



The National Air Emission Inventory

Republic of Turkey

General Directorate for Environmental Management
Air Management Department

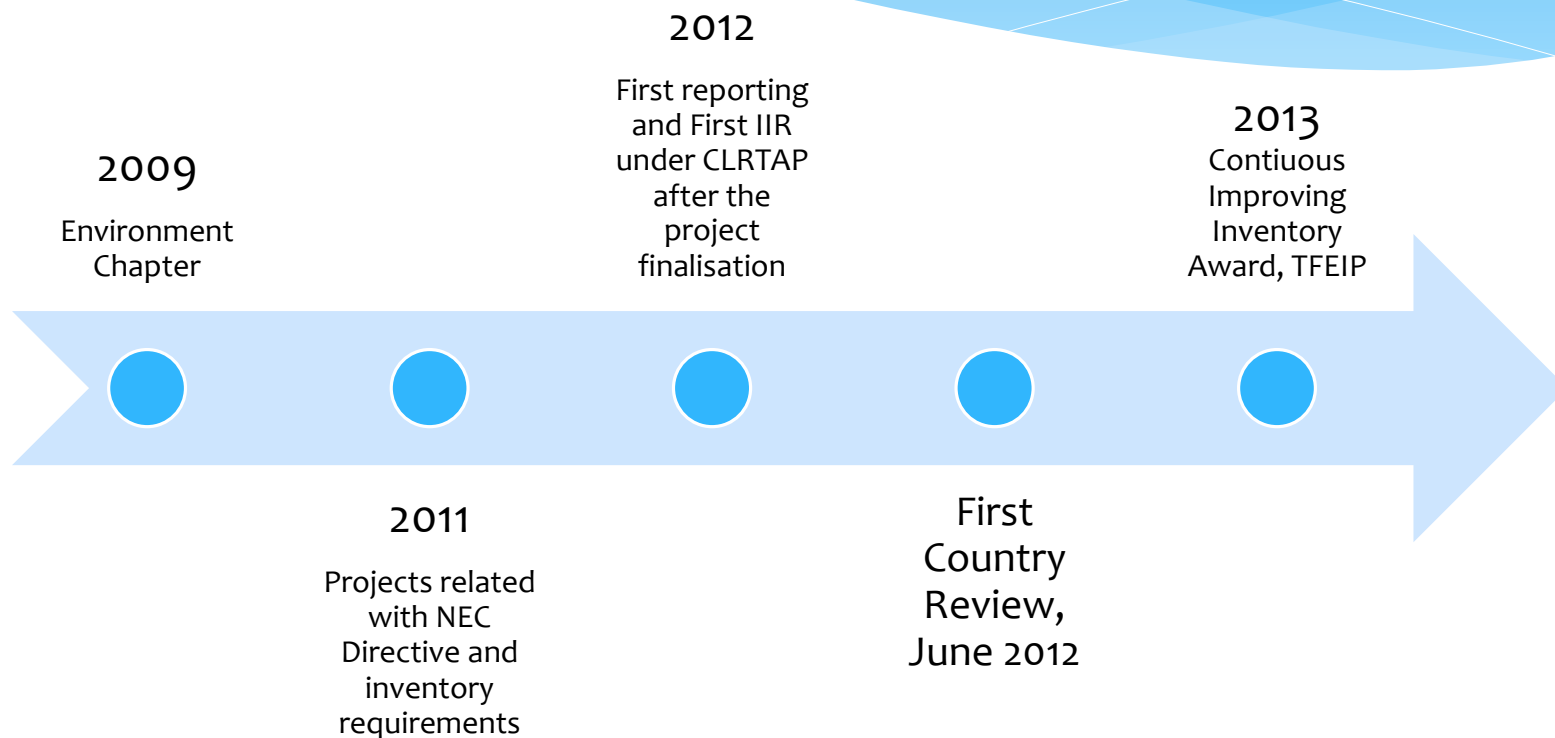
Outline

- ❑ Institutional History (Chronological Order)
- ❑ Air Management Situation
- ❑ Air Emission Inventory Situation
- ❑ Inter-institutional Coordination
 - CoBoard
 - WG
- ❑ International and National Awareness
 - TW Projects
 - National Funded Projects
 - Relation within the inventory management platforms
- ❑ Emission Distribution
 - Current Situation
 - Future Plans (short, middle and long term)
 - Cooperation
 - Improvement Plans

Institutional History (Chronological Order)

- ☐ *Within the process of «Environment Chapter opening»*
 - ☐ Ministry of Environment and Forestry
 - ☐ start point of air emission inventory
 - ☐ institutional awareness raising
 - ☐ Ministry of Environment and Urbanization
 - ☐ replanning for the structure
 - ☐ continuous improvement effort
 - ☐ raising expertise
 - ☐ sustainability between the project outputs and policy measures

Improvement under Emission Inventory Topic





Development of National Air Emission Inventory System

Budget: 4.5 Milyon TL

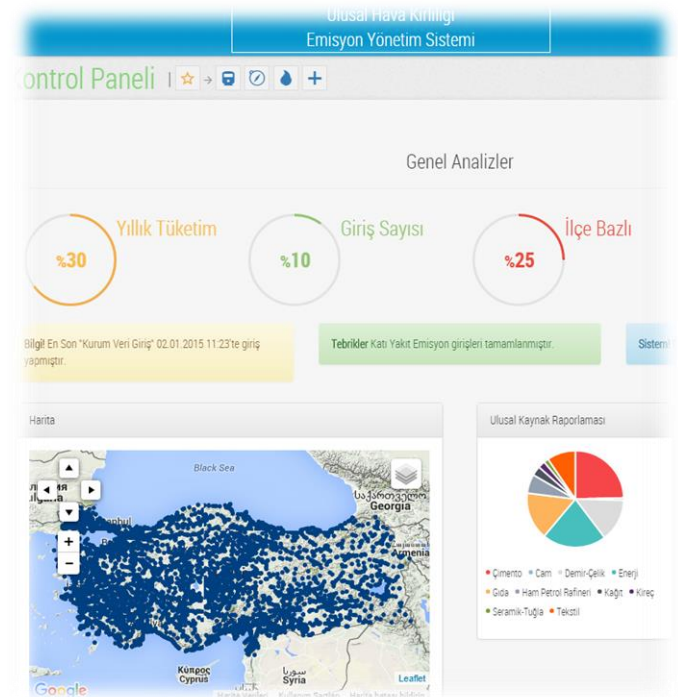
Duration: 2013-2017

Results

- ✓ Geographical web based software
- ✓ Emission Management Portal
- ✓ National Emission Factors(industrial, traffic and residential heating)
- ✓ Regional Emission Results
- ✓ In Pilot Region Marmara air quality maps
- ✓ By using the model air quality scenario results

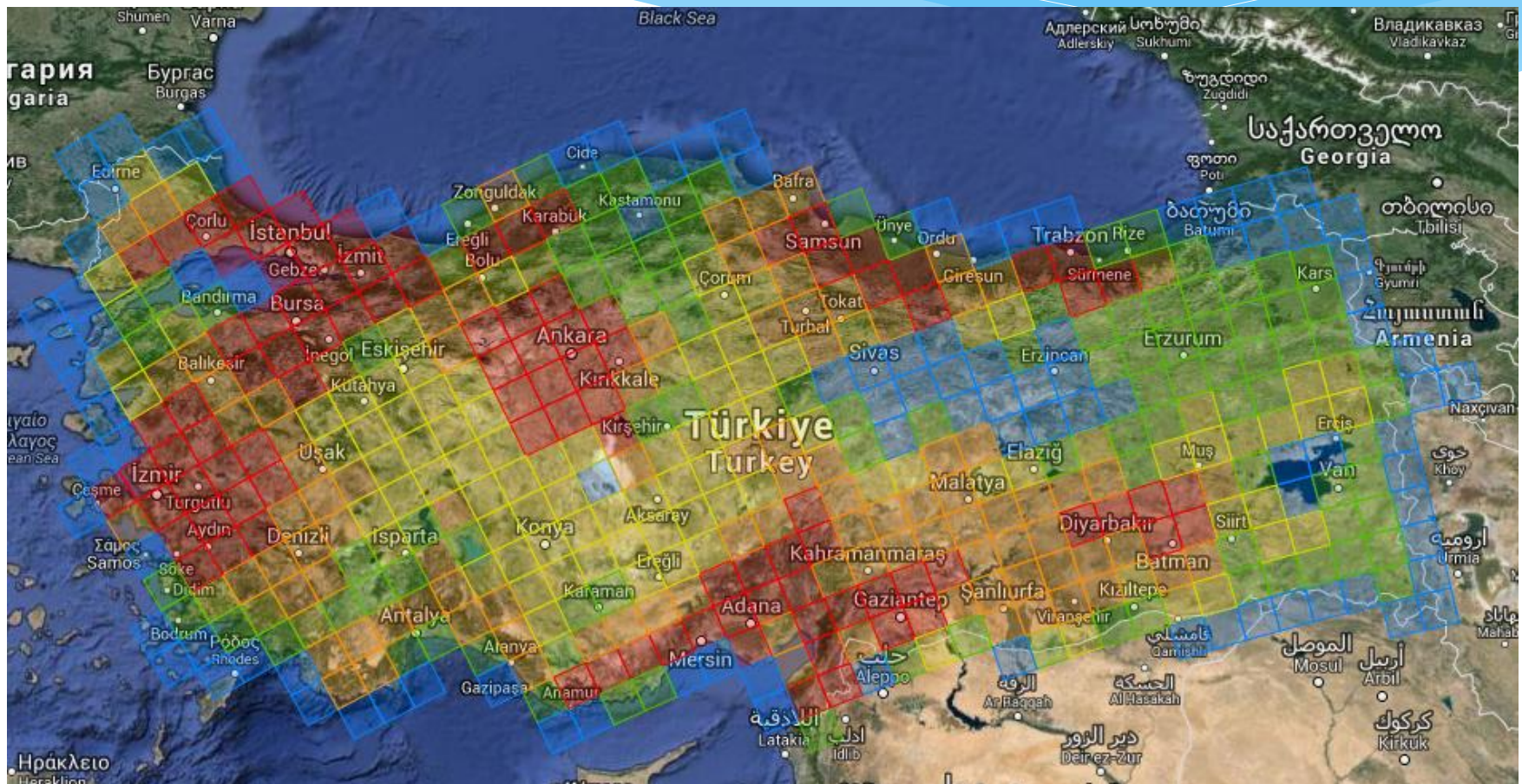


ulusal hava kirliliği
EMİSYON
yönetim sisteminin geliştirilmesi



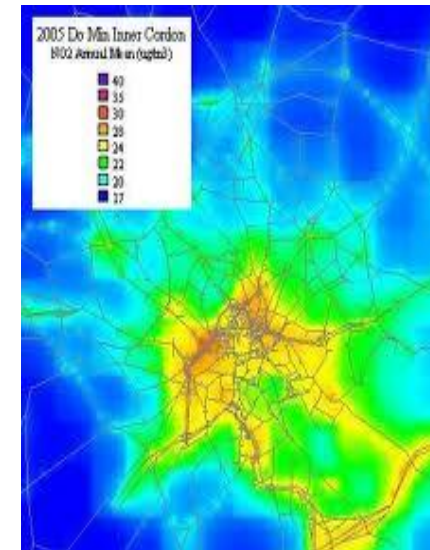
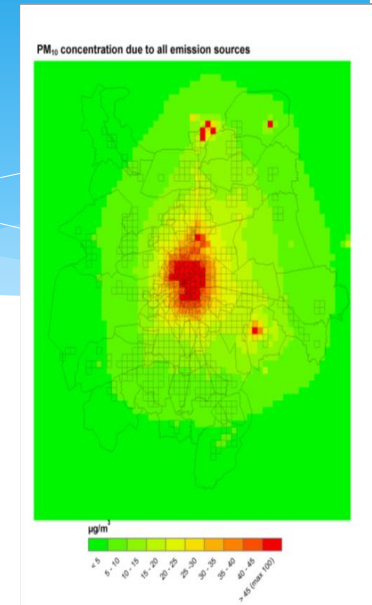
As an example

Thematic Graph (Residential Heating-SO₂ 2012)



Ministry Studies

- USING Emission Inventory Results
- WRF Model for Meteorological Studies
- CMAQ – Air Quality Modelling
- 3 area, 2*2 km max. resolution
- WRF and CMAQ Training
- Air Quality Maps
- Air quality station values on web used
- Precaution following the model results
- Computer Facilities



AIR QUALITY FOLLOW UP

National
Air
Quality
web
connection

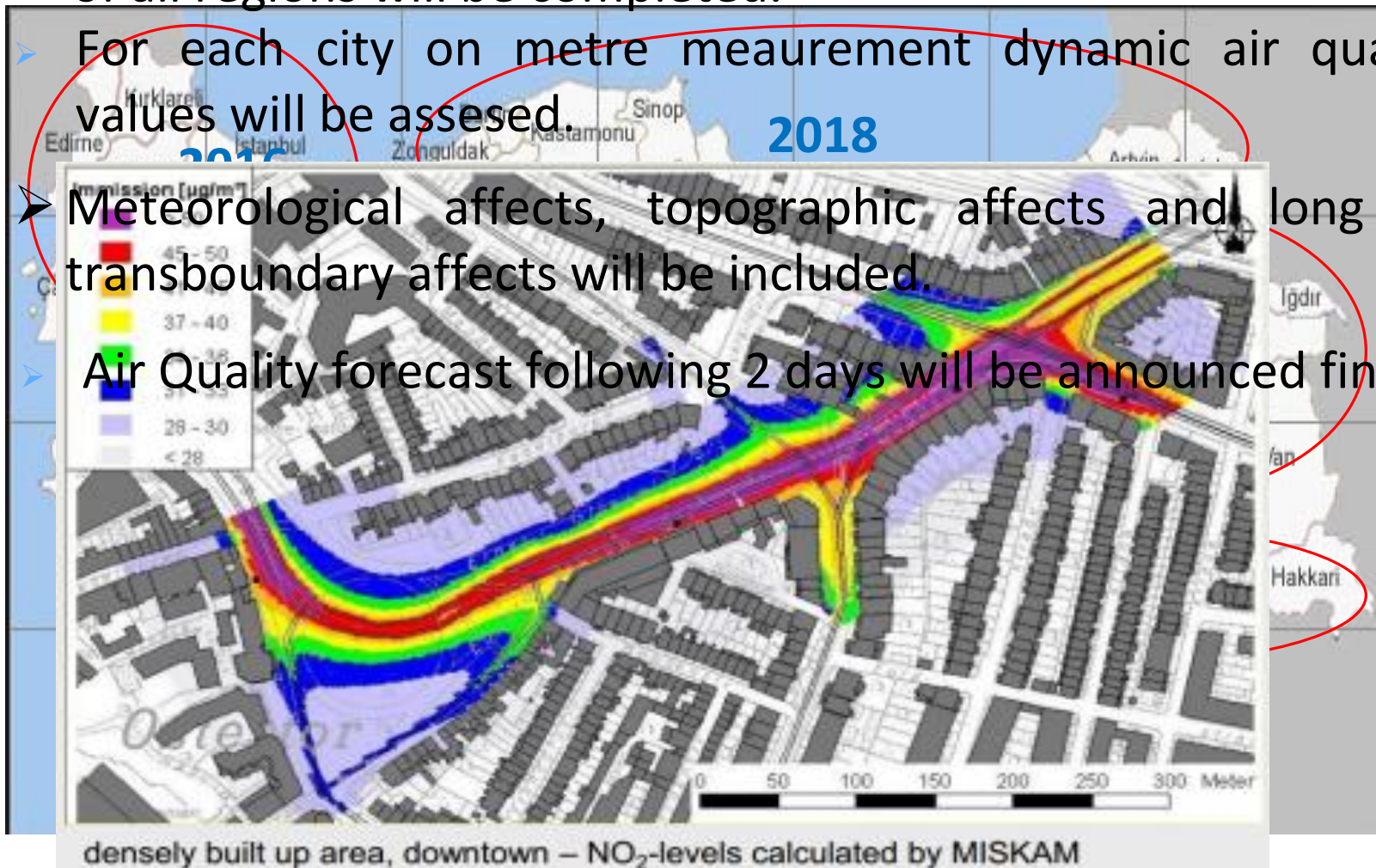
Marmara
Clean Air
Center

Results
www.havaizleme.gov.tr

249 Air
Quality
Stations
(SO₂, PM₁₀)
(CO, NO_x,
O₃, PM_{2,5})

Targets

- By the end of 2018 air pollution maps and emission inventories of all regions will be completed.
- For each city on metre measurement dynamic air quality values will be assessed.
- Meteorological affects, topographic affects and long range transboundary affects will be included.
- Air Quality forecast following 2 days will be announced finally.



Air QUALITY MANAGEMENT TO BE TARGETED

Efficient political strategies

Pollution maps evaluation resulting models reworking

Concentration values in pollution maps will be compared air quality station values

Using Air Quality Modelling

Pollution parameters on time scale (ton/month, ton/day, ton/hour)

Pollution parameters on spatial planning(industrial stations building agricultural areas etc.)

Pollutants amounts determination(ton/year)

Measurement Results Evaluation(parametre on stations)

Atmospherically transportation included

Sectoral and time scale not included yet

Geographical expertisement is needed

National emission inventory is reported for 6 years

National Air Quality web net

Air Emission Inventory Situation

EIONET Scoring

Scoring history for Turkey



Data flow name	Progress 2000	Progress 2001	Progress 2002	Progress 2003	Progress 2004	Progress 2005	Progress 2006	Progress 2007	Progress 2008	Progress 2009	Progress 2010
AE1: LRTAP data	N/A	N/A	N/A	N/A	N/A						

EIONET

European Environment Information and Observation Network

- SERVICES
- REPORTNET
- TOOLS
- TOPICS (ETCS)

You are here: Eionet» Eionet priority data ...» Eionet priority data ...

Local navigation

- » User directory
- » Roles
- » Organisations
- » NFP/Eionet IG
- » Mails to NFPs
- » SERIS
- » Workplan/planner
- » Meetings & events
- » Priority dataflows

Scoring history for Turkey

Year	Score
2000	N/A
2001	N/A
2002	N/A
2003	N/A
2004	N/A
2005	Low
2006	Low
2007	Low
2008	Medium
2009	High
2010	High
2011	High

Data flow name	Progress 2000	Progress 2001	Progress 2002	Progress 2003	Progress 2004	Progress 2005	Progress 2006	Progress 2007	Progress 2008	Progress 2009	Progress 2010	Progress 2011
AE1: LRTAP data	N/A	N/A	N/A	N/A	N/A							

CLRTAP Sözleşmesi Raporlaması



Emisyon Envanterleri ve Projeksiyonlar Görev Gücü 2013 Toplantısı Türkiye'de

Task Force on Emission Inventories and Projections
2013 Meeting in Turkey



TFEIP TASK FORCE ON EMISSION
INVENTORIES & PROJECTIONS

Sözleşmeye Taraf Olan Ülkeler

Almanya	Hırvatistan	Liechtenstein
Amerika Birleşik Devletleri	Hollanda	Litvanya
Arnavutluk	İrlanda	Luksemburg
Avrupa Birliği	İspanya	Macaristan
Avusturya	İsveç	Makedonya
Azerbaycan	İsviçre	Malta
Belarus		Moldova
Belçika		Monako
Birleşik Krallık		Montenegro
Bosna Hersek		Norveç
Bulgaristan		Polonya
Çek Cum.		Portekiz
Danimarka		Romanya
Ermenistan		Rusya
Estonya	İtalya	Sırbistan
Finlandiya	İzlanda	Slovakya
Fransa	Kanada	Slovenya
Güney Kıbrıs	Kazakistan	Türkiye
Gürcistan	Kırgızistan	Ukrayna
	Letonya	Vatikan (imza)



Birleşmiş Milletler Uzun Menzilli Sınır Aşan Hava Kirliliği Sözleşmesi (CLRTAP) kapsamında İzleme ve Değerlendirme Protokolü (EMEP) görev güçleri ile faaliyet göstermektedir. Emisyon Envanterleri ve Projeksiyonları Görev Gücü yıllık toplantısı 13-15 Mayıs 2013 tarihlerinde ülkemizde **ilk kez** Bakanlığımız ev sahipliğinde düzenlenmiştir. Bu husus görev gücü resmi web-sitesinde (www.tfeip-secreteriat.org) yayımlanan e-dergide tüm sözleşme taraflarına duyurulmuştur.

TFEIP newsletter – Autumn 2012

8 TFEIP meeting 2013 Announcement

We are very pleased to announce the dates and venue for TFEIP 2013.

The meeting will be in Istanbul, Turkey on Monday 13th and Tuesday 14th May 2013, followed by a technical workshop on Wednesday 15th May (topic to be decided).

The meeting is very kindly being hosted by the Turkish Ministry of Environment and Urbanization.

Further details concerning the meeting will be available in due course.

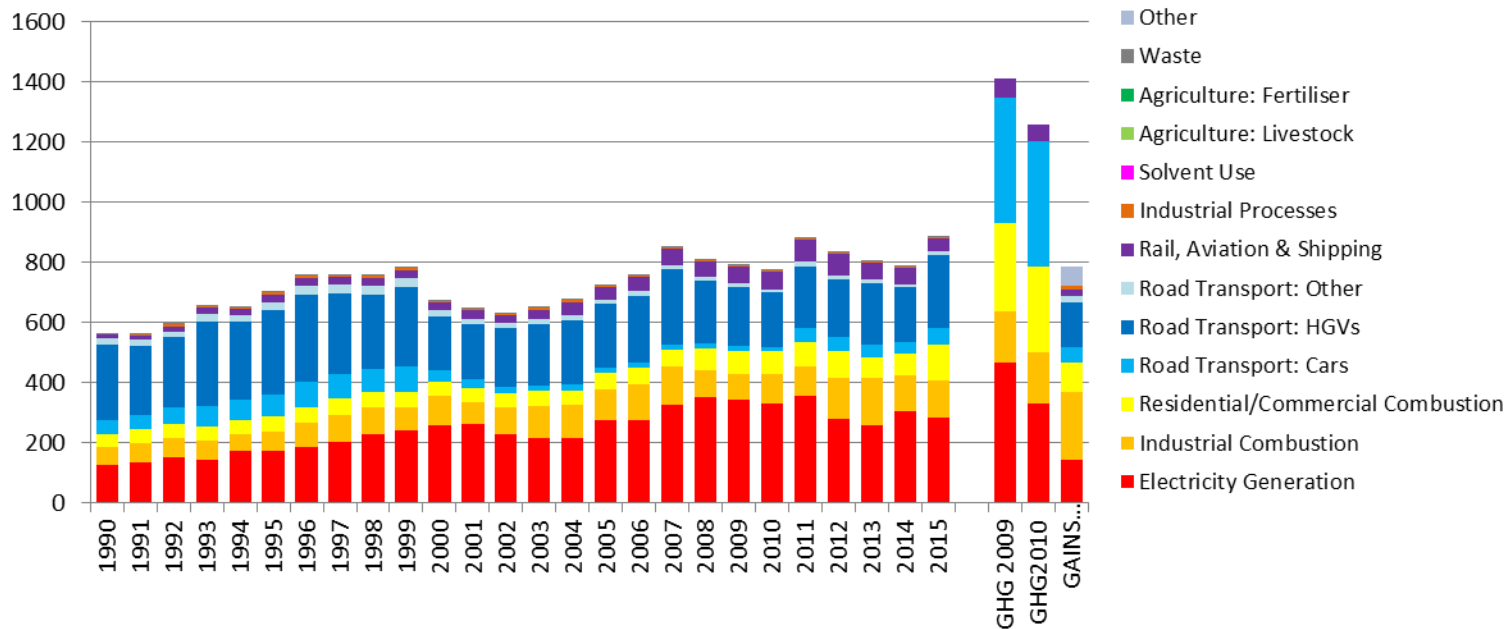


source: freedigitalphotos.net, Suat Eman

Orhan YILDIR

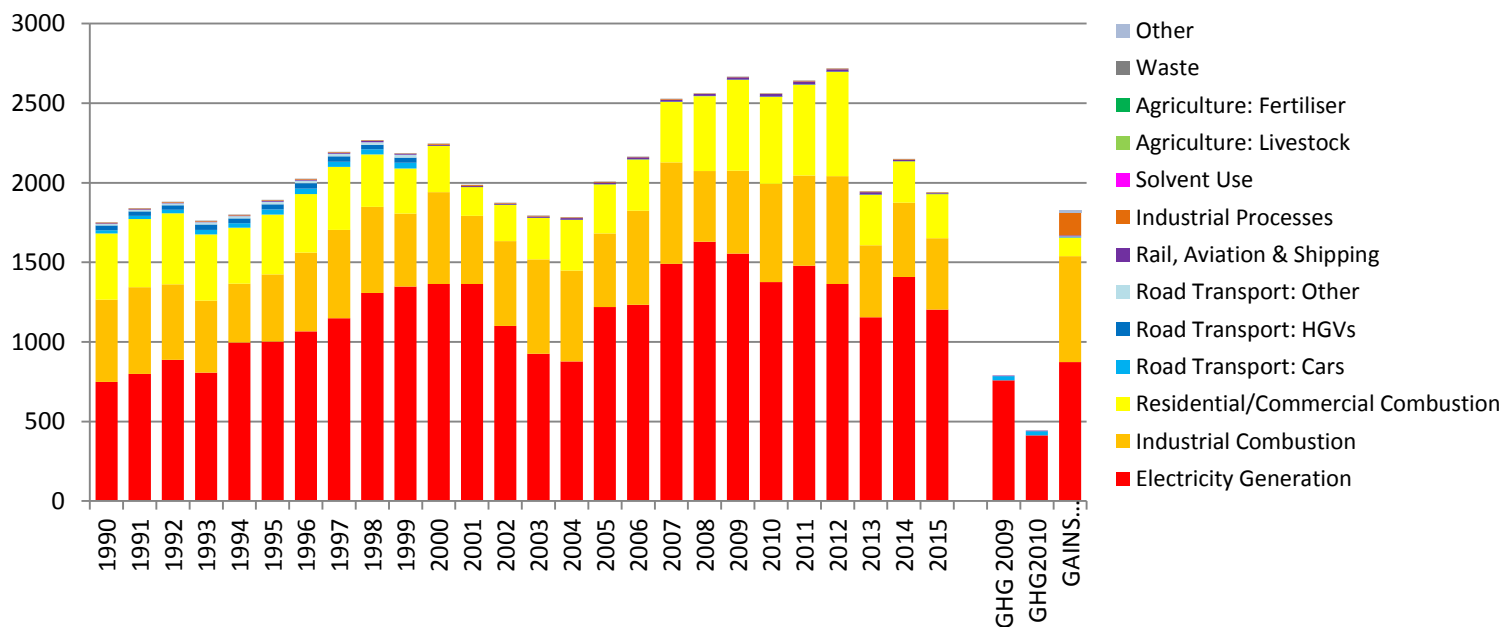
2017 Calculation Results

NOx



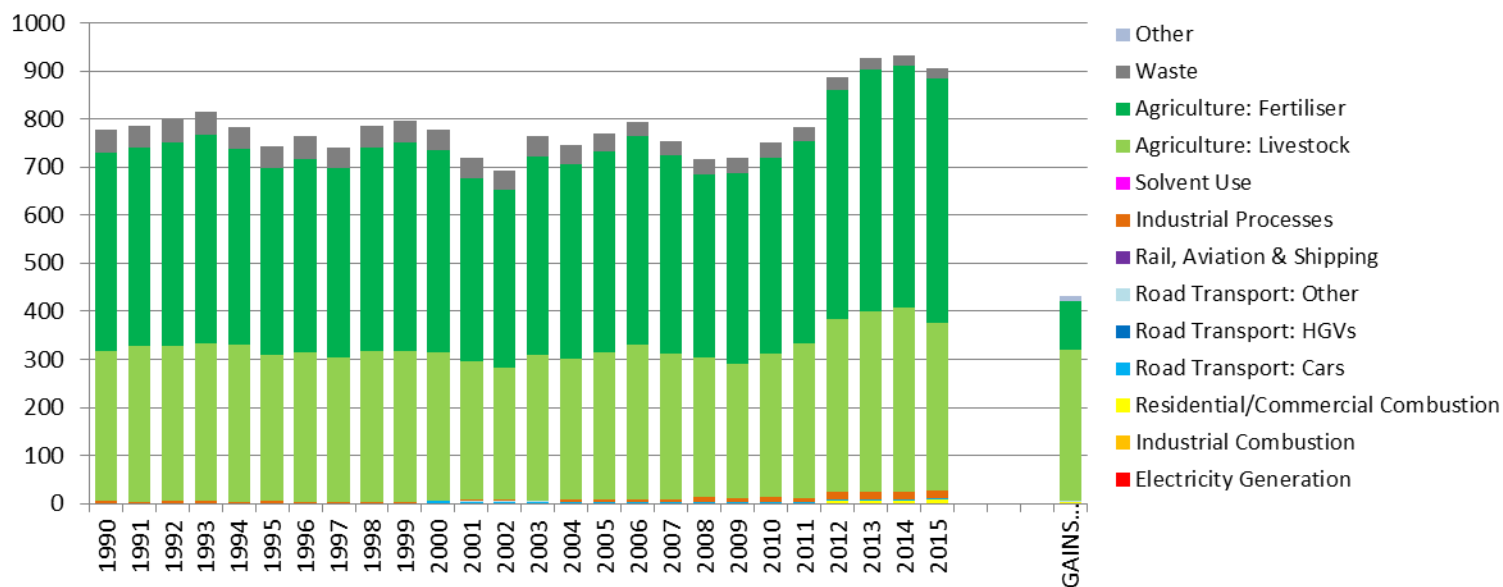
2017 Calculation Results

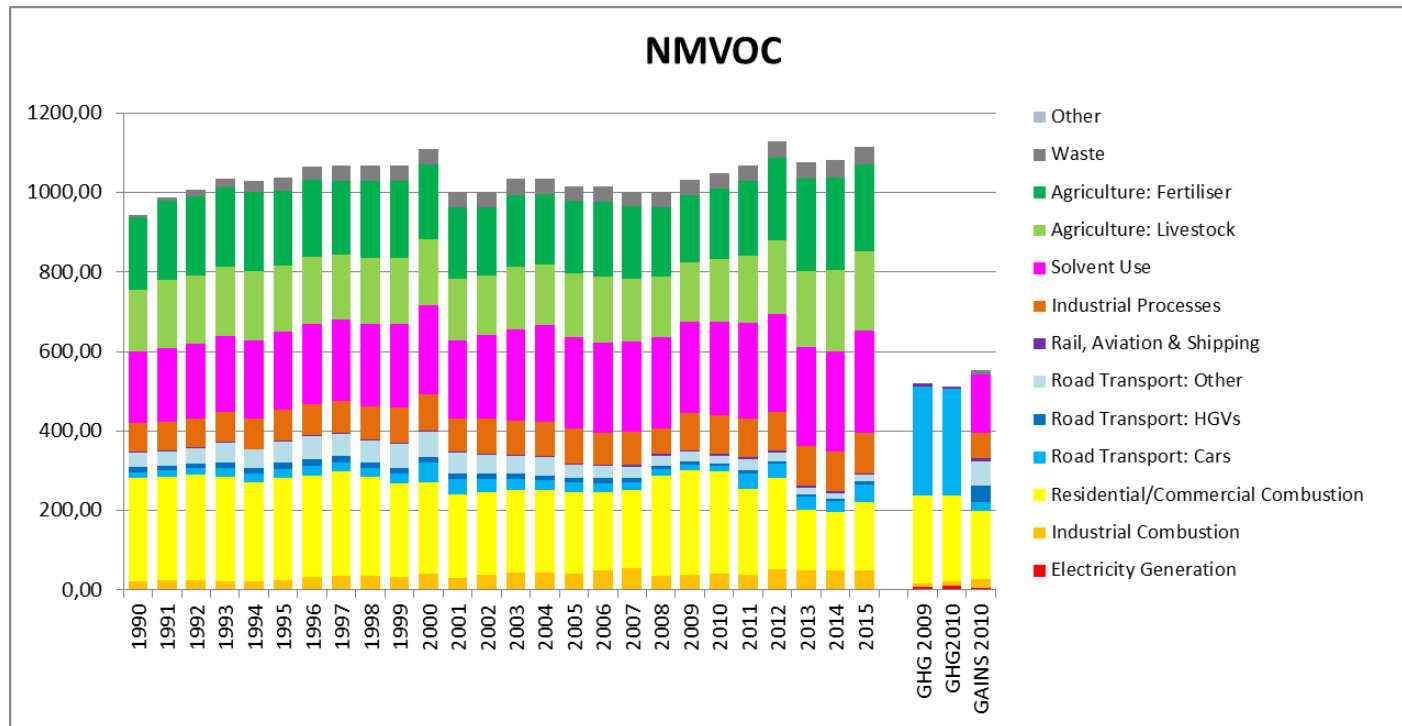
SO₂



2017 Calculation Results

NH3





Inter-Institutional Coordination

- ☐ Data flow
- ☐ Data collection, communication with the providers
- ☐ Ministerial communication
 - ☐ Technical
 - ☐ Decision-making
 - ☐ Prioritization
- ☐ Circular
 - ☐ by the Prime Minister
 - ☐ all Ministries
 - ☐ permanent membership
 - ☐ WG schedules

International and National Awareness

- ❑ International Projects
 - ❑ Air Quality Project in Marmara Region
 - ❑ Improving Emissions Control
 - ❑ Projects on VOC Directives and Emissions, LCP Directive, Climate Change
- ❑ Capacity Building under the emission inventory compilation
 - ❑ Improving Emissions Control Project
 - ❑ TW and TA components
 - ❑ Austria, Finland and UK
 - ❑ Improvement on inventory, calculation, methodological perspective, data judgement, gap analysis, quality issues

International and National Awareness

- ☐ National Projects
 - ☐ Development of the National Emission Management System
 - ☐ Universities involved, GIS integrated
 - ☐ Local data collection and management, Source classification for the measurements
 - ☐ Air Quality modeling linkage
 - ☐ Direct input preparation for the AQ model
 - ☐ Provincial participation, municipalities' awareness
 - ☐ National EF generation for prioritized sectors
 - ☐ Web-based management



- * Development of the National Emission Management System
- * 2017 the last emission inventory includes,
For road transport emissions calculation COPERT 4 has been used for the first time. It covers starting from 2000 to 2015. Next year using the NEMS the input data will be prepared.

Development of the National Emission Management System

- * The emission inventory will be prepared by using the prepared hosting emission factors next year for industrial sector, residential heating and vehicles

THANK YOU



agul.yilmaz@csb.gov.tr