



This project is co-financed by the European Union
and the Republic of Turkey.

National Programme for Turkey 2013 –
Instrument for Pre-Accession Assistance

**Technical Assistance for
Developed Analytical Basis for Formulating
Strategies and Actions Towards
Low Carbon Development**

Project Identification No: EuropeAid/136032/IH/SER/TR

Contract No: TR2013/0327.05.01-01/001

**Component 3 – Briefing on Consultation Meeting with
Waste Sector's Stakeholders**

Ankara 2018



This project is co-financed by the European Union
and the Republic of Turkey.



Abbreviations

LCDTR	Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions Towards Low Carbon Development
MoEU	Ministry of Environment and Urbanization (Beneficiary)
TAT	Technical Assistance Team



1. Summary of the Meeting

Project Name	Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions Towards Low Carbon Development	
Project No	TR2013/0327.05.01-01/001	
Date	07.11.2018, 14:30	
Location	MoEU 5 th Floor Meeting Room, Ankara, Turkey	
Name of the Meeting	Waste Sector Consultation Meeting	
Participants	Ministry of Environment and Urbanization (MoEU)	Sezin Sönmez Erbaş - Expert Hakan Aydoğan - Expert Gülşah Reis – Deputy Unit Head İrem Şeşenoğlu - Engineer A.Teoman Sanalan – Engineer Hasan Önel - Engineer Münire Türkmen - Expert
	Technical Assistance Team (TAT)	Mykola RAPTSUN – Team Leader Aynur TOKEL – Statistic, data and sector liaison expert Erdiñç ERSOY – Project expert Teksin ÖZTEKİN – Project translator
	Project Sectoral Expert(s)	M. Özgür Şakı – Senior expert- waste sector

2. Agenda

- Opening speech
- Briefing on the project progress
- Briefing on component 3
- Data needs in component 3
- Discussion and evaluation of GHG mitigation actions and data needs
- Identification of participants for Working Group 3 and 4

Project Leader, Mr. Rapsun commenced the meeting and thank all participants for their attendance. Following the introduction part, he made a presentation regarding the project and component 3. The headings of the presentation are as follows:

- Overall objective and purpose of the project
- Stakeholders and target groups
- Project consortium
- Expected results
- Identification of GHG mitigation actions
- Suggested actions for waste sector within component 3

Following to Mr. Rapsun's presentation, senior expert Mrs. Tokel took the floor to inform participants regarding the needed data on assessment of potential GHG mitigation actions and cost for waste sector.

Please see ANNEX for detailed presentation.

Following the presentation, comments and suggestions of the participants were received. Mrs. Münire Türkmen asked whether the municipal waste will be focused on within the scope of the project and whether the agricultural wastes will be included. Mrs. Tokel stated that it is planned to cover all types of wastes. She also indicated that agricultural wastes will be integrated to the project however it will be covered under agriculture sector.

Project senior expert, Özgür Sakı gave brief information on waste-climate relation and stated that the project focuses on waste storage due to its high contribution of methane emissions. He underlined the importance of other targets regarding waste sector besides the one in national waste management action plan, if there is any.

Mrs. Türkmen stated that information on waste depth and etc. regarding dump sites not existed and stated that animal waste is used for anaerobic digestion. She also indicated that many data are covered in national waste management action plan.



Mrs. Gülşah Reis said that information on waste disposal is available in Ministry's mass balance system.

Emphasizing that TIMES modelling will be used to assess GHG mitigation potential and cost, all participants were invited to 1-day TIMES modelling training to be conducted on November 15, 2018. Waste Treatment Unit stated that they will not be able to participate the training due to overlap of the dates with another training.

Mr. Rapsun stated that more in-depth information will be given during the TIMES modelling training. Stating that COPERT training is going to be held for transport sector upon the request of the Ministry, he underlined that requested training for waste sector can be organised, if there is any.

Mr. Teoman Sanalan stated that there is GAINS (Europe Environment Agency) model that analysis different scenarios.

In the meeting, no other recommendations of chance are requested upon the suggested list of actions.

Mr. Rapsun thanked all participants for their participation and contribution. Underlying the importance of collaboration on data, he closed the meeting.



ANNEX
Presentation(s)



This project is co-financed by the European Union
and the Republic of Turkey.

Technical Assistance for Developed Analytical Basis for
Formulating Strategies and Actions towards
Low Carbon Development



LCDTR - introduction to the Project and Component 3

Dr. Mykola Raptsun
Team Leader

November 2018, Ankara



REPUBLIC OF TURKEY
MINISTRY OF ENVIRONMENT
AND URBANISATION

Project's Overall Objective and Purpose

Project title: *Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions towards Low Carbon Development*

This project is co-financed by the European Union and the Republic of Turkey

Overall objective: To reduce anthropogenic GHG emissions to contribute to the global efforts to mitigate climate change in line with the scientific evidence

Purpose: To increase national and local capacity to prepare for medium and long term climate action towards climate resilient low-carbon development, which will gradually align with EU climate policy and legislation by providing an analytical basis to support realisation of low carbon in the long-term, specifically focusing on cost-effective climate change mitigation actions related to building, waste, transportation and agriculture sectors of the National Climate Change Action Plan (NCCAP)

Period of implementation: 36 months (June 2017 – May 2020)

Project Stakeholders and Target Groups

- **Ministry of Environment and Urbanisation –Beneficiary**
 - **Central Finance and Contracts Unit (CFCU) - Contracting Authority**
 - **Ministry of Energy and Natural Resources**
 - **Ministry of Agriculture and Forestry**
 - **Ministry of Transportation and Infrastructure**
 - **Ministry of Foreign Affairs**
 - **Coordination Board on Climate Change and Air Management**
 - **Turkish Statistical Institute**
 - **Local level governmental institutions**
 - **NGOs and private sector - with focus on the key sectors of buildings, transport, waste and agriculture**
-

Project Consortium



Consortium Leader - Human Dynamics, is a leading provider of premium public sector consulting services

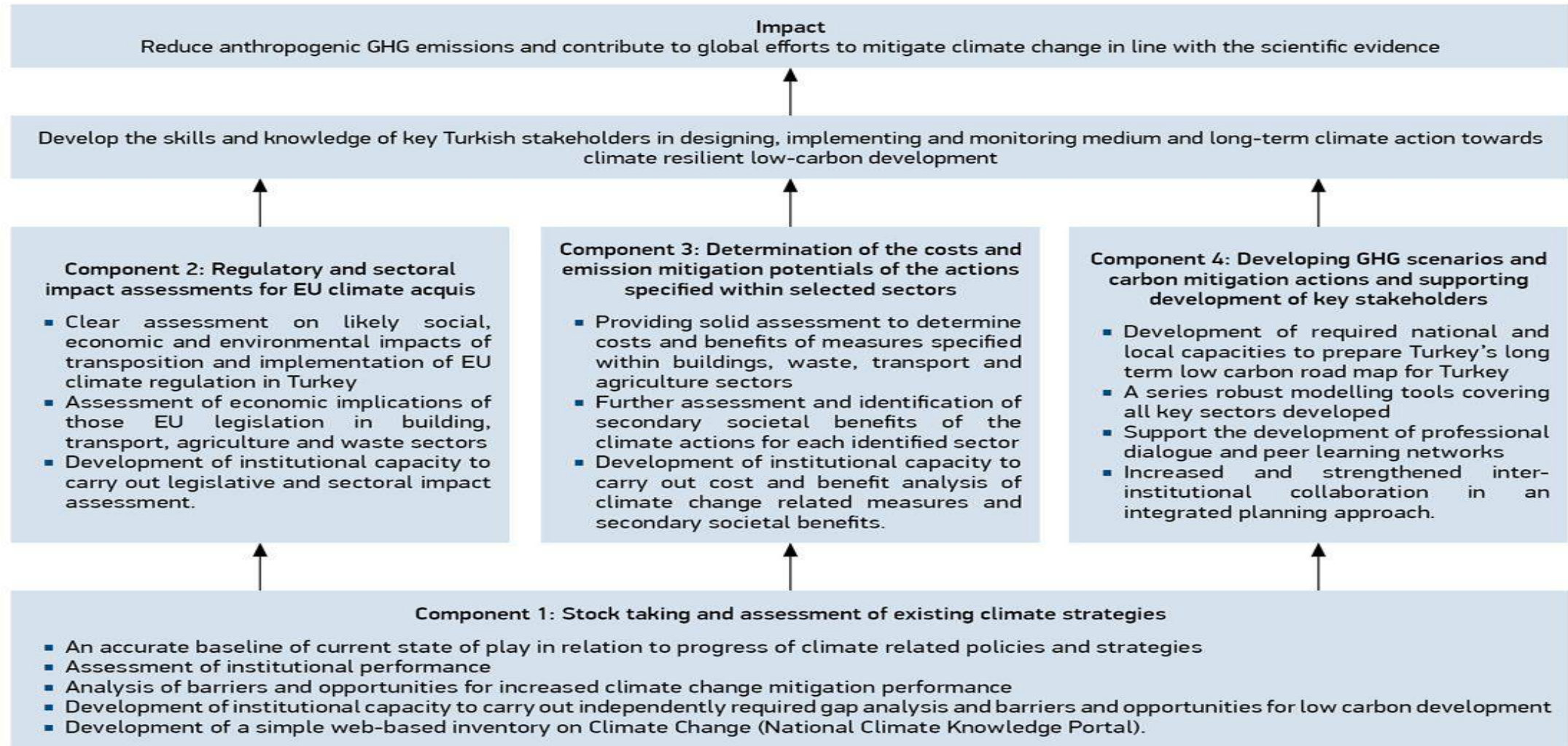


The Regional Environmental Centre for Central and Eastern Europe (REC) is an international organisation with a mission to assist in addressing environmental issues



Agriconsulting Europe S.A. (AESAs), is a leading international development consulting firm that has been in operation since 1994.

Expected results



Component 1: *Stock taking and assessment of existing climate strategies (1)*

ACTIVITY, REPORT	CONTENT
<p>Activity 1.1.1 Review and analysis of the status of the climate related strategies policies, plans, and legislation (Status Report, 105 p.)</p>	<ul style="list-style-type: none"> ▪ Introduction ▪ GHG Emission for Turkey: Trends and Projections ▪ Setting Macroeconomic Outlook for Predefined Term (2053) ▪ Review of Existing Turkish Legal and Political Framework on Climate Action and Low Carbon Development ▪ Conclusions, Recommendations and Inputs for Further Analysis
<p>Activity 1.1.2 Identification of the sectoral development policies intended to meet the GHG emissions reduction targets (Demand Status Report, 91 p.)</p>	<ul style="list-style-type: none"> ▪ Introduction ▪ Development Policies and GHG Emission Reduction Targets in Buildings Sector ▪ Development Policies and GHG Emission Reduction Targets in Waste Sector ▪ Development Policies and GHG Emission Reduction Targets in Transportation Sector ▪ Development Policies and GHG Emission Reduction Targets in Agriculture Sector ▪ Conclusions and Recommendations
<p>Activity 1.2 Legislative and institutional gap analysis to improve low carbon development and climate change mitigation performance (Gap Analysis Report, 133 p.)</p>	<ul style="list-style-type: none"> ▪ Introduction ▪ Legal Framework for Low Carbon Development ▪ Political and Legislative Gap Analysis ▪ Governance and Institutional Framework for Low Carbon Development ▪ Conclusions and Recommendations

Component 1: *Stock taking and assessment of existing climate strategies (2)*

<p>Activity 1.3 Identification and analysis of the political, financial, institutional and technological barriers and opportunities for low carbon development (Barriers and Opportunities Report, 143 p.)</p>	<ul style="list-style-type: none">▪ Introduction▪ Analysis of Cross-cutting Barriers and Opportunities in Turkey▪ Analysis of Barriers and Opportunities in Buildings Sector▪ Analysis of Barriers and Opportunities in Waste Sector▪ Analysis of Barriers and Opportunities in Transportation Sector▪ Analysis of Barriers and Opportunities in Agriculture Sector▪ Conclusions and Recommendations
<p>Activity 1.1-1.3 Four summarised and collated reports (Consolidated Baseline Report, 161 p.)</p>	<ul style="list-style-type: none">▪ Executive Summary▪ Introduction▪ Status Report – Review of Existing Strategies Related to Climate Change▪ Demand Status Report - Review of the Sectoral Development Objectives and Policies in Relation to GHG Emission Reduction Commitments for Agriculture, Buildings, Transport, and Waste Sectors▪ Gap Analysis Report – Identification and Assessment of the Political, Legislative, Institutional and Governance Gaps towards LCD▪ Barriers and Opportunities Report – Identifying and Analysing the Problems, Lock-ins and Solutions towards LCD▪ Conclusion

The reports can be downloaded from the project's website:
<http://www.lowcarbonturkey.org/technical-reports/>

Component 2: *Regulatory and sectoral impact assessments for EU climate acquis*

2.1 Four Regulatory Impact Assessment Reports (RIAs) for the EU climate acquis (Emission Trading, Effort Sharing Decision, Carbon Capture and Storage, and Fuel Quality Directives) to be transposed into the national legislation. Assessments will identify and describe the problems to be addressed, establish objectives, formulate policy options and assess the impacts of this options

2.2 Sectoral Impact Assessment Reports (Building, Transport, Waste and Agriculture) – to analyse positive and negative impacts of the EU climate acquis on sectoral competitiveness, access to markets, public procurement, etc.

Component 3: Determination of the costs and emission mitigation potentials of the actions specified within the buildings, waste, transport and agriculture sectors of the NCCAP and other policy documents

3.1 Assess the GHG emission mitigation potentials of at least ten actions in the focus sectors (buildings, waste, transport and agriculture) of the project

3.2 Assess the financial costs and benefits of the actions analysed in activity 3.1

3.3 Identify and analyse other potential positive and negative non-financial societal gains and losses of the analysed mitigation actions

Component 4: *Developing GHG scenarios and carbon mitigation actions and supporting development of key stakeholders*

4.1 Carry out GHG scenario modelling for focus sectors of the project

4.2 Identify carbon mitigation activities entailing significant benefits to Turkey with a perspective to reconcile climate, growth, and energy security in the selected sectors

4.3 Capacity building for key stakeholders (training, coaching and mentoring services, study visits)

Strategic principles of the Project implementation

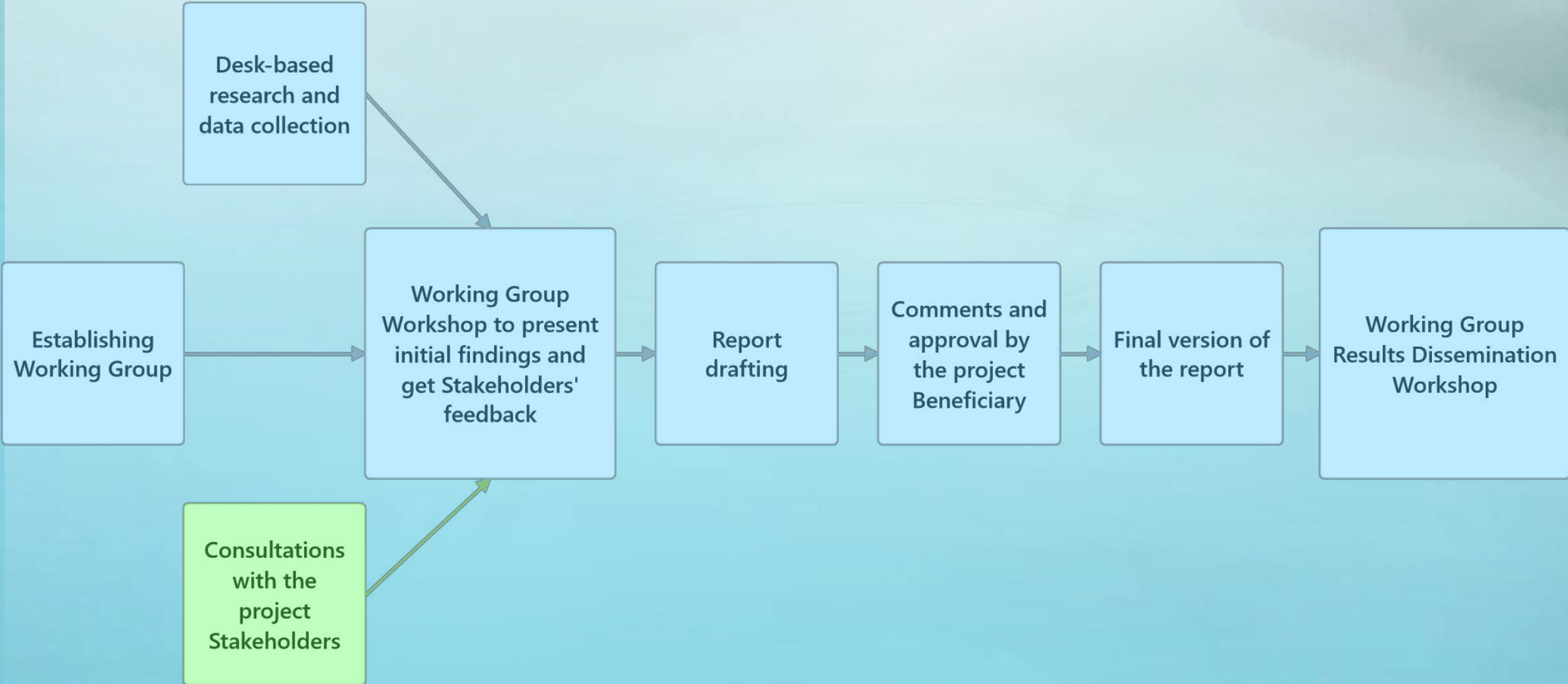
Principle 1: Results-orientated, solution-driven approach

Principle 2: Promoting dialogue and collaboration with relevant stakeholders from the public, private and non-governmental sector

Principle 3: Deep understanding of the sectoral and local situation

Principle 4: Prioritizing capacity development

Participatory approach to policy & strategy analysis



Component 3: identification and selection of the actions for GHG mitigation potentials and costs assessment

Phase
1

- Preliminary sectoral GHG mitigation actions screening and evaluation

Phase
2

- Consultations with the project stakeholders

Phase
3

- Selection of the actions (at least 10) for GHG mitigation potentials and costs assessment

Criteria for GHG mitigation actions selection

- Belong to four project target sectors - transport, buildings, agriculture and waste
- Included in NCCAP and/or other governmental strategic documents
- Cost effectiveness
- High potential for GHG emission reduction
- Other non-financial societal criteria – social, economic, environmental, etc.

Sectoral GHG emissions in 1990 and 2016

Sector	GHG Emissions (kt CO ₂ -eq)		GHG Emissions in total (%)	
	1990	2016	1990	2016
Transport Sector	26968.90	81841.20	12.8	16.5
Buildings Sector	27215.06	56837.30	12.9	11.5
Agriculture Sector	42402.30	56485.70	20.1	11.4
Waste Sector	11090.59	16181.19	5.3	3.3
Total for 4 Sectors	107676.85	211345.39	51.1	42.6

Waste sector: actions suggested based on preliminary screening

Sub-Sector	Suggested actions for Waste sector	Selection Criteria		
		Including in National Climate Change Action Plan (NCCAP)	Cost Effectiveness (EUR/tCO ₂ e)	Mitigation Potential (MtCO ₂)
Solid Waste	Methane utilization for energy production at waste disposal and treatment facilities	√	24 to 77	2.9 to 5.1
	Improving recycle rate	√	?	?
	Rehabilitation of uncontrolled waste disposal sites	√	?	?
Wastewater	Improving WWTP technology		?	?
	Increasing use of biogas from WWTP		?	?

* Abatement cost and potential values are taken from, “The Demand for GHG emissions Reductions: An investors’ MACC for Turkey, prepared for EBRD” report as reference.

Data Needs-Waste Sector

Data needs for waste disposal and treatment	Possible data source
Proportion of residents with waste collection services	Turkstat
Waste composition (%); (paper/cardboard, textiles, food waste, yard waste, wood, rubber and leather, plastics, metal, glass, others)	MoEU, Turkstat-(National GHG inventory)
Waste disposal and treatment by waste type (%)	Turkstat
Landfill methane capture rate (%)	Turkstat-(national GHG inventory)

Data Needs-Waste Sector

Data needs for waste disposal and treatment	Possible data source
Waste facility type; Open dumps ; >5m deep or <5m deep Landfills ; anaerobic or semi-aerobic Incinerators ; continuous, semi continuous, batch-type incineration	Turkstat (national GHG inventory) MoEU
Anaerobic digester biogas end use (flared, electricity generation, thermal energy or cogeneration)	Turkstat
Incineration heat energy end use (combustion, electricity generation, thermal energy or cogeneration)	Turkstat MoEU
Waste collection vehicle annual energy consumption	Municipalities?
Waste transfer station annual energy consumption	Waste operators

Data Needs-Waste Sector

Data needs for waste disposal and treatment	Possible data source
Current and future technology characterization for incineration and waste treatment technologies	?
Demand projections based on population and GDP projections	?



This project is co-financed by the European Union
and the Republic of Turkey.

Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions towards Low Carbon Development



Thank you for your attention!

<http://www.lowcarbonturkey.org/>



REPUBLIC OF TURKEY
MINISTRY OF ENVIRONMENT
AND URBANISATION