	2011-2013	Situation analysis reports	MFAL	MoD

PURPOSE UT3. SUSTAINABLE PLANNING OF WATER UTILIZATION IN AGRICULTURE**OBJECTIVE UT3.1. Increasing the effectiveness of water management in agriculture**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UT3.1.1. Promoting water efficient processes in agricultural industry	2011-2015	Development of efficient processes	MFAL	MSIT
UT3.1.2. Promoting crop types suitable for climate and water availability in agricultural basins	2011-2015	Using appropriate crop types	MFAL	LA, GDM, Irrigation unions
UT3.1.3. Reducing water losses in the agriculture sector	2011-2015	Decrease in water losses	MFAL	SHW, Irrigation unions
UT3.1.4. Developing irrigation and water management systems specific to the local conditions	2011-2015	Water management systems specific to localities	MFAL	SHW, Irrigation unions

PURPOSE UT4. PROTECTING SOIL AND AGRICULTURAL BIODIVERSITY AGAINST THE IMPACTS OF CLIMATE CHANGE**OBJECTIVE UT4.1. Protecting the physical, chemical and biological efficiency of soil against climate change impacts**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UT4.1.1. Developing classification standards for protection, improvement and efficient use of soil and lands, monitoring such practices and ensuring land use in consideration of capability classes	2011-2013	Standards developed, model practices	MFAL	
UT4.1.2. Studying soil humidity regimes according to climate change impacts	2012-2015	Impact assessment reports	MFAL	
UT4.1.3. Implementation of advanced harvesting systems, and development of agricultural forestry	2012-2023	Model practices	MFAL	
UT4.1.4. Ensuring use of new and technological systems in irrigation and water management	2011-2015	Water saving, model practices	MFAL	

OBJECTIVE UT4.2. Protecting agricultural biological diversity and resources for adaptation to the impacts of climate change

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UT4.2.1. Developing innovative and appropriate agriculture techniques oriented to ensure adaptation to climate change and sustainability of natural resources	2011-2015	Model practices	MFAL	MFWW
UT4.2.2. Researching the climate change impacts on agricultural products the gene resources of Turkey	2012-2015	Research reports	MFAL	RI
UT4.2.3. Carrying out R&D studies to determine and monitor the effects of climate change on cattle, sheep and goat husbandry	2013-2015	Research reports	MFAL	TUBITAK, RI, Universities
UT4.2.4. Carrying out R&D studies to determine and monitor the effects of climate change on aqua-farming	2013-2015	Research reports	MFAL	TUBITAK, RI, Universities

OBJECTIVE UT4.3. Completing land consolidation activities for the purpose of increasing agricultural efficiency in efforts to adapt to climate change

UT4.3.1. Prioritizing land consolidation practices in regions with flood risk	2011-2013	Records on land consolidations, increase in average parcel sizes	MFAL	SHW
UT4.3.2. Conduct technical and financial studies to integrate climate change adaptation indicators in land consolidations	2011-2013	Relevant technical reports	MFAL	MFWW, DGF, SHW
UT4.3.3. Completing land consolidation and other in-field development services to increase in-parcel irrigation efficiency	2011-2013	Model practices	MFAL	SHW, SPA, NGOs, Farmer organizations, Irrigation unions

PURPOSE UT5. DEVELOPING INSTITUTIONAL CAPACITY AND IMPROVING INTERAGENCY COOPERATION IN TURKEY WITH REGARD TO ADAPTATION ALTERNATIVES IN AGRICULTURE**OBJECTIVE UT5.1. Strengthening interagency cooperation and developing the capacities of MFAL and its attached and affiliated organizations with regard to combating climate change and adaptation**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UT5.1.1. Increasing the climate change adaptation capacities and effectiveness of boards and committees responsible for agricultural drought management	2011-2015	Trainings, Institutional infrastructure with defined job descriptions and responsibilities	MFAL	CBCC, ARDSI
UT5.1.2. Setting up a climate change unit within MFAL and its attached and affiliated organizations	2011-2012	Institutional infrastructure with defined job descriptions and responsibilities	MFAL	
UT5.1.3. Developing and implementing capacity building programmes for climate change in MFAL and provincial offices	2011-2015	Training needs analysis Training programs Capacity building programs	MFAL	
UT5.1.4. Carrying out cooperation activities with international organizations in the area of adaptation to the impacts of climate change on the agriculture sector	2011-2015	Cooperation agreements	MFAL	
UT5.1.5. Increasing existing capacity for flood and drought early warning systems	2011-2013	Effective early warning systems	MFAL, SHW, GDM	DGF

OBJECTIVE UT5.2. Increasing the awareness of the civil society on the effects of climate change on the agriculture sector and on the adaptation approaches

UT5.2.1. Informing the local stakeholders in the agriculture sector about alternative crop patterns	2011-2013	Capacity building programs	MFAL	LA, NGOs, Unions, Cooperatives
UT5.2.2. Increasing the awareness and capacities of unions and cooperatives with regard to climate change impacts and adaptation	2011-2013	Capacity building programs	MFAL	LA, NGOs, Unions, Cooperatives
UT5.2.3. Raising the awareness of Provincial/District Drought Damage Assessment Commissions, Provincial Crisis Centres and Provincial Drought Investigation Commissions on adaptation to climate change impacts	2011-2013	Awareness programs	MFAL	
UT5.2.4. Increasing the accessibility of early warning and climate information	2012-2015	Accessible early warning and information system	MFAL, GDM, SHW	

ECOSYSTEM SERVICES, BIODIVERSITY AND FORESTRY

PURPOSE U01. INTEGRATION OF THE CLIMATE CHANGE ADAPTATION APPROACH TO ECOSYSTEM SERVICES, BIOLOGICAL DIVERSITY AND FORESTRY POLICIES

OBJECTIVE U01.1. Reviewing the existing strategies in terms of adaptation to the impacts of climate change

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
U01.1.1. Revising the National Forestry Programme (2004–2023) and DGF Strategic Plan (2010–2014) for adaptation to climate change impacts	2011-2013	Revised plan and program	DGF	MFWW, MoD, NGOs
U01.1.2. Preparing regional strategies on adaptation to climate change in protected areas	2011-2015	Regional strategies	MFWW	MCT, MEU, DGF
U01.1.3. Integrating and spreading adaptation to climate change into the existing planning for selected/ priority protected areas	2011-2015	Plans for protected areas including adaptation to climate change	MFWW	
U01.1.4. Determination of water resources feeding wetlands, and developing planning studies	2012-2015	Effective and sustainable water resources planning	MFWW	
U01.1.5. Preparing regional strategies for natural and cultural heritage areas with regard to adaptation to climate change	2012-2015	Regional strategies	MFWW, MCT	

PURPOSE U02. IDENTIFYING AND MONITORING THE IMPACTS OF CLIMATE CHANGE ON BIOLOGICAL DIVERSITY AND ECOSYSTEM SERVICES**OBJECTIVE U02.1. Identifying and monitoring the effects of climate change on the species in forest land**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
U02.1.1. Identifying and monitoring the impacts of climate change on forestry activities, forest ecosystems and species	2011-2013	Impact assessment reports	DGF	
U02.1.2. Identifying the effects of the temperature increase and change in precipitation regime due to climate change on forest ecosystems and species	2011-2015	Impact assessment reports	DGF	MFAL
U02.1.3. Conduct researches to minimize climate risks in agricultural-forestry activities	2011-2015	Research reports	MFAL	DGF
U02.1.4. Integration of data related to natural disasters such as floods, overflows, avalanches, landslides etc, into the Forest Inventory and Monitoring system.	2011-2015	Early warning system integrated to Land Monitoring System	DGF	MFAL, MFWW, MEU, GDM
U02.1.5. Allocation of more funds to projects on climate change and forest-pasture-agriculture ecosystems, from existing R&D funding sources, and mainly from the R&D support mechanisms of the DGF,	2011-2015	final Project reports, number and size of financed projects	DGF	MFWW, MFAL, SHW, TUBITAK, Municipalities, Universities

OBJECTIVE U02.2. Identifying the land use changes due to the impacts of climate change in forest land

U02.2.1. Identifying the land transformed into meadows, pastures and grasslands in forest land	2012-2015	Stocktaking reports	MFWW, DGF	MFAL, Governorships, SPA
U02.2.2. Identifying sites transformed from forest land into settlement land (housing areas)	2011-2015	Stocktaking reports	DGF	MFWW, MEU, Governorships, SPA, LA
U02.2.3. Identifying sites transformed from forest land into wetlands	2012-2015	Stocktaking reports	DGF	MFWW
U02.2.4. Identifying sites transformed from forest land into agricultural lands	2012-2015	Stocktaking reports	DGF	MFAL
U02.2.5. Identifying sites transformed from forest land into other land types	2012-2015	Stocktaking reports	DGF	Governorships, SPA

OBJECTIVE U02.3. Monitoring the health of forest ecosystems				
Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
U02.3.1. Measuring the effects of atmospheric pollution, climate change and other factors on forests and evaluating the findings by 2014	2011-2014	Impact analysis and assessment reports	DGF	Universities
U02.3.2. Identifying the effect of the afforestation activities carried out on the degraded forests classified as forest and allocated to DGF, and on properties of the Ministry of Finance that are not classified as forests, on natural environment	2011-2015	Impact analysis and assessment reports	DGF	MoF
U02.3.3. Ensuring that European applications on the Forest Ecosystems monitoring Tier I and Tier 2 Programme are carried out in an integrated way with the National Forest Inventory	2011-2013	Integrated system	DGF	Universities
OBJECTIVE U02.4. Carrying out R&D activities oriented to identify and monitor the effects of climate changes in protected areas				
U02.4.1. Identifying the species, ecosystems and processes that will be affected from climate change in protected areas	2011-2013	Vulnerability analysis	MFWW	Universities
U02.4.2. Ensuring effective management against the impacts of climate change on protected areas systems	2012-2015	Effective management	MFWW	MoF, MoD, TUBITAK
U02.4.3. Identifying climate adaptation strategy and actions in order to support the livelihoods of the local people in protected areas; conducting relevant cost/benefit and cost-effectiveness analyses, and diversification of livelihoods	2012-2015	Assessment reports, livelihood work plans	MFWW	MoF, DGF
U02.4.4. Developing monitoring systems on the impacts of climate change in protected areas	2011-2015	Monitoring system	MFWW	GDM, SHW, RI, Universities
OBJECTIVE U02.5. Taking into consideration the climate change adaptation activities in the socio-economic development of forest villagers, and thereby supporting rural development				
U02.5.1. Determining the socioeconomic effects of climate change on forest villagers	2011-2013	Assessment report	DGF	MFWW, Governorships
U02.5.2. Diversifying the livelihood activities of forest villagers, and shifting to other activities if necessary, so as to ensure minimization of the risks of climate change on their livelihoods	2011-2015	Livelihood work plans	DGF	MFWW, Governorships

OBJECTIVE U02.6. Identifying and monitoring the effects of climate change on the mountain, steppe, inland water and seashore ecosystems and on the ecosystem services they provide, and developing measures for adaptation to climate change

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
U02.6.1. Assessing the effects of user sectors, which have direct negative effects on ecosystems, so as to ensure the sustainability of the resilience of ecosystems to climate change	2012-2015	Impact assessment analyses	MFWW	MEU
U02.6.2. Conducting R&D studies to identify and monitor the effects of climate change on mountain ecosystems (indicative species, sensitive ecosystems)	2012-2015	Research reports	DGF	
U02.6.3. Conducting R&D studies to identify and monitor the effects of climate change on steppe ecosystems (indicative species, sensitive ecosystems)	2012-2015	Research reports	DGF	
U02.6.4. Conducting R&D studies to identify and monitor the effects of climate change on inland water ecosystems (wetlands, peatlands, lakes, rivers) (indicative species, sensitive ecosystems)	2012-2015	Research reports	DGF	
U02.6.5. Conducting R&D studies to identify and monitor the effects of climate change on marine ecosystems (indicative species, sensitive ecosystems)	2012-2015	Research reports	DGF	
U02.6.6. Conducting R&D studies to identify and monitor the effects of climate change on natural, cultural and visual landscapes	2012-2015	Research reports	DGF	
U02.6.7. Taking climate change into consideration in addition to the ecosystem integrity and biodiversity of the localities, in ecosystem assessment studies of HPPs planned on small rivers	2012-2015	Research reports	SHW	MENR, MFWW, MEU, TEIAS, TEDAS, MTA, GDM, TUBITAKMRC, GDLRC, Universities
U02.6.8. Piloting sustainable integrated peatland management and rehabilitation practices	2012-2015	Research reports	MFWW	
U02.6.9. Identifying priority protected areas by matching the results of the climate change model studies carried out at national level, with areas that are important in terms of biodiversity	2012-2015	Research reports	MFWW	TUBITAK, NGOs, Universities

OBJECTIVE U02.7. Integrating climate change adaptation into the marine and coastal zone management framework

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
U02.7.1. Taking the climate change impacts into consideration in ballast water management	2012-2015	Revised regulation	MEU	MoTC, LA
U02.7.2. Adding climate change adaptation into integrated studies in marine and coastal areas	2012-2023	Integrated management plans	MEU	MFWW, LA
U02.7.3. Controlling developments that reduce the resistance of marine and coastal ecosystems to climate change in shore settlement planning	2012-2023	Shore settlements zoning plan, Other planning documents	MEU	MFWW, LA

OBJECTIVE U02.8. Protection of forests against fires

U02.8.1. Identifying and monitoring the impacts of climate change on forest fires, and incorporating the data onto fire risk maps	2011-2013	Assessment reports, fire risk maps, monitoring system	DGF	DGF Regional organizations, Governorships
U02.8.2. Including necessary risk preparation/prevention against forest fires caused by climate change within the scope of local/regional planning activities	2011-2013	Revised planning processes	DGF	DGF Regional organizations, Governorships
U02.8.3. Increasing preventive measures in combating forest fires, improving existing early warning systems	2011-2013	Effective early warning systems	DGF	DGF Regional organizations, Governorships

NATURAL DISASTER RISK MANAGEMENT

PURPOSE UA1. IDENTIFYING THREATS AND RISKS FOR MANAGEMENT OF NATURAL DISASTERS CAUSED BY CLIMATE CHANGE

OBJECTIVE UA1.1. Identifying risks of natural disasters caused by climate change, such as floods, overflows, avalanches, landslides etc

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UA1.1.1. Preparing disaster, hazard and risk maps for floods, landslides, etc., that will be the basis for risk management processes against the impacts of climate change, and integrating these maps into land use plans	2011-2015	Risk maps	MFWW, MEU, SHW, DEMP	GDM, LA, Governorships
UA1.1.2. Preparing implementation and audit guides related to flood, landslide risk mitigation and management plans	2011-2015	Relevant plans and guides	MWFF, SHW, DEMP	
UA1.1.3. Developing disaster management plans for sectors affected from natural disasters caused by climate change	2011-2020	Management plans	DEMP	MFAL, MFWW, MEU, SHW, GDM, Universities
UA1.1.4. Establishing, spreading and developing monitoring, forecast and early warning systems for natural disasters caused by climate change	2011-2013	Installing relevant systems (flood, overflow, early warning etc), Making early warnings, risk maps	SHW, GDM, DEMP	MFWW, MEU, Governorships, Universities, Municipalities
UA1.1.5. Identifying the social, economic and environmental impacts of natural disasters caused by climate change	2011-2015	Impact analysis reports	DEMP	MFWW, MEU, MFAL, DGF, Universities
OBJECTIVE UA1.2. Reviewing the legislation on natural disasters caused by climate change, and determining implementation principles				
UA1.2.1. Developing and ensuring the enforcement of the necessary legislation to protect ecosystems and to identify the natural structures that reduce the effects of natural disasters occurring due to climate change,	2013-2015	Relevant legal arrangements	MFWW	MEU, MFAL, DGF, DEMP
UA1.2.2. Carrying out studies to disseminate private and public insurance mechanisms across all economic sectors and citizens	2013-2015	Increase in the use of insurance mechanisms	DEMP	MoF, MoE, UoT
UA1.2.3. Developing and ensuring the enforcement of the legislation on the structural effects of natural disasters caused by climate change	2013-2015	Legal arrangements	Relevant institutions / organizations	MEFU, SHW, DEMP

PURPOSE UA2. STRENGTHENING RESPONSE MECHANISMS FOR NATURAL DISASTERS CAUSED BY CLIMATE CHANGE**OBJECTIVE UA2.1. Strengthening the capacities of local public organizations with regard to responding to natural disasters caused by climate change, and reaching the level of being able to make field exercises**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UA2.1.1. Developing the workforce/technical capacities of the local organizations of relevant authorities	2011-2015	Training and infrastructure	DEMP	Governorships, LA, NGOs
UA2.1.2. Developing coordination between provincial offices at the local level	2011-2015	Carrying out joint projects	DEMP	Governorships, LA, NGOs

OBJECTIVE UA2.2. Establishing a community-based disaster management in combating disaster risks that may arise due to climate change

UA2.2.1. Identifying and developing the capacities of relevant agencies and organizations covering all administrative levels at the local level, including mukhtar offices, with regard to risk mitigation, emergency response and post-disaster short and long term recovery approaches and practices	2011-2015	Training needs analysis, trainings, capacity building programs	Governorships	DEMP, LA, NGOs, Village Service Unions
UA2.2.2. Developing and distributing implementation guides and procedures on disaster risk reduction, emergency response and post-disaster short and long term recovery approaches and practices; and delivering the related trainings	2011-2015	Disaster management guides and procedures, training programs	Governorships	DEMP, LA, NGOs, Village Service Unions
UA2.2.3. Improving exchange of information, experience and infrastructure through ensuring interagency coordination at the local level	2011-2015	Partnerships, joint projects	Governorships	DEMP, LA, NGOs, Village Service Unions

OBJECTIVE UA2.3. Continuing the training activities that will increase public awareness and participation with regard to the disaster and risk impacts that may arise due to climate change

UA2.3.1. Carrying out awareness-raising activities for all segments of the society	2011-2020	Awareness raising activities	DEMP	Governorships, LA, NGOs, Village Service Unions
UA2.3.2. Carrying out joint activities with relevant NGOs	2011-2020	Joint projects	DEMP	Governorships, LA, NGOs, Village Service Unions

PUBLIC HEALTH

PURPOSE UIS1. IDENTIFYING THE EXISTING AND FUTURE EFFECTS AND RISKS OF CLIMATE CHANGE ON PUBLIC HEALTH**OBJECTIVE UIS1.1. Researching the effects of extreme weather events on public health**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UIS1.1.1. Monitoring and evaluating the present and future effects on public health of extreme weather events such as heat waves, hurricanes, floods and drought, based on climate projections	2011-2020	2011-2020 Impact assessment reports and monitoring systems	MoH	Governorships
UIS1.1.2. Installing and spreading early warning systems and giving emergency warnings to reduce the effects of extreme weather events on public health	2011-2020	Emergency warning reports, Early warning systems	Governorships	MoH, Universities

OBJECTIVE UIS1.2. Researching and monitoring the link between climate change, communicable diseases and health risks, and determining possible measures

UIS1.2.1. Researching and following up the existing and future relationship between communicable diseases and climate change	2011-2015	Research reports	MoH	MFAL, MFWW, Governorships
UIS1.2.2. Identifying the risky areas in terms of public health, and determining the measures to be taken	2011-2015	Map of public health risks arising due to climate change	MoH	LA
UIS1.2.3. Establishing Tropical Diseases Diagnosis Laboratories at the regional level, or strengthening the infrastructures of some of the public health laboratories to this end in some provinces	2011-2015	Strengthened diagnosis and response infrastructure	MoH	Governorships

PURPOSE UIS2. DEVELOPING THE CAPACITY TO COMBAT RISKS ORIGINATING FROM CLIMATE CHANGE IN THE NATIONAL HEALTHCARE SYSTEM**OBJECTIVE UIS2.1. Developing emergency response action plans in risky areas, and supplying the necessary infrastructure**

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UIS2.1.1. Developing and implementing pilot programmes in the areas of epidemics and emergency health risks	2011-2015	Repeatable and scalable model studies	MoH	Governorships
UIS2.1.2. Raising the awareness of "National Medical Rescue Teams (UMKE)" on adaptation to the impacts of climate change	2011-2013	Emergency response teams strengthened in the area of climate change risks, including disasters and communicable diseases	MoH	Governorships
UIS2.1.3. Increasing the competence and practical capabilities of mobile health teams of Provincial Health Directorates in risky areas, with regard to infectious (communicable) diseases	2011-2015	Reduction of communicable disease risks at the local scale	MoH	Governorships
UIS2.1.4. Cooperating with international organizations and countries working on the effects of climate change on public health	2011-2015	Exchange of knowledge and experience through joint projects/ activities	MoH	International organizations
UIS2.1.5. Preparing and disseminating guides describing what citizens and agencies should do in the event of possible infectious diseases during extreme weather events, and delivering periodic trainings	2011-2023	Public health guides	MoH	Governorships, LA, Universities, public and private hospitals, university hospitals

OBJECTIVE UIS2.2. Strengthening the capacities of health sector organizations arising health risks arising due to climate change

UIS2.2.1. Carrying out capacity-building activities on health risks arising from climate change, for health professionals working at protective health services / family health system	2011-2015	Capacity building activities	MoH	MFWW, DGF, Governorships
UIS2.2.2. Announcing the "Ministry of Health - Climate Change Adaptation Programme" nationwide	2011-2013	Communication campaigns	MoH	MFWW, DGF, Governorships
UIS2.2.3. Establishing Ministry of Health "Disaster Coordination Centres" in areas that may be affected from climate	2011-2015	Effective health coordination infrastructure	MoH	Governorships
UIS2.2.4. Ensuring coordination and cooperation between related agencies and organizations with regard to climate-sensitive disasters and the health risks they will create	2011-2015	Partnerships, joint projects	MoH	DEMP, Governorships, Universities, NGOs, Public and private hospitals, University hospitals

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UIS2.2.5. Strengthening the treatment and control (including vaccination programmes and vector control) and evidence-based protection, including integrated health observation and surveillance of vector-borne (transmitted by a carrier) and zoonose (transmitted from animals to humans) diseases, and infectious diseases	2011-2020	Strengthened public health monitoring and decision system	MoH	Public and private hospitals, University hospitals
UIS2.2.6. Researching/monitoring the effectiveness of possible adaptation measures to be taken in the health sector for the protection from the effects of climate change, including early warning, strengthened disease observation, information systems and other public health measures	2011-2020	Strengthened public health monitoring and decision-making system	MoH	Public and private hospitals, University hospitals
UIS2.2.7. Researching/monitoring the common benefits of mitigation/adaptation measures, negative impacts and the adaptation costs	2011-2020	Strengthened public health monitoring and decision-making system	MoH	MEU, Universities
UIS2.2.8. Strengthening observation and preparedness level with regard to water availability, water quality and hygiene in urban and rural areas	2011-2015	Water and hygiene monitoring system and measures and information guides	MoH	Governorships, Municipalities
UIS2.2.9. Identifying the health risks that may occur due to population increase in climatevulnerable zones and in areas located on migration routes, and increasing the capacities of health organizations in these areas	2011-2015	Research reports, capacity development activities	MoH	Governorships, Universities, International organizations
UIS2.2.10. Cooperating with countries and national and international organizations working in areas that may affect human health due to climate change such as migration movements, international trade and tourism	2011-2015	Possible disease prevalence at regional scale with exchange of knowledge and experience, Improving international measures	MoH	Governorships, Universities, International organizations

CROSSCUTTING ISSUES IN ADAPTATION

PURPOSE UYK1. ENSURING ADAPTATION TO CLIMATE CHANGE ON CROSSCUTTING ISSUES

OBJECTIVE UYK1.1. Integration of adaptation to climate change into national development plans, programs and policies

Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UYK1.1.1. Dynamic examination of the possible impacts of climate change on general macroeconomic variables (growth, income, employment, etc.) and reflection of the findings in national strategies/policies and plans	2011-2015	Impact analysis reports, revised regulations, plan	MoD, MoF	
UYK1.1.2. Identifying, on sectoral basis, the opportunities and bottlenecks that climate change will create, and integrating findings into sectoral policies and development plans	2011-2015	Revised sector policies	MoD	Relevant institutions / organizations

OBJECTIVE UYK1.2. Developing and putting in place information, monitoring and evaluation systems that support decision-making processes

UYK1.2.1. Inclusion of indicators on the effects of climate change in the Official Statistics Programme	2011-2013	Updated program	TURKSTAT	
UYK1.2.2. Inclusion of climate change data in TEIEN	2012-2015	Updated system	MEU	MFAL, GDM, SHW, DGF

OBJECTIVE UYK1.3. Realizing and putting in practice the financial arrangements necessary for implementation of the National Climate Change Strategy at the national, regional and local level

UYK1.3.1. Strengthening the capacities of development agencies with regard to financing of climate change adaptation projects, and including in support programmes the climate change adaptation issues that may emerge in line with local needs	2011-2013	Calls from support programmes including climate change adaptation matters	MoD	DA
UYK1.3.2. Conducting integrated cost/benefit analyses that take into consideration the Mitigation-Adaptation synergy	2011-2013	Analysis reports, determination of priority actions	MoD	Relevant institutions / organizations
UYK1.3.3. Conducting climate change impact analyses in sectors and determining the adaptation costs	2011-2015	Impact analysis reports	MoD	Relevant institutions / organizations

OBJECTIVE UYK1.4. Organizing training, awareness-raising and informative activities to develop the capacity to combat and adapt to climate change				
Actions	Time Period	Outputs and Performance Indicators	Responsible / Coordinating Organization	Relevant Organizations
UYK1.4.1 Delivering basic training on Turkey's situation and adaptation to the impacts of climate change in the in-service trainings of all ministries	2011-2014	In-service training programs	Relevant ministries	
UYK1.4.2 Ensuring participation in the climate change adaptation process, and preparing programmes to raise public awareness	2011-2014	Programmes	MEU	CBCC, Universities
OBJECTIVE UYK1.5. Developing R&D capacity with regard to climate change adaptation				
UYK1.5.1. Carrying out projects to identify the "national research area" that will provide support and infrastructure for climate change adaptation	2011-2015	Research reports	TUBITAK	MEU, SHW, DGF, Universities
UYK1.5.2. Increasing debate forum and certification programmes on climate change adaptation in universities, adding relevant courses to undergraduate and graduate programmes, and encouraging research/doctorate programmes	2011-2015	Courses and programmes	CoHE	Universities
UYK1.5.3. Supporting initiatives concerning adaptation to climate change in the industrial R&D activities of the private sector	2011-2020	Model studies	MSIT	TUBITAK

