

OBJECTIVES OF THE PROJECT

The project targets eight specific objectives:

1. Establishment of a data management system to collect information and monitor the GHG emissions ✓
2. Preparation of sector-specific guidelines for implementation of the legislation ✓
3. Training and capacity building activities for stakeholders ✓
4. Development of legislative proposals for implementation of the MRV system ✓
5. Dissemination of experience on developing an MRV system to other countries ✓
6. Establishment of MRV prerequisites for aviation in a technical sense as well as with regard to the capacities of involved actors
7. Enhancement of data quality in the current system
8. Development of benchmarks for potential ETS sectors

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Capacity Development for the Implementation of a **Monitoring, Reporting and Verification (MRV)** System for Greenhouse Gas Emissions



On behalf of:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

Implemented by

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

of the Federal Republic of Germany

This project is part of the International Climate Initiative (ICI). The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative on the basis of a decision adopted by the German Bundestag (Parliament).

Capacity Development for the Implementation of a Monitoring, Reporting and Verification (MRV) System for Greenhouse Gas Emissions Project

PROJECT DESCRIPTION

Commissioned by: German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), within the context of the International Climate Initiative (IKI)

Partner Ministry: Republic of Turkey Ministry of Environment and Urbanization (MoEU)

Implemented by: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Overall term: 2013 to 2020

PROJECT CONTEXT

The MoEU issued the “Regulation on Monitoring of Greenhouse Gas (GHG) Emissions” in 2012 and revised it in 2014 and 2017. This regulation was supported with the “Communique on Monitoring and Reporting of GHG Emissions” (July 2014) and “Communique on Verification of GHG Reports and Accreditation of Verifying Bodies” (December 2017). The regulation obliges all installations over 20 MW combustion capacity and certain production levels to monitor their emissions and have them verified by third parties and submitted to the MoEU. Accordingly, those installations submitted their Monitoring Plans to the MoEU by October 2014 and their first Verified Annual Emission Reports by October 2017. In scope of this regulation, an MRV system has been established by MoEU.

In this respect, “Capacity Development for the Implementation of a Monitoring, Reporting and Verification System for Greenhouse Gas Emissions Project” started. The overall objective of the project is to establish the whole infrastructure of the MRV system in Turkey on a basis of a regulatory framework, largely based on EU regulation, which has been adopted by the MoEU.

The MRV system delivers accurate emission data of the Turkish GHG emissions which can be used as a base for future activities such as the implementation of an emission trading system (ETS) or other carbon pricing policies.

In scope of this project, an innovative, tailor-made data management system (DMS) has been developed. MRV actors can communicate and installations can submit their Monitoring Plans and Annual Emission Reports by the help of this system.

In order to guide the installation operators, various guidelines have been prepared and training seminars as well as awareness-raising events have been conducted. Being a good example and sparking interest in the region, two experience dissemination events of the project have been successfully conducted.

With the extension of the project, three new components have been added (2018-2020): Aviation will be included as a new sector in the existing MRV system, with the establishment of technical requirements and capacities of relevant actors. Data quality of the existing emission data will be improved. Furthermore, MoEU will be supported in order to develop suggestions for benchmarks for selected potential ETS sectors.



OUTCOMES

MRV in numbers

Approximately half of national emissions are covered by the current MRV scope. More than 700 Turkish industrial installations from the energy and industry sector submit their emission data to MoEU. Emissions data is verified by third party verifiers before submission.

Energy Sector			
Electricity and Heat Production		Petroleum Refining	
Industry (Combustion + Process)			
Production/Processing of			
Coke	Metal Ore	Pig Iron & Steel	Primary & Secondary Aluminium
Non-ferrous Metals	Cement Clinker	Lime	Glass
Ceramics, Tiles, Bricks	Mineral Wool	Gypsum	Pulp, Paper, Cardboard
Carbon Black	Nitric Acid, Adipic Acid, Glyoxal Acid, Ammonia and Bulk Chemicals	H ₂ and Synthesis Gas	Soda ash (Na ₂ CO ₃) and Sodium Bicarbonate (NaHCO ₃)

Innovative Data Management System

A tailor-made web-based MRV data management system has been developed from scratch to fulfill the specific requirements. MoEU, installations, verification bodies and lead verifiers can herein communicate online. The MRV system involves a range of different actors, consists of multiple components and is based on a number of legal requirements. The core features of this state-of-art system allow flexibility in the design and include actors' needs and learning experiences.

Capacity building

In cooperation with MoEU, sector-specific training seminars for over 1.000 participants, including civil servants, installation operators and associations, have already been conducted. These participants gained the competency to develop their Monitoring Plans and Annual Emissions Reports.

Turkey-specific MRV guidelines

Monitoring Plan Guideline, Annual Emissions Reporting Guideline, Verification Guideline, Sectoral Calculation Examples and System Manual on Electronic Monitoring Plan and System Manual on Electronic Annual Emissions Report have been published to provide guidance to the operators.

Dissemination of experiences

The successful implementation of the Turkish MRV system sparked interest in the region. Several events and materials aim at sharing knowledge and lessons learnt with relevant actors.

- Two dissemination workshops have been conducted with Ukraine and Tunisia in which the fruitful approach and technical details were presented.

- An International Summer School on “The Implementation and Enhancement of MRV Systems for GHGs and ETS” in Izmir in 2016 hosted experts from public institutions and organizations of various countries who work on GHG-relevant topics.

- The DMS architecture provides a replicable example for other countries, although has to be customized to the specific circumstances. The booklet “MRV in Practice” provides the projects' experiences with designing and implementing the system in Turkey.

Informative website

The website <http://carbon-turkey.org> has been launched to increase awareness and share knowledge. It provides easy access to guidelines and implemented project activities. Upcoming events and activities are also announced.

